10 SOUTH VAN NESS AVENUE MIXED-USE PROJECT

DRAFT ENVIRONMENTAL IMPACT REPORT

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT: CASE NO. 2015-004568ENV
STATE CLEARINGHOUSE NO.: 2017072018

DRAFT EIR PUBLICATION DATE: OCTOBER 17, 2018
DRAFT EIR PUBLIC HEARING DATE: DECEMBER 6, 2018
DRAFT EIR PUBLIC COMMENT PERIOD: OCTOBER 18, 2018 - DECEMBER 11, 2018

WRITTEN COMMENTS SHOULD BE SENT TO:

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TO: Distribution List for the 10 South Van Ness Avenue Mixed-Use Project Draft EIR

FROM: Lisa M. Gibson, Acting Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the 10 South Van Ness Avenue Mixed-Use Project (Planning Department File No. 2015-004568ENV)

This is the Draft of the Environmental Impact Report (Draft EIR) for the 10 South Van Ness Avenue Mixed-Use Project. 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 titled "Responses to Comments," which will contain all relevant comments on this Draft EIR and our responses to those comments. It may also specify changes to this Draft EIR. Those who testify at the hearing on the Draft EIR will automatically receive a copy of the Responses to Comments document, along with notice of the date reserved for certification; others may receive a copy of the Responses to Comments document and notice by request or by visiting our office. This Draft EIR together with the Responses to Comments document will be considered by the Planning Commission in an advertised public meeting and will be certified as a Final EIR if deemed adequate.

After certification, we will modify the Draft EIR as specified by the Responses to Comments document and print both documents in a single publication called the Final EIR. 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 document, rather than two. Therefore, if you receive a copy of the Responses to Comments 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 Responses to Comments 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 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. Public agencies on the distribution list will automatically receive a copy of the Final EIR.

Thank you for your interest in this project.

NOTE: The Governor of the State of California has re-certified this project as an Environmental Leadership Development Project under Chapter 6.5 (commencing with section 21178) of the Public Resources Code, which provides, among other things, that any judicial action challenging the certification of the EIR or the approval of the project described in the EIR is subject to the procedures set forth in sections 21185 to 21186, inclusive, of the Public Resources Code. In accordance with Public Resources section 21186(a) and (b), documents and other materials placed in the record of proceedings can be found at https://www.ab900record.com/10svn. Additional public notice has been separately provided regarding such certification, in accordance with the requirements of the Public Resources Code.

FOR MORE INFORMATION, PLEASE CONTACT:

Planner: Rachel Schuett

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TO SUBMIT COMMENTS ON THE DRAFT EIR, PLEASE E-MAIL: CPC.10SouthVan Ness@sfgov.org

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LIST OF ACRONYMS AND ABBREVIATIONS

ABAG	Association of Bay Area Governments
ACL	absolute cumulative limit
AC Transit	Alameda–Contra Costa Transit District
ADA	Americans with Disabilities Act
AERMOD	American Meteorological Society/EPA Regulatory Model
APEZ	Air Pollutant Exposure Zone
ARB	California Air Resources Board
BART	Bay Area Rapid Transit
BMP	best management practices
BRT	Bus Rapid Transit
CAAQS	California ambient air quality standards
CalEEMod	California Emissions Estimator Model
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
CNEL	community noise equivalent level
CO	carbon monoxide
CRHR	California Register of Historical Resources
dB	decibels
dBA	A-weighted decibel
DBI	Department of Building Inspection
EIR	Environmental Impact Report
EMFAC	EMission FACtors (ARB's on-road emissions inventory model)
ERO	environmental review officer
FAR	floor area ratio
FTA	Federal Transit Administration
GHG	greenhouse gas
HARP2	Hotspots Analysis and Reporting Program version 2
hp	horsepower
HRA	Health Risk Assessment
HRE	Historic Resource Evaluation
HVAC	heating, ventilation, and air conditioning
I-80	Interstate 80
I-280	Interstate 280
in/sec	inches per second
L_{dn}	day-night noise level
L_{eq}	Equivalent noise level
LEED	Leadership in Energy and Environmental Design
L_{max}	maximum noise level
L_{min}	minimum noise levels
LOS	level of service
mph	miles per hour
MSM	Mobile Source Measure

MTC	Metropolitan Transportation Commission
MTS	Metropolitan Transportation System
Muni	San Francisco Municipal Railway
NAAQS	national ambient air quality standards
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
NRHP	National Register of Historic Places
OPR	Office of Planning and Research
PM	particulate matter
PM_{10}	PM equal to or less than 10 microns in diameter
$PM_{2.5}$	PM equal to or less than 2.5 microns in diameter
POPOS	privately owned publicly accessible open spaces
PPV	peak particle velocity
RMS	root mean square
ROG	reactive organic gases
SamTrans	San Mateo County Transit District
SB	Senate Bill
SFBAAB	San Francisco Bay Area Air Basin
SF-CHAMP	San Francisco Chained Activity Model Process
SFDPH	San Francisco Department of Public Health
SFMTA	San Francisco Municipal Transportation Agency
SIP	state implementation plan
SoMa	South of Market
SO_2	sulfur dioxide
SSMs	stationary-source control measure
SUD	Special Use District
TAAS	theoretically available annual sunlight
TAC	toxic air contaminants
TASC	Transportation Advisory Staff Committee
TAZ	transportation analysis zone
TCM	Transportation Control Measure
TDM	transportation demand management
TIS	Transportation Impact Study
U.S. EPA	U.S. Environmental Protection Agency
U.S. 101	U.S. Highway 101
VdB	vibration dB
VDECS	Verified Diesel Emission Control Strategies
VMT	vehicle miles traveled
ZOI	BART zone of influence
$\mu g/m^3$	micrograms per cubic meter

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SUMMARY

This environmental impact report (EIR) chapter summarizes the proposed 10 South Van Ness Avenue Mixed-Use Project and its potential environmental impacts. This summary is intended to highlight major areas of importance in the environmental analysis as required by section 15123 of the California Environmental Quality Act Guidelines (CEQA Guidelines). This chapter briefly summarizes the 10 South Van Ness Avenue Mixed-Use Project (referred to in this Environmental Impact Report [EIR] as "the proposed project"). Following the synopsis of the proposed project, a summary table presents the environmental impacts of the proposed project identified in the EIR by topic and the mitigation measures identified to reduce or lessen significant impacts. Improvement measures, which are not required to mitigate significant impacts but would further reduce the magnitude of less-than-significant effects, may also be identified. Significant impacts identified in the initial study are listed in a separate summary table, along with the mitigation measures that would reduce them to less-than-significant levels. Following these summary tables is a description of the alternatives to the proposed project that are addressed in this EIR and a table comparing the impacts of those alternatives with the proposed project. The chapter concludes with a summary of environmental issues to be resolved and areas of known controversy.

Table S.1: Summary of Impacts of Proposed Project Identified in the EIR, beginning on p. S.5, provides an overview of the following:

- Environmental impacts with the potential to occur as a result of the proposed project;
- The level of significance of the environmental impacts before implementation of any identified mitigation measures;
- A statement clarifying whether identified mitigation measure(s) would avoid or reduce significant environmental impacts and the level of significance for each impact after the mitigation measures are implemented; and
- Improvement measures that would further reduce less-than-significant impacts.

This summary should not be relied upon for a thorough understanding of the proposed project or variant, individual impacts, and mitigation measures. Please see Chapter 2, Project Description, for a complete description of the proposed project and variant; Chapter 4, Environmental Setting and Impacts, and the initial study (EIR Appendix B) for a complete description of impacts and mitigation measures; and Chapter 5, Alternatives, for a complete description of the alternatives to the proposed project and variant and their significant impacts.

S.1 PROJECT SYNOPSIS

The project sponsor, 10 SVN, LLC, proposes to redevelop a 51,150-square-foot (1.17-acre) triangle-shaped property at the southwest corner of South Van Ness Avenue and Market Street, in the South of Market (SoMa) neighborhood of San Francisco, with a large residential complex with ground-floor retail. The northern end of the project site was occupied by the San Francisco Honda Dealership until recently. The

dealership occupied the two-story, 30- to 45-foot-high building, and the southern end of the site encompasses a small, undeveloped area. The proposed 10 South Van Ness Avenue Mixed-Use Project would involve the demolition of the existing building and the construction of two 41-story towers. The towers would be 400 feet tall (420 feet total, including roof screens and elevator penthouses) and would contain a total of 984 dwelling units and retail space on the ground floor. Below grade, the two structures would be connected by two basement parking levels. New publicly accessible open space would be provided in the form of a new pedestrian-oriented right-of-way (or alley) that would run from South Van Ness Avenue to 12th Street under the proposed project or from Market Street to 12th Street under the variant, as discussed below.

The project sponsor is considering a variant to the proposed project that would include construction of a single 55-story tower over a podium structure. Under the variant, the tower would be up to 590 feet in height (610 feet total, including roof screens and elevator penthouses). The variant would be similar to the proposed project in that it would provide 984 dwelling units, ground-floor retail space, two levels of underground parking, and a pedestrian-oriented right-of-way through the project site.

Both the proposed project and variant would involve improvements to 12th Street that are consistent with the base requirements of the Better Streets Plan. In addition, the project sponsor is considering an alternate set of improvements to 12th Street (referred to as the "straight-shot streetscape option" in this EIR) for both the proposed project and variant that would extend the eastern sidewalk and pedestrian promenade adjacent to the project site from 15 to 40 feet in width on 12th Street. The western sidewalk on 12th Street would be expanded to a width of 18 feet. There would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction. In addition, both the proposed project and variant may include a street-level elevator to provide access to the San Francisco Municipal Railway (Muni) Metro station at Market Street and South Van Ness Avenue.

S.2 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The San Francisco Planning Department (planning department) published a Notice of Preparation of an Environmental Impact Report on July 12, 2017, announcing the intent to prepare and distribute a focused EIR and subsequently published an initial study on May 2, 2018. The topics analyzed in this EIR are Cultural Resources (Historic Architectural), Transportation and Circulation, Air Quality, Noise, Wind, and Shadow; all other topics were covered within the initial study (see EIR Appendix B).

All impacts of the proposed project and associated mitigation measures and improvement measures identified in this EIR are summarized under their own subsection in **Table S.1: Summary of Impacts of Proposed Project Identified in the EIR**. Under each topic, impacts follow the order of the corresponding impact discussion in Chapter 4, Environmental Setting and Impacts, of this EIR. For the topics evaluated in the EIR, the levels of significance of impacts are identified as:

- **No Impact** – No adverse changes (or impacts) to the environment are expected.

- **Less Than Significant** – Impact that does not exceed the defined significance criteria or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations.
- **Less Than Significant with Mitigation** – Impact that is reduced to a less-than-significant level through implementation of the identified mitigation measures.
- **Significant and Unavoidable with Mitigation** – Impact that exceeds the defined significance criteria and can be reduced through compliance with existing local, state, and federal laws and regulations and/or implementation of all feasible mitigation measures, but cannot be reduced to a less-than-significant level.
- **Significant and Unavoidable** – Impact that exceeds the defined significance criteria and cannot be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations and for which there are no feasible mitigation measures.

Where applicable, this table identifies the level of significance for impacts after implementation of the identified mitigation measure(s) in the column labeled "Level of Significance after Mitigation." All mitigation measures and improvement measures are applicable to the proposed project and the variant.

Table S.1 should not be relied upon for a thorough understanding of the proposed project or its variant and their associated impacts and mitigation needs, but is presented for the reader as an overview of impacts, mitigation measures, and improvement measures of the proposed project and variant. Please see the environmental topic sections in Chapter 4, Environmental Setting and Impacts, of this EIR and Section E, Evaluation of Environmental Effects, in the initial study (EIR Appendix B) for a thorough discussion and analysis of project-level and cumulative environmental impacts and the mitigation measures identified to address those impacts, as well as the basis for any proposed improvement measures.

As described below in Table S.1, this EIR identifies three significant and unavoidable impacts related to, respectively, demolition of the existing buildings at 10 South Van Ness Avenue, a historical resource for the purposes of CEQA; cumulative construction traffic; and cumulative wind effects. Table S.1 also identifies improvement measures that could be implemented by the project sponsor to further reduce the less-than-significant transportation impacts of the proposed project.

As shown in **Table S.2: Summary of Significant Impacts of Proposed Project and Variant Identified in the Initial Study**, beginning on p. S.40, the initial study identified five significant impacts related to cultural resources (historic architectural) and geology and soils that would be mitigated to less-than-significant levels with measures identified in that table.

Table S.1: Summary of Impacts of Proposed Project and Variant Identified in the EIR

Impact	Level of Significance before Mitigation	Mitigation and Improvement Measures	Level of Significance after Mitigation
Legend: NI = No Impact; LTS = Less than Significant; LTSM = Less than Significant with mitigation; S = Significant; SU = Significant and unavoidable; SUM = Significant and unavoidable with mitigation; NA = Not Applicable			
Cultural Resources (Historic Architectural)			
CR-1: The proposed demolition of the building at 10 South Van Ness Avenue would cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5 of the CEQA Guidelines.	S	**Mitigation Measure M-CR-1a: Documentation** Prior to demolition or the issuance of site permits for the 10 South Van Ness Avenue project, the project sponsor shall undertake Historic American Building Survey (HABS)–level documentation of the property. The documentation shall be funded by the project sponsor and undertaken by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth in the Secretary of the Interior's Professional Qualification Standards (Code of Federal Regulations title 36, part 61). Before beginning work on any aspect of the documentation, the professional overseeing the documentation shall meet with the preservation staff of the Planning Department for review and approval of a coordinated documentation plan. The documentation package created shall consist of the items listed below. • **Measured Drawings:** A set of measured drawings that depict the existing size, scale, and dimensions of the property. The Planning Department's preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (e.g., plan, section, elevation). The preservation staff will assist the consultant in determining the appropriate level of measured drawings. • **HABS-Level Photography:** Digital photographs of the interior and exterior of the property. Large-format negatives are not required. The scope of the digital photographs shall be reviewed by the Planning Department's preservation staff for concurrence, and all digital photography shall be conducted according to current National Park Service standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HABS photography.	SUM

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		• **HABS Historical Report:** A written historical narrative and report, per the HABS Historical Report Guidelines. • **Video Recordation:** The project sponsor shall undertake a video documenting the affected historical resource and its setting. The documentation shall be conducted and narrated by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth in the Secretary of the Interior's Professional Qualification Standards (Code of Federal Regulations title 36, part 61). The documentation shall include as much information as possible—using visuals in combination with narration—about the materials, construction methods, current condition, historic use, and historic context of the historical resource. • **Print-on-Demand Book:** The project sponsor shall make the content from the historical report, historical photographs, HABS photography, measured drawings, and field notes available to the public through a pre-existing print-on-demand book service. This service will print and mail softcover books containing the aforementioned materials to members of the public who have paid a nominal fee. The sponsor shall not be required to pay ongoing printing fees once the book has been made available through the service. The professional(s) shall submit the completed documentation for review and approval by a member of the Planning Department's preservation staff before demolition or site permits are issued. Documentation may be used in the interpretive display or signage described in Mitigation Measure M-CR-1b. The final approved documentation shall be provided to the planning department and offered to repositories including but not limited to the History Room of the San Francisco Public Library; the Environmental Design Library at the University of	

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		California, Berkeley; the Northwest Information Center; San Francisco Architectural Heritage; and the California Historical Society. The Planning Department will make electronic versions of the documentation available to the public at no charge. **Mitigation Measure M-CR-1b: Interpretation** The project sponsor shall install and maintain a permanent interpretive display commemorating the historical significance of the Fillmore West and Bill Graham. Interpretive display(s) shall develop a connection between the general public and the subject building's history. These installations may include, for example, interactive sound or video installations showcasing historic performances at Fillmore West or booths designed to record or play oral histories (see below), and historically oriented programming for a publicly accessible space. The interpretive program may also include more traditional interpretive materials such as commemorative markers and plaques, displays of photographs, and news articles. Emphasis shall be placed on the many posters advertising concerts that took place at the subject building during its period of significance. The high-quality interpretive displays shall be installed within the project site boundaries, made of durable, all-weather materials, and positioned to allow for high public visibility and interactivity. To assist in the collection of information that will inform and direct the historical interpretation, the sponsor shall fund a historical study prepared by the qualified historic consultant preparing the interpretative program to identify significant trends and events associated with the music of the 1960s counterculture in San Francisco, as well as identify associated buildings and sites throughout San Francisco. The project sponsor, at his or her election, may also incorporate the art and culture of the 1960s counterculture in San Francisco into this study. The objective of this study is to provide background information that will enrich the	

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		historical contexts that have already been established for the subject building and to place the subject building within the wider context of 1960s counterculture, for the benefit of the general public. Additionally, the sponsor shall retain the services of a qualified historian to undertake an oral history of the Fillmore West. This oral history project will consist of interviews and recollections of people present at the concerts performed during the period of significance, including performers, organizers, and concertgoers, to the extent feasible. The success of this effort will depend primarily on the ability of the project sponsor to locate such persons, and on their willingness/ability to participate. Therefore, the project sponsor shall make a good-faith effort to publicize the oral history project, conduct public outreach, and identify a wide range of potential interviewees. To accomplish this, the sponsor shall employ a range of measures that may include hosting a commemorative concert or event, installing booths that allow participants to record their recollections, and/or hosting a website that allows interviewees to contribute remotely. Prior to undertaking this effort, the scope and methodology of the oral history project shall be reviewed and approved by the Environmental Review Officer, in consultation with preservation staff. In addition to potentially being utilized for the on-site interpretive program, the recordings made as part of the oral history project shall be transcribed, indexed, and made available to the public at no charge through the Planning Department and other archives and repositories in order to allow for remote, off-site historical interpretation of the subject building. A general plan that will lay out the various components of the interpretive program shall be developed in consultation with an architectural historian who meets the Secretary of the Interior's Professional Qualification Standards, and approved by Planning Department staff prior to issuance of a site permit or demolition permit.	

Table S.1: Summary of Impacts of Proposed Project and Variant Identified in the EIR

Impact	Level of Significance before Mitigation	Mitigation and Improvement Measures	Level of Significance after Mitigation

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		This plan shall include the historical study and the oral history program described above. The substance, media, and other characteristics of the interpretive display shall be developed by a consultant experienced in urban architectural interpretive displays. Prior to finalizing the display, the sponsor and consultant shall attempt to convene a community group consisting of local preservation organizations and other interested parties to receive feedback on the adequacy of the interpretive display. A detailed final design showing the substance and appearance of the interpretive displays, as well as maintenance plans, shall be approved by Planning Department preservation staff before the final certificate of occupancy can be issued. **Mitigation Measure M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse** Prior to demolition of the subject building, the project sponsor shall either use salvaged architectural materials on the site as part of the interpretive program or make such architectural materials from the site available to museums, archives, curation facilities, the public, and nonprofit organizations to preserve, interpret, and display the history of the historical resource. The project sponsor shall provide representatives of these groups the opportunity to salvage materials for public information or reuse in other locations. No materials shall be salvaged or removed until HABS recordation and documentation are completed and an inventory of key exterior and interior features and materials is completed by Secretary of the Interior–qualified professionals.	
CR-2: Demolition and new construction on the project site or variant would not have a	LTS	None necessary.	NA

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substantial adverse effect on any offsite historical resource, as defined in section 15064.5 of the CEQA Guidelines.			
C-CR-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the project vicinity, would not substantially contribute to cumulative impacts related to historical resources.	LTS	None necessary.	NA
Transportation and Circulation			
TR-1: The proposed project, the variant, or the straight-shot streetscape option would not cause substantial additional VMT or substantially induce automobile travel.	LTS	None necessary.	NA
TR-2: The proposed project, the variant, or the straight-shot streetscape option would not cause major traffic hazards.	LTS	**Improvement Measure I-TR-2a: Monitoring and Abatement of Queues** The owner/operator of any off-street parking facility with more than 20 parking spaces (excluding loading and car-share spaces) will be responsible for ensuring that recurring vehicle queues do not occur on the public right-of-way. A recurring vehicle queue is defined as one or more vehicles (destined for the parking facility) blocking any portion of any public street, alley, or sidewalk for 3 consecutive	NA

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		minutes or longer on a daily or weekly basis. If a recurring vehicle queue occurs, the owner/operator of the parking facility will employ methods as needed to abate the queue. Appropriate abatement methods will vary depending on the characteristics and causes of the recurring queue, and the characteristics of the parking facility, the street(s) to which the facility connects, and the associated land uses (if applicable). Suggested abatement methods include but are not limited to the following: • Redesigning the facility to improve vehicular circulation and/or onsite queue capacity • Employing parking attendants • Installing "LOT FULL" signs with active management by parking attendants • Using valet parking or other space-efficient parking techniques • Using offsite parking facilities or shared parking with nearby uses • Using parking occupancy sensors and signage to direct drivers to available spaces • Employing travel demand management strategies such as additional bicycle parking, customer shuttles, or delivery services • Implementing parking demand management strategies such as parking time limits, paid parking, time-of-day parking surcharge, or validated parking If the planning director, or his or her designee, suspects that a recurring queue is present, the planning department will notify the property owner in writing. Upon	

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		request, the owner/operator will hire a qualified transportation consultant to evaluate site conditions for no less than seven days. The consultant will prepare a monitoring report to be submitted to the planning department for review. If the planning department determines that a recurring queue does exist, the facility owner/operator will have 90 days from the date of the written determination to abate the queue. **Improvement Measure I-TR-2b: Active Garage Driveway Controls and Curbside Management** The project sponsor/property owner will install active parking management controls at the project site at the driveway of the off-street parking garage, within the off-street garage area, and at the curbside loading zones on the east side of 12th Street. The goals of this measure will be to reduce the potential for queuing of project-related vehicular traffic along 12th Street; reduce and/or eliminate potential conflicts between vehicles entering and exiting the site driveway and other roadway users along 12th Street (e.g., motorists, cyclists, pedestrians); and reduce potential conflicts between large delivery vehicles using the curbside loading zones on the east side of 12th Street and other roadway users. Sensors will be installed at the gated parking garage's ramp and at the driveway entrance/exit lane at 12th Street to detect any outbound vehicles on the driveway and in the ramp area. Vehicles traveling up the garage ramp and approaching the exit gate would then trigger a sensor that would activate an electronic sign, signal, or audible devices at the driveway entrance to warn any vehicles, pedestrians, or bicyclists of the presence of the exiting vehicle. Large delivery and move-in/move-out vehicles will be required to coordinate and schedule use of the curbside loading spaces on the east side of 12th Street through building management and SFMTA's 311 reservation system.	

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		Additional traffic calming and safety treatments will be installed in the parking driveway area. Specifically, signage will be installed to advise drivers exiting the parking driveway to slow, stop, and yield to any pedestrians in the sidewalk on 12th Street (e.g., "Caution: Pedestrians Crossing," "Watch for Pedestrians," "Exit Slowly," "STOP"). Diagonal mirrors will be installed so that motorists exiting the parking garage and pedestrians in the sidewalk can see each other. The project sponsor will also install rumble strips or similar devices to maintain slow speeds for vehicles exiting the parking garage.	
TR-3: The proposed project or variant would not cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity such that unacceptable levels of transit service could result, nor would they cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels would result.	LTS	None necessary.	NA
TR-4: The proposed project, the variant, or the straight-shot streetscape option would not create potentially hazardous conditions for bicyclists or otherwise substantially	LTS	None necessary.	NA

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interfere with bicycle accessibility to the site or adjoining areas.			
TR-5: The proposed project, the variant, or the straight-shot streetscape options would not 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.	LTS	None necessary.	NA
TR-6: The proposed project, the variant, or the straight-shot streetscape options would not result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed onsite loading facilities or within convenient on-street loading zones, and would not create potentially hazardous conditions affecting traffic, transit, bicycles, or pedestrians or significant	LTS	**Improvement Measure I-TR-6: Coordination of Freight Loading/Service Vehicle Activities** To reduce the potential for delivery vehicles to park in the travel lane adjacent to the project frontage on 12th Street (if on- and off-street loading spaces are occupied or truck size exceeds 45 feet in length), residential move-in/move-out activities and larger deliveries will be scheduled and coordinated through building management. For retail uses, appropriate delivery times will be scheduled and restricted to before 7 a.m., between 10 a.m. and 4 p.m., and after 8 p.m. No deliveries will occur between 4 p.m. and 8 p.m., to avoid conflicts with peak-period commute traffic and with bicyclists on adjacent streets and pedestrians in adjacent sidewalk areas. The project sponsor will enforce strict regulations governing the size of trucks using the off-street loading spaces in the proposed freight loading area. Trucks	NA

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delays affecting transit.		more than 45 feet long will be prohibited from entering the parking garage and will use existing and proposed on-street loading spaces along 12th Street adjacent to the project site. Appropriate signage will be posted at the parking garage entrance to notify truck operators of the truck size regulations and the presence of on-street loading spaces on 12th Street. The project sponsor will notify building management (and related staff) and retail tenants regarding the imposed truck size limits for the proposed freight loading area. Building management staff will notify operators of large trucks regarding the proper loading procedures to follow upon entering the off-street parking garage. Because trucks will be required to move into and out of a 24-foot driveway, building management will require a person (i.e., spotter) to safely guide the truck driver and assist in maneuvering the truck within the public right-of-way and into the parking garage, as needed. Appropriate move-in/move-out and loading procedures will be enforced to avoid blockages of streets adjacent to the project site over an extended period of time, and to reduce potential conflicts with other roadway users along adjacent streets, including movers and pedestrians walking along 12th Street or South Van Ness Avenue. Curb parking for movers on 12th Street or South Van Ness Avenue will be reserved through SFMTA or by directly contacting the local 311 service. Residential move-in/move-out activities will be scheduled during weekday midday hours between 10 a.m. and 4 p.m. and/or on weekends to avoid any potential conflicts with peak-period commute traffic and all users of adjacent roadways. In addition, the project sponsor will coordinate with Recology and enforce strict garbage pick-up periods. Such pick-up times will be restricted to before 7 a.m. and/or between 10 a.m. and 2 p.m. No garbage pick-up activities will occur after 3 p.m., to avoid conflicts with vehicular traffic and pedestrians on 12th Street, Market Street, or South Van Ness Avenue. Specific loading procedures (as	

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		described above) will also be enforced for Recology vehicles during garbage pick-up periods.	
TR-7: The proposed project, the variant, or the straight-shot streetscape options would not result in inadequate emergency access to the project site or adjoining areas.	LTS	None necessary.	NA
TR-8: The duration and magnitude of temporary construction activities for the proposed project or the variant would not result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas that could create potentially hazardous conditions.	LTS	None necessary.	NA
C-TR-1: The proposed project, the variant, or the straight-shot streetscape option, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to	LTS	None necessary. For less-than-significant cumulative traffic hazard impacts: implementation of **Improvement Measure I-TR-2a: Monitoring and Abatement of Queues**, **Improvement Measure I-TR-2b: Active Garage Driveway Controls and Curbside Management**, and **Improvement Measure I-TR-6: Coordination of Freight Loading/Service Vehicle Activities**.	NA

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significant cumulative impacts related to VMT or traffic hazards.			
C-TR-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on transit.	LTS	None necessary.	NA
C-TR-3: The proposed project or variant, or the straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on bicycle travel.	LTS	For the less-than-significant impacts on bicycle travel, implementation of Improvement Measure I-TR-2a: Monitoring and Abatement of Queues, Improvement Measure I-TR-2b: Active Garage Driveway Controls and Curbside Management, and Improvement Measure I-TR-6: Coordination of Freight Loading/Service Vehicle Activities.	NA
C-TR-4: The proposed project, variant, or straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of	LTS	For the less-than-significant impacts on pedestrians, implementation of Improvement Measure I-TR-2a: Monitoring and Abatement of Queues, Improvement Measure I-TR-2b: Active Garage Driveway Controls and Curbside Management, and Improvement Measure I-TR-6: Coordination of Freight Loading/Service Vehicle Activities.	NA

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the project site, would not contribute considerably to significant cumulative impacts on pedestrians.			
C-TR-5: The proposed project, variant, or straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on loading.	LTS	For the less-than-significant cumulative impacts from loading, implementation of Improvement Measure I-TR-2a: Monitoring and Abatement of Queues, Improvement Measure I-TR-2b: Active Garage Driveway Controls and Curbside Management, and Improvement Measure I-TR-6: Coordination of Freight Loading/Service Vehicle Activities.	NA
C-TR-6: The proposed project, variant, or straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on emergency vehicle access.	LTS	None necessary.	NA
C-TR-7: The duration and magnitude of temporary construction activities for the	S	**Mitigation Measure M-C-TR-7a: Cumulative Construction Coordination:** The project sponsor or its contractor(s) shall consult with City departments such as the SFMTA and Public Works through ISCOTT, and other interdepartmental	SUM

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proposed project, the variant, or the straight-shot streetscape option, in combination with construction of past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in a significant cumulative impact from potentially hazardous conditions to which the proposed project or variant would contribute considerably.		meetings as deemed necessary by the SFMTA, Public Works, and the San Francisco Planning Department, to develop a Coordinated Construction Management Plan that shall address construction-related vehicle routing, detours, and maintaining transit, bicycle, vehicle, and pedestrian movements in the vicinity of the construction area for the duration of the cumulative construction period overlap. Key coordination meetings would be held jointly between project sponsors and contractors of other projects for which the relevant City departments determine impacts could overlap. The Coordinated Construction Management Plan shall consider other ongoing construction in the project vicinity, including development and transportation infrastructure project, and shall include, but not be limited to, the following: • Restricted Construction Truck Access Hours – Limit construction truck movements to the hours between 9:00 a.m. and 4:00 p.m., or other times if approved by the SFMTA, to minimize disruption to vehicular traffic, including transit during the AM and PM peak periods. • Construction Truck Routing Plans – Identify optimal truck routes between the regional facilities and the project site, taking into consideration truck routes of other development projects and any construction activities affecting the roadway network. • Coordination of Temporary Lane and Sidewalk Closures – The project sponsor shall coordinate lane closures with other projects requesting concurrent lane and sidewalk closures through the ISCOTT and interdepartmental meetings process above, to minimize the extent and duration of requested lane and sidewalk closures. Lane closures shall be minimized especially along transit and bicycle routes, so as to limit the impacts to transit service and bicycle circulation and safety.	

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		• Maintenance of Transit, Vehicle, Bicycle, and Pedestrian Access – The project sponsor/construction contractor(s) shall meet with Public Works, SFMTA, the San Francisco Fire Department, Muni Operations and other City agencies to coordinate feasible measures to include in the Coordinated Construction Management Plan to maintain access for transit, vehicles, bicycles and pedestrians. This shall include an assessment of the need for temporary transit stop relocations or other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the project. • Carpool, Bicycle, Walk and Transit Access for Construction Workers – The construction contractor shall include methods to encourage carpooling, bicycling, walk and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to-employee ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers). • Construction Worker Parking Plan – The location of construction worker parking shall be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking shall be discouraged. All construction bid documents shall include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on-site, the location, number of parking spaces, and area where vehicles would enter and exit the site shall be required. If off-site parking is proposed to accommodate construction workers, the location of the off-site facility, number of parking spaces	

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		retained, and description of how workers would travel between off-site facility and project site shall be required. • Project Construction Updates for Adjacent Businesses and Residents – To minimize construction impacts on access for nearby institutions and businesses, the project sponsor shall provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and lane closures. At regular intervals to be defined in the Coordinated Construction Management Plan, a regular email notice shall be distributed by the project sponsor that shall provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns. **Mitigation Measure M-C-TR-7b: Construction Truck Deliveries During Off-Peak Periods:** Any construction traffic occurring between 7:00 a.m. and 9:00 a.m. or between 3:30 p.m. and 6:00 p.m. would coincide with peak hour traffic and could temporarily impede traffic and transit flow, although it would not be considered a significant impact. Limiting truck movements to the hours between 9:00 a.m. and 3:30 p.m. (or other times, if approved by SFMTA) would further minimize disruption of the general traffic flow on adjacent streets during the a.m. and p.m. peak periods. As required, the Project Sponsor and construction contractor(s) shall meet with the Sustainable Streets Division of the SFMTA, the San Francisco Fire Department, Muni, and the San Francisco Planning Department to determine feasible measures to reduce traffic congestion, including potential transit disruption, and pedestrian circulation impacts during construction of the project. To minimize cumulative traffic impacts due to project construction, the Project Sponsor shall coordinate	

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		with construction contractors for any concurrent nearby projects that are planned for construction or which later become known. **Mitigation Measure M-C-TR-7c: Construction Management Plan:** In addition to items required in the Construction Management Plan, the project sponsor shall include the following: • Carpool, Shuttle, and Transit Access for Construction Workers – As an improvement measure to minimize parking demand and vehicle trips associated with construction workers, the construction contractor shall include methods to encourage carpooling, shuttle use, and transit use to the project site by construction workers in the Construction Management Plan contracts. • Project Construction Updates – As an improvement measure to minimize construction impacts on nearby businesses, the project sponsor shall provide regularly-updated information (typically in the form of website, news articles, on-site posting, etc.) regarding project construction and schedule, as well as contact information for specific construction inquiries or concerns.	

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Noise			
NO-1: Proposed project or variant construction would generate noise levels in excess of standards and would result in substantial temporary increases in ambient noise levels. *Daytime and Nighttime Construction Noise Impacts*	S	**Mitigation Measure M-NO-1: Prepare and Implement Construction Noise Plan** The project sponsor shall prepare a construction noise plan for review and approval by Planning Department and Department of Building Inspection before permit issuance, demonstrating that daytime and nighttime construction noise resulting from the proposed project or variant will not exceed applicable limits of the noise ordinance and will not cause a temporary increase in ambient noise levels greater than 10 dBA L_{eq}. The plan shall include, and project sponsor's construction contractor(s) shall implement, the following features: • **Stage Concrete Pump Trucks during Daytime along South Van Ness Avenue or Attenuate Truck Noise at Noise Sensitive Receptors** The project sponsor shall (through the construction contractor) stage the use of concrete pump trucks along South Van Ness Avenue adjacent to the project site during daytime construction activities. If it is undesirable to stage concrete pump trucks along South Van Ness Avenue, the project sponsor shall install noise attenuation features around the staging area of the concrete pump trucks in order to attenuate construction noise at the	LTSM

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		closest sensitive receptor at 20 12th Street. • **Prohibit Use of Concrete Pump Trucks at Night at Any Locations that Analysis Shows Fail to Meet Established Noise Levels at Sensitive Receptors** The project sponsor shall (through the construction contractor) prepare a site-specific noise analysis, including measurements at the closest sensitive receptor site, the Civic Center Hotel at 20 12th Street, of noise from concrete pump trucks, showing that use of concrete pump trucks at various locations on or around the project site including along South Van Ness Avenue would not result in interior noise levels above 45 dBA during nighttime hours (8 p.m. to 7 a.m.) at the receptor site. A report presenting the results of this analysis shall be provided to the Department of Building Inspection prior to authorization to conduct nighttime construction activities that would involve the use of any concrete pump trucks, and concrete pump trucks shall be authorized only at the locations on or adjacent to the project site that are shown in the report to meet the 45 dBA interior noise level at the sensitive receptor site. • **Telephone Hotline for Noise Complaint Reporting** The project sponsor (through the construction contractor) shall establish a telephone hotline for use by the public to report any perceived adverse noise conditions associated with construction of the proposed project or variant. If the telephone is not staffed 24 hours per day, the contractor shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This hotline telephone number shall be posted at the project site during construction in a manner and at a location visible to passers-by. This telephone number shall be maintained until the proposed project or variant has been	

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		considered commissioned and is ready for occupancy. • **Investigate and Respond to Noise Complaints** The project sponsor (through the construction contractor) shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The contractor or authorized agent shall implement all of the following measures: - Use a noise complaint resolution form to document and respond to each noise complaint. - Contact the person(s) making the noise complaint within 24 hours. - Conduct an investigation to attempt to determine the source of noise related to the complaint. - Take reasonable measures to reduce noise at its source (or abate the noise along the direct sound path between the source and the receptor of concern) if the source of the noise that has generated the complaint is associated with construction of the proposed project or variant and is found to involve any of the following: o Noise from a construction activity that is causing interior noise levels at a noise-sensitive receptor to exceed 45 dBA during the nighttime hours of 8 pm to 7 am. o Noise levels that exceed 10 dBA above the ambient at noise sensitive receptors To determine if any of the above are met, noise readings shall be taken at the noise sensitive receptor location with the equipment at issue in operation and again with such equipment not in operation.	

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		• **Implement Best Construction Practices** To the extent practical, the construction contractor shall adopt and implement the following typical field techniques for reducing noise from construction activities, to reduce aggregate construction noise levels for nearby noise-sensitive receptors - Unless safety provisions require otherwise, adjust audible backup alarms downward in sound level while still maintaining an adequate signal-to-noise ratio for alarm effectiveness. Consider signal persons, strobe lights, or alternative safety equipment and/or processes as allowed to reduce reliance on high-amplitude sonic alarms/beeps. - Place stationary noise sources, such as generators and air compressors, on the project site as far away from nearby noise-sensitive receptors as possible. - Place non-noise-producing mobile equipment, such as trailers, in the direct sound pathways between suspected major noise-producing sources and noise-sensitive receptors. • **Implement Measures to Reduce Equipment Noise Generation** To the extent practical, the construction contractor shall implement one or more of the following measures for construction equipment selection (or preferences) and expected functions to help reduce noise: - Provide impact noise-producing equipment (i.e., jackhammers and pavement breaker[s]) with noise-attenuating shields, shrouds, or portable barriers or enclosures, to reduce operating noise. - Line or cover hoppers, storage bins, and chutes with sound-deadening material (e.g., apply wood or rubber liners to metal bin	

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		impact surfaces). - Provide upgraded mufflers, acoustical lining, or acoustical paneling for other noisy equipment, including internal combustion engines. - Use alternative procedures of construction and select a combination of techniques that generates the least overall noise and vibration. - Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as the following: o Electric equipment instead of diesel-powered equipment o Hydraulic tools instead of pneumatic tools o Electric saws instead of air- or gasoline-driven saws If insufficient space exists or the construction contractor lacks available resources (such as semi-truck trailers, bulk material storage containers, or field office trailers) to create a noise barrier using non-noise-producing equipment in use at an active construction site as suggested above under Best Construction Practices, the contractor also may employ field-erected temporary noise barriers. Options for such onsite barriers may include using appropriately thick wooden panel walls (at least 0.5 inch thick) that are high enough to block the line of sight from the dominant construction noise source(s) such as the concrete pump trucks to the noise-sensitive receptors. Depending on factors such as barrier height, barrier extent, and distance between the barrier and the noise-producing equipment or activity, such barriers may reduce construction noise by 3–15 dBA at the locations of nearby noise-sensitive receptors. Alternately, field-erected noise curtain assemblies may be installed around specific equipment sites or zones of anticipated mobile or	

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		stationary activity. These techniques will be most effective and practical when the noise source for the construction activity is stationary (e.g., auger or drill operation) and the specific source locations of noise emission are near the ground and can be placed as close to the equipment/activity-facing side of the noise barrier as possible.	
Construction-Related Traffic Noise	LTS	None necessary.	NA
NO-2: Operation of the proposed project or variant would generate noise levels in excess of standards or result in substantial temporary increases in ambient noise levels, above levels existing without the project.			
Onsite Stationary Operational Noise	S	**Mitigation Measure M-NO-2: Require that Exterior Mechanical Equipment Comply with Noise Ordinance Prior to Certificate of Occupancy** After completing installation of the HVAC equipment but before receipt of any Certificate of Occupancy, the project sponsor shall conduct noise measurements to ensure that the noise generated by stationary equipment complies with section 2909 (a) and (d) of the San Francisco Noise Ordinance. The noise measurements shall be conducted by persons qualified in acoustical analysis and/or engineering. The measurements shall demonstrate with reasonable certainty that the project's stationary mechanical equipment will not do either of the following:	LTSM

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		(a) Cause the noise level measured inside any sleeping or living room in a dwelling unit on residential property to exceed 45 dBA with windows open, except where building ventilation is achieved through mechanical systems that allow windows to remain closed (b) Result in an increase in ambient noise levels of 5 dBA or more at the property plane On completion of such testing, the acoustical consultant/acoustical engineer shall submit a memorandum summarizing test results to the San Francisco Planning Department. If measured noise levels are found to exceed these standards, the project sponsor shall be responsible for implementing stationary equipment noise-control measures or other acoustical upgrades such as additional noise insulation in mechanical rooms, until similar measurements of interior sound levels in sleeping or living rooms in residential units after installation of these upgrades demonstrate compliance with the noise ordinance standards above. No Certificate of Occupancy shall be issued for any part of the structure until the standards in the Noise Ordinance are shown to be met.	
Transportation Noise	LTS	None necessary.	NA
NO-3: The proposed project or variant would not generate or result in exposure of persons to excessive groundborne vibration.	LTS	None necessary.	NA
C-NO-1: The proposed project or variant, in combination with past, present, and reasonably	S	Implementation of **Mitigation Measure M-No-1: Prepare and Implement Construction Noise Plan.**	LTSM

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foreseeable future projects, would result in a considerable contribution to significant cumulative construction noise.			
C-NO-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact related to vibration.	LTS	None necessary.	NA
C-NO-3: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to significant cumulative impacts related to operational noise and vibration.	LTS	None necessary.	NA
Air Quality			
AQ-1: The proposed project or variant's construction activities would generate criteria air pollutants and fugitive dust, but would not violate an air quality	LTS	None necessary.	NA

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standard, contribute substantially to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.			
AQ-2: During project operations, the proposed project or variant would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants.	LTS	None necessary.	NA
AQ-3: Construction and operation of the proposed project or variant would generate toxic air contaminants, including diesel particulate matter, at levels which would expose sensitive receptors to substantial air pollutant concentrations.			

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Construction-Related $PM_{2.5}$ Concentrations	S	**Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions** The project sponsor shall comply with the following requirements: A. **Construction Emissions Minimization Plan.** Before a construction permit is issued, the project sponsor shall submit a construction emissions minimization plan to the environmental review officer (ERO) or the ERO's designated representative for review and approval. The construction emissions minimization plan shall detail project compliance with the following requirements: (1) All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements: (a) Where access to alternative sources of power is reasonably available, portable diesel engines shall be prohibited. Where portable diesel engines are required because alternative sources of power are not reasonably available, the portable diesel engine shall meet the requirements of section (A)(1)(b), below. (b) All off-road equipment shall have engines that meet either EPA or ARB tier 4 final off-road emission standards. If engines that comply with tier 4 final off-road emission standards are not commercially available, then the project sponsor shall seek a waiver from this requirement from the ERO and provide the next cleanest piece of off-road equipment as provided by the step-down schedule in Table M-AQ-3-1. i. If seeking a waiver from this requirement, the project	LTSM

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sponsor shall demonstrate that the resulting emissions would not result in the following:

- Annual average construction-related $PM_{2.5}$ emissions in excess of 0.2 $\mu g/m^3$ at off-site sensitive receptor locations and
- The combined cancer risk from construction and operational emissions generated by the project do not exceed an excess cancer risk of 7 per one million persons exposed at off-site sensitive receptor locations

ii. For purposes of this mitigation measure, "commercially available" shall mean the availability of tier 4 final engines taking into consideration factors such as critical-path timing of construction; (ii) geographic proximity to the project site of equipment; and (iii) geographic proximity of access to off-haul deposit sites.

TABLE M-AQ-3-1: OFF-ROAD EQUIPMENT COMPLIANCE STEP-DOWN SCHEDULE

Compliance Alternative	Engine Emissions Standard	Emissions Control
1	Tier 4 Interim	N/A
2	Tier 3	ARB verified diesel emissions control strategy
3	Tier 2	ARB verified diesel emissions control strategy

How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance

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		Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met. (c) Renewable diesel shall be used to fuel all diesel engines unless it can be demonstrated to the environmental review officer that such fuel is: (1) not compatible with on-road or off-road engines, (2) that emissions from the transport of fuel to the project site will offset its emissions reduction potential, or (3) the fuel is not commercially available. (2) The project sponsor shall require in its construction contracts that the idling time for off-road and on-road equipment be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, and Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit. (3) The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer's specifications. (4) The construction emissions minimization plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include but are not limited to equipment	

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		type, equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For verified diesel emissions control strategy installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. (5) The project sponsor shall keep the construction emissions minimization plan available for public review onsite during working hours. The project sponsor shall post at the perimeter of the project site a legible and visible sign summarizing the requirements of the plan. The sign shall also state that the public may ask to inspect the construction emissions minimization plan at any time during working hours, and shall explain how to request inspection of the plan. Signs shall be posted on all sides of the construction site that face a public right-of-way. The project sponsor shall provide copies of the construction emissions minimization plan to members of the public as requested. B. **Reporting.** Quarterly reports shall be submitted to the ERO or the ERO's designated representative indicating the construction phase and off-road equipment information used during each phase, including the information required in A(4). (1) Within six months of the completion of construction activities, the project sponsor shall submit to the ERO or the ERO's designated representative a final report summarizing construction activities. The final report shall indicate the start	

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		and end dates and duration of each construction phase. For each phase, the report shall include detailed information required in A(4). C. **Certification Statement and Onsite Requirements.** Before the start of construction activities, the project sponsor must certify that it is in compliance with the construction emissions minimization plan, and that all applicable requirements of the plan have been incorporated into contract specifications.	
Operational $PM_{2.5}$ Concentrations	LTS	None necessary.	NA
Cancer Risk	S	Implementation of **Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions**, above **Mitigation Measure M-AQ-3b: Implement Best Available Control Technology for Operational Diesel Generators** The project sponsor shall require in applicable contracts that the operational backup diesel generator: (1) Comply with ARB Airborne Toxic Control Measure emissions standards for model year 2008 or newer engines; and (2) Meet tier 4 final emissions standards; and (3) Be fueled with renewable diesel. The project sponsor shall submit documentation of compliance with the BAAQMD New Source Review permitting process (regulation 2, rule 2, and regulation 2, rule 5) and the emissions standard requirement of this measure to the San Francisco Planning Department for review and approval before a permit for a	LTSM

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		backup diesel generator is issued by any City agency. Once operational, the diesel backup generator shall be maintained in good working order for the life of the equipment and any future replacement of any diesel backup generators shall be required to be consistent with these emissions specifications. The operator of the facility at which the generator is located shall maintain records of the testing schedule for each diesel backup generator for the life of that diesel backup generator. The facility operator shall provide this information for review to the San Francisco Planning Department within three months of a request for such information.	
AQ-4: The proposed project or variant would not generate emissions that create objectionable odors affecting a substantial number of people.	LTS	None necessary.	NA
AQ-5: The proposed project or variant would not conflict with or obstruct implementation of the 2017 Bay Area Clean Air Plan.	LTS	None necessary.	NA
C-AQ-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to cumulative	LTS	None necessary.	NA

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regional air quality impacts.			
C-AQ-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would contribute to cumulative health risk impacts on sensitive receptors.	S	Implementation of Mitigation Measures M-AQ-3a: Minimize Off-Road Construction Equipment Emissions and M-AQ-3b: Implement Best Available Control Technology for Operational Diesel Generators	LTSM
Wind			
WI-1: The proposed project or variant would not alter wind in a manner that would substantially affect public areas in the vicinity of the project site.	LTS	None necessary.	NA
C-WI-1: The proposed project or variant, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that would make a cumulatively considerable contribution to a significant cumulative wind impact.	S	**Mitigation Measure M-C-WI-1: Design Measures to Reduce Cumulative Off-Site Wind Impacts** The project sponsor shall retain a qualified wind consultant to prepare, in consultation with the San Francisco Planning Department (planning department), a wind impact mitigation report that identifies design measures to reduce the project's contribution to off-site wind impacts in the cumulative-plus-project setting, based on best available information ("the wind report"). Prior to the final addenda approval by the Department of Building Inspection (DBI), the project sponsor shall submit the wind report to the planning department for its review and approval. The wind report shall incorporate updated information on cumulative	SUM

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		development in the area and shall contain a list of potential wind reduction design measures, along with the estimated effectiveness of each measure to reduce the identified cumulative off-site wind hazards. Such wind reduction design measures may include additional on-site landscaping, or equivalent wind-reducing features; and off-site wind reduction measures such as landscaping, streetscape improvements or other wind-reducing features, such as wind screens. The project sponsor shall implement as many of the design measures identified in the wind report as needed to reduce the project's contribution to identified cumulative offsite wind hazards. The planning department shall approve the final list of wind reduction measures that the project sponsor shall implement.	
Shadow			
SH-1: The proposed project or variant would not alter shadows in a manner that would substantially affect public areas or outdoor recreation facilities.	LTS	None necessary.	NA
SH-2: The proposed project or variant would not substantially shade outdoor recreation facilities or other public areas, such as streets and sidewalks that are not under the jurisdiction of the San Francisco Recreation and Park	LTS	None necessary.	NA

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Commission.			
C-SH-1: The proposed project or variant in combination with past, present, and reasonably foreseeable future projects in the project area would not create new shadow in a manner that would substantially affect outdoor recreation facilities or other public areas. The proposed project would not make a cumulatively considerable contribution to a significant cumulative shadow impact.	LTS	None necessary.	NA

Table S.2: Summary of Significant Impacts of Proposed Project Identified in the Initial Study

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Legend: NI = No Impact; LTS = Less than Significant; LTSM = Less than Significant with mitigation; S = Significant; SU = Significant and unavoidable; SUM = Significant and unavoidable with mitigation; NA = Not Applicable			
Cultural Resources			
CR-2: The proposed project or variant's construction could cause a substantial adverse change in the significance of an unknown archeological resource.	S	**Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring** Based on a reasonable presumption that archeological resources may be present within the project area, 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 rotational qualified archeological consultants list maintained by the Planning Department archeologist. The project sponsor shall contact the department archeologist to obtain the names and contact information for the next three archeological consultants on the qualified archeological consultants list. 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 at the direction of the Environmental Review Officer (ERO). 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 4 weeks. At the direction of the ERO, the suspension of construction can be extended beyond 4 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) and 15064.5(c).	LTSM

Table S.2: Summary of Significant Impacts of Proposed Project Identified in the Initial Study

Impact	Level of Significance before Mitigation	Mitigation and Improvement Measures	Level of Significance after Mitigation
Legend: NI = No Impact; LTS = Less than Significant; LTSM = Less than Significant with mitigation; S = Significant; SU = Significant and unavoidable; SUM = Significant and unavoidable with mitigation; NA = Not Applicable			
		Consultation with Descendant Communities. On discovery of an archeological site[1] associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group, an appropriate representative[2] of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the final archeological resources report shall be provided to the representative of the descendant group. **Archeological Testing Program.** The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing program (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	

[1] The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

[2] An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the department archeologist.

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Impact	Level of Significance before Mitigation	Mitigation and Improvement Measures	Level of Significance after Mitigation

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		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. No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. 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 redesigned 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 monitoring program shall minimally include the following provisions: • The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the archeological monitoring program reasonably before the commencement of any project-related soil-disturbing activities. The ERO in consultation with the archeological	

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		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), and site remediation shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context. • 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 the 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), 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	

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		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.	

Table S.2: Summary of Significant Impacts of Proposed Project Identified in the Initial Study

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		• **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 onsite/offsite 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 soil-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 Native American Heritage Commission, which shall appoint a Most Likely Descendant (California Public Resources Code section 5097.98). The archeological consultant, the project sponsor, ERO, and the Most Likely Descendant shall have up to but not beyond six days of discovery	

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		to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines section 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. Nothing in existing state regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of a Most Likely Descendant. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such an agreement has been made or, otherwise, as determined by the archeological consultant and the ERO. **Final Archeological Resources Report.** The archeological consultant shall submit a draft final archeological resources report 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 final archeological resources report shall be distributed as follows: California Archeological Site Inventory, Northwest Information Center shall receive one copy and the ERO shall receive a copy of the transmittal of the report to the Northwest Information Center. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the final archeological resources report along with copies of any formal site	

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Impact	Level of Significance before Mitigation	Mitigation and Improvement Measures	Level of Significance after Mitigation

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		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.	
CR-3: The proposed project or variant's construction could disturb human remains, including those interred outside of formal cemeteries.	S	Implementation of **Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring**	LTSM
CR-4: The proposed project or variant's construction could cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074.	S	Implementation of **Mitigation Measure M-CR-2: Tribal Cultural Resources Interpretive Program** If the ERO determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned to avoid any adverse effect on the significant tribal cultural resource, if feasible. If the ERO, in consultation with the affiliated Native American tribal representatives and the project sponsor, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the project sponsor shall implement an interpretive program of the tribal cultural resource in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the ERO would be required to guide the interpretive program. The plan shall identify, as appropriate, proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or	LTSM

Table S.2: Summary of Significant Impacts of Proposed Project Identified in the Initial Study

Impact	Level of Significance before Mitigation	Mitigation and Improvement Measures	Level of Significance after Mitigation

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		installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifact displays and interpretation, and educational panels or other informational displays.	
C-CR-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would result in cumulative impacts to archeological resources, tribal cultural resources, and human remains.	S	Implementation of **Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring** and **Tribal Cultural Resources Interpretive Program**	LTSM
Geology and Soils			
GE-5: Construction activities for the proposed project or variant would directly or indirectly result in damage to, or destruction of, as-yet unknown paleontological resources or sites, should such resources, sites, or features exist on or beneath the project site.	S	**Mitigation Measure M-GE-6: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources** Before ground disturbance, the project sponsor shall retain a qualified paleontologist, as defined by the Society of Vertebrate Paleontology, to instruct construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance of fossils that may be unearthed during construction, and proper notification procedures should fossils be encountered. A qualified paleontologist shall monitor construction activities in the areas where construction activities have the potential to disturb previously undisturbed native sediment or sedimentary rocks. Construction shall be halted within 50 feet of any potential fossil find and a qualified paleontologist notified, who shall evaluate the significance. If paleontological resources are discovered during earthmoving activities, the	LTSM

Table S.2: Summary of Significant Impacts of Proposed Project Identified in the Initial Study

Impact	Level of Significance before Mitigation	Mitigation and Improvement Measures	Level of Significance after Mitigation

Legend: NI = No Impact; LTS = Less than Significant; LTSM = Less than Significant with mitigation; S = Significant; SU = Significant and unavoidable; SUM = Significant and unavoidable with mitigation; NA = Not Applicable

		construction crew shall immediately cease work in the vicinity of the resource and notify the project sponsor and San Francisco Planning Department. There shall be no construction work in the area to allow for the recovery of the resource in a timely manner. A qualified paleontologist shall evaluate the resource and prepare a recovery plan compliant with the standards of the Society for Vertebrate Paleontology. The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. The City and County of San Francisco shall determine which of the recommendations in the recovery plan are necessary and feasible, and these recommendations shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. The City shall be responsible for ensuring that the qualified paleontologist's recommendations regarding treatment and reporting are implemented.	

S.3 SUMMARY OF THE PROJECT ALTERNATIVES

As evaluated and identified in Section 4.1, Cultural Resources (Historic Architectural), for the proposed project and variant, demolition of the existing building at 10 South Van Ness Avenue would result in a significant and unavoidable impact on the historical resource. Thus, in developing the alternatives to be analyzed in this EIR, the planning department has considered a range of feasible design configurations and development programs that could avoid or lessen the significant impact on the historical resource, while optimizing the development potential on the project site.

The EIR evaluates five alternatives: the No Project Alternative – Alternative 1 (as required by CEQA Guidelines section 15126.6(e)); the Proposed Project Full Preservation Alternative – Alternative 2; the Proposed Project Partial Preservation Alternative – Alternative 3; the Variant Full Preservation Alternative – Alternative 4; and Variant Partial Preservation Alternative – Alternative 5. These alternatives are summarized below, and **Table S.3: Comparison of the Proposed Project and Variant to the Alternatives**, presents a comparison of the characteristics and potential significant impacts of the proposed project and variant to those of the alternatives. The environmentally superior alternative is discussed on pp. S.59–5.60. Detailed descriptions of the alternatives are given in Chapter 5, Alternatives.

As with the proposed project and variant, the straight-shot streetscape option could be implemented with any of the alternatives summarized here and studied in Chapter 5. There are no significant environmental impacts identified for the straight-shot streetscape option that would be different from, or unique to, that option. As such, no further analysis of the straight-shot streetscape option in the context of these alternatives is necessary.

Table S.3: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

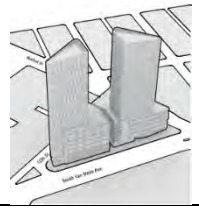
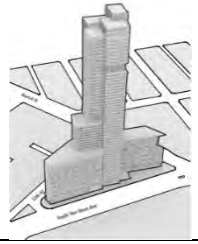
	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
							
Retail/Commercial (gsf)	91,088	30,350	64,900	31,400	30,450	64,400	28,100
Residential (gsf)	–	935,745	435,700	707,600	935,250	619,900	770,300
Parking (gsf)	–	102,000	47,900	73,500	101,992	65,000	78,400
Total gsf[1]	91,088	1,071,095	548,500	812,500	1,072,989	749,300	876,800
Residential (nsf)	–	671,380	295,700	486,200	696,468	430,100	543,700
Tower Efficiency[2]	–	73% North Tower/72% South Tower	72%	72% North Tower/68% South Tower	77%	74%	73%
Net Unit Size	–	682	682	682	682	702	702
Dwelling Units							
Studio		*375*	*166*	*272*	*347*	*213*	*270*
1 Bedroom		*461*	*203*	*334*	*449*	*276*	*349*
2 Bedroom		*100*	*44*	*72*	*166*	*102*	*129*
3 Bedroom		*48*	*21*	*35*	*22*	*14*	*17*
Total Units		984	434	713	984	605	765
Parking Spaces	–	518	239	367	518	325	392
Bicycle Spaces							
Class 1		*336*	*192*	*257*	*325*	*235*	*270*
Class 2		*61*	*33*	*48*	*61*	*41*	*49*
Total		386	225	305	386	276	319

Table S.3: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
Podium Height (Max.)	–	114 Feet North Podium/120 Feet South Podium	120 Feet Podium	120 Feet Podium	139 Feet Podium/164 Feet Podium (120 Feet Average)	120 Feet Podium	120 Feet Podium
Building Height	30 – 45 Feet	400 Feet	400 Feet	400 Feet	590 Feet	590 Feet	590 Feet
Stories	2	41	41	41	55	55	55
Existing GSF Retained	91,088 plus All Façades	–	59,400 plus North Façades	North Façades	–	59,400 plus North Façades	North Façades
Excavation Required (yd^3)	–	100,000 (Full Site)	50,000 (Partial Site[3])	70,000 (Full Site)	100,000 (Full Site)	60,000 (Partial Site[3])	80,000 (Full Site)
Ability to Meet Project Sponsor's Objectives?	No	Yes	Most	Most	Yes	Most	Most
Comparison of Significant Impacts							
Cultural Resources (Historic Architectural)							
CR-1: The proposed demolition of the building at 10 South Van Ness Avenue would cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5 of the CEQA Guidelines.	None	SUM	LTS	SUM	SUM	LTS	SUM

Table S.3: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
Transportation and Circulation – Cumulative Construction Impacts							
C-TR-7: The duration and magnitude of temporary construction activities for the proposed project, the variant, or the straight-shot streetscape option, in combination with construction of past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in a significant cumulative impact from potentially hazardous conditions to which the proposed project or variant would contribute considerably.	None	SUM	SUM	SUM	SUM	SUM	SUM
Noise							
NO-1: Proposed project or variant construction would generate noise levels in excess of standards and would result in substantial temporary increases in ambient noise levels.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM

Table S.3: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
NO-2: Operation of the proposed project or variant would generate noise levels in excess of standards or result in substantial temporary increases in ambient noise levels, above levels existing without the project.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM
C-NO-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects, would result in a considerable contribution to significant cumulative construction noise.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM
Air Quality							
AQ-3: Construction and operation of the proposed project or variant could generate toxic air contaminants, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentrations. (Less than significant with mitigation)	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM

Table S.3: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
C-AQ-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would contribute to cumulative health risk impacts on sensitive receptors.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM
Wind							
C-WI-1: The proposed project or variant, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that would make a cumulatively considerable contribution to a significant cumulative wind impact.	None	SUM	SUM	SUM	SUM	SUM	*SUM*

Notes:

[1] Total gsf includes parking gsf and excludes rooftop mechanical.

[2] A typical residential tower has an efficiency factor of 70–80%, assuming a typical residential core.

[3] Size and geometry of basement levels create highly inefficient layouts and may not be able to accommodate parking, bicycle parking, and necessary infrastructure.

Source: Page & Turnbull, Inc., *10 South Van Ness Avenue Preservation Alternatives Report*, Revised Final, January 30, 2018, prepared for 10 SVN, LLC.

No Project Alternative – Alternative 1

Under the No Project Alternative, the existing structure and use of the project site would not change and the existing physical conditions, as described in detail for each environmental topic in Chapter 4, Environmental Setting and Impacts, would remain the same. The existing building would remain along with the existing ingress and egress points, and the proposed project or variant would not be constructed. As such, the proposed housing units, commercial square footage, parking, and streetscape improvements would not be implemented.

Under the No Project Alternative, none of the impacts associated with the proposed project or variant, as described in Chapter 4, would occur. The No Project Alternative would have no significant and unavoidable impacts related to historical resources, or cumulative impacts related to transportation (during construction) or wind; would have no impacts related to transportation and circulation, air quality, noise, or shadow; would have no impacts related to topics determined in the initial study to be either less than significant or less than significant with mitigation under the proposed project or variant; and would not require mitigation measures. However, development and growth would continue in the vicinity of the project site as reasonably foreseeable future projects are approved, constructed, and occupied. These projects could contribute to cumulative impacts in the vicinity, but under the No Project Alternative, land use activity on the project site would not contribute to these cumulative impacts beyond existing levels.

Proposed Project Full Preservation Alternative – Alternative 2

Under the Proposed Project Full Preservation Alternative (Alternative 2), the existing building at 10 South Van Ness, a historical resource, would undergo some changes but it would retain all of its exterior and interior character-defining features. The single-tower design of Alternative 2 would preserve the adjacent historical resource by maintaining the historically significant ballroom on the northern portion of the project site, including its concrete construction, orientation, footprint, massing, facades, windows, and detailing. The non-contributing southern garage addition portion of the existing building would be demolished and a new mixed-use building would be constructed in its place. The new building would include an approximately 548,500-gross-square-foot, 41-story single tower (400-feet-tall plus an additional 20 feet for roof screens and elevator penthouses) constructed with a trapezoidal footprint situated over a 120-foot-tall podium. Construction of the single tower would avoid the need for deep excavation surrounding the existing building because the existing building would be retained in place, while still adhering to the load requirements above the Bay Area Rapid Transit (BART) easement at the north end of the project site.

The Proposed Project Full Preservation Alternative would provide more retail and/or commercial space square footage than the proposed project or variant would (see Table S.3, p. S.51) because

the existing building would be devoted to retail/commercial uses (the second floor would not be suitable for residential use) and both the historic building and the new building would include active ground-floor uses.[3] Overall, Alternative 2 would provide a total of about 64,900 gross square feet of retail and/or commercial space, with ground-floor access along Market Street, South Van Ness Avenue, 12th Street, and the newly created mid-block passage that would be aligned south of the historical resource building. The historic building would provide a total of about 59,400 gross square feet of retail and/or commercial space, with no residential uses. The new building would include approximately 435,700 gross square feet of residential use on the upper floors of the tower, with a total of 434 residential units (166 studio, 203 one-bedroom, 44 two-bedroom, and 21 three-bedroom).

By retaining the existing historic building, the Proposed Project Full Preservation Alternative would avoid the significant and unavoidable impact related to demolition of a historical resource that would occur with the proposed project. Therefore, there would be no significant impact related to historic architectural resources, and Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse, identified for the proposed project, would not apply.

As with the proposed project, the alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic) and cumulative wind conditions, and less-than-significant impacts (with mitigation where required) related to air quality, noise, other transportation subtopics, and shadow.

Proposed Project Partial Preservation Alternative – Alternative 3

The purpose of the Proposed Project Partial Preservation Alternative is to consider a project that would lessen the significant impacts of the proposed project on the existing historical resource while accommodating more of the land development program than the Proposed Project Full Preservation Alternative would. The Proposed Project Partial Preservation Alternative would retain historically significant portions of the existing building at 10 South Van Ness Avenue and adapt the property for residential use by adding two new buildings. Although all interior character-defining features would be removed, the only main exterior character-defining feature that would be partially compromised is the massing. The majority of the exterior character-defining features would be retained, including the concrete walls, orientation, footprint, façades, windows, and detailing.

[3] The second floor of the historic building would not be suitable for residential use because the potential reuse of the ballroom as a performance venue would be incompatible with residential use. Additionally, the floor plate dimension of the historic building (approximately 150 feet by 200 feet wide) is unsuitable for residential layout, as there would need to be major penetration with a light well in the structure to provide required light and air for residential use. This would involve the loss of interior character-defining features of the historic building.

The Proposed Project Partial Preservation Alternative would involve the construction of two new towers (the north tower and the south tower) and would partially retain the historic building on site. The two new towers would both be 41 stories and 400 feet tall (420 feet total, including roof screens and elevator penthouses) constructed above a 120-foot-tall podium. The north tower would incorporate the historic façades portion of the historical resource and would have a much smaller trapezoidal footprint that would be situated above the southeastern portion of the podium. The south tower would have a podium with a triangular footprint and a tower with a smaller triangular footprint situated above the southern wedge portion of the podium. The north and south podiums would be separated by the mid-block passage at the ground and second floors and connected on the upper podium floors.

The Proposed Project Partial Preservation Alternative would have a total of approximately 812,500 gross square feet (including parking and excluding rooftop mechanical). The two new buildings under the Proposed Project Partial Preservation Alternative would have a total of about 31,400 gross square feet of retail and/or commercial space on the ground floor with access along Market Street, South Van Ness Avenue, 12th Street. There would be about 707,600 gross square feet (486,200 net square feet) of residential uses across both buildings on the upper floors (also including residential lobbies on the ground floor), with a total of 713 residential units (272 studio, 334 one-bedroom, 72 two-bedroom, and 35 three-bedroom units).

Below grade, the buildings would be connected via a two-level parking garage/basement, accessed from 12th Street, with about 73,500 gross square feet of parking with 367 parking spaces (in stackers) and 257 class 1 bicycle parking spaces. Forty-eight class 2 bicycle parking spaces would also be provided on the sidewalk. As with the proposed project and variant, the garage/basement would include off-street loading spaces.

Like the proposed project, the Proposed Project Partial Preservation Alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic) and cumulative wind conditions, and less-than-significant impacts related to noise, other transportation subtopics, air quality, and shadow (with mitigation where mitigation is identified).

Alternative 3 would also not avoid the significant and unavoidable impact on historical resources, since the historic interior, including the ballroom, the southeast wall, and the roof of the historic north portion of the resource, would be demolished, resulting in a significant and unavoidable impact with mitigation. If Alternative 3 is chosen, mitigation measures for this alternative would be tailored to ensure that the Secretary of the Interior's Standards for documentation of historical resources are met.

Variant Full Preservation Alternative – Alternative 4

The purpose of Alternative 4 is to consider a plan that would lessen the significant impacts of the proposed variant on the existing historical resource. Alternative 4 would retain the significant

portions of the existing historic building at 10 South Van Ness Avenue and adapt the property for residential use by adding a new building on the southern portion of the site. The alternative would retain all character-defining features of the historic building. Alternative 4 would include a 55-story single tower (590-feet-tall plus an additional 20 feet for roof screens and elevator penthouses) constructed with a trapezoidal footprint situated over a 120-foot-tall podium with a triangular footprint. The single tower design would preserve the adjacent historical resource, since construction of the single tower avoids the need for deep excavation surrounding the existing building while still adhering to the BART easement at the north end of the site. The façades of the new building would be clad in modern materials, such as steel and glazing.

The Variant Full Preservation Alternative would provide more retail and/or commercial space square footage than the variant (see Table S.3, p. S.51) because the existing building would be devoted to retail/commercial uses (the second floor would not be suitable for residential use) and both the historic building and the new building would include active ground-floor uses. Overall, Alternative 4 would provide a total of about 64,400 gross square feet of retail and/or commercial space, with ground-floor access along Market Street, South Van Ness Avenue, 12th Street, and the newly created mid-block passage that would be aligned south of the existing historical resource. The historic building would be used for retail and/or commercial space, with no residential uses. Under the Variant Full Preservation Alternative, the new building would include approximately 619,900 gross square feet of residential use on the upper floors of the tower, with a total of 605 residential units (213 studio, 276 one-bedroom, 102 two-bedroom, and 14 three-bedroom).

By retaining the existing historic building, the Variant Full Preservation Alternative would avoid the significant and unavoidable impact related to the demolition of this historical resource. Unlike the variant, there would be no significant impact related to historic architectural resources, and Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse would not apply.

As with the variant, the Variant Full Preservation Alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic) and cumulative wind conditions, and less-than-significant impacts related to air quality, noise, other transportation subtopics, and shadow (with mitigation where measures are identified).

Variant Partial Preservation Alternative – Alternative 5

The purpose of the Variant Partial Preservation Alternative is to consider a project that would lessen the significant impacts of the variant on the existing historical resource. It would partially retain the historic building on site while accommodating more of the land development program than the Proposed Project Partial Preservation Alternative. Although all interior character-defining features would be removed, the character-defining features of the building's exterior

would be partially retained, including the concrete walls, orientation, footprint, façades, windows, and detailing.

With the Variant Partial Preservation Alternative, a new tower would be constructed on the southern portion of the project site. The new tower would be 55 stories and 590 feet tall (610 feet including roof screens and elevator penthouses) constructed above a 120-foot-tall podium, with a triangular footprint. In the northern portion of the project site, the podium would be retained and would incorporate the historic façades of the historical resource. The north and south podiums would be separated by a mid-block passage.

The Variant Partial Preservation Alternative would have a total of approximately 876,800 gross square feet (including parking and excluding rooftop mechanical). The new building would have a total of about 28,100 gross square feet of retail and/or commercial space on the ground floor with access along Market Street, South Van Ness Avenue, and 12th Street. There would be about 770,300 gross square feet (543,700 net square feet) of residential use across both buildings on the upper floors (also including residential lobbies on the ground floor), with a total of 765 residential units (270 studio, 349 one-bedroom, 129 two-bedroom, and 17 three-bedroom units).

Below grade, the building would include a two-level parking garage/basement, accessed from 12th Street, with about 78,400 gross square feet of parking with 392 parking spaces (in stackers) and space for 270 Class 1 bicycle parking spaces. Forty-nine Class 2 sidewalk bicycle parking spaces would also be provided on the sidewalk. As with the variant, the garage/basement would include off-street loading spaces.

Like the variant, the Variant Partial Preservation Alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic), and cumulative wind conditions, and less-than-significant impacts related to noise, other transportation subtopics, air quality, and shadow (with mitigation measures where identified).

Alternative 5 would not avoid the significant and unavoidable impact on historical resources, since the historic interior, including the ballroom, the southeast wall, and the roof of the historic north portion of the resource, would be demolished, thus resulting in a significant and unavoidable impact with mitigation measures. If Alternative 5 is chosen, mitigation measures for this alternative would be tailored to ensure that the Secretary of the Interior's Standards for documentation of historical resources are met.

Environmentally Superior Alternative

Pursuant to CEQA Guidelines section 15126.6(e)(2), an EIR is required to identify the environmentally superior alternative (the alternative that has the fewest environmental impacts) from among the alternatives evaluated if the proposed project or variant has significant impacts that cannot be mitigated to a less-than-significant level.

The No Project Alternative would not result in any change to existing environmental conditions. This alternative is considered the overall environmentally superior alternative, because the significant impacts associated with implementation of the proposed project or variant would not occur with the No Project Alternative. If the No Project Alternative is found to be the environmentally superior alternative, CEQA requires selection of the "environmentally superior alternative other than the no project alternative" from among the other alternatives.

Here, Alternative 2, the Proposed Project Full Preservation Alternative, would be the environmentally superior alternative to the proposed project. Alternative 4, the Variant Full Preservation Alternative, would be the environmentally superior alternative to the variant. Either of these full preservation alternatives would avoid a significant impact resulting from the demolition of the 10 South Van Ness historical resource. They would also result in the least intensive trip generation among all of the remaining alternatives, and would create the least shadow on public spaces. However, Alternatives 2 and 4 would still contribute to cumulatively considerable wind and construction transportation impacts.

S.4 AREAS OF KNOWN CONTROVERSY AND ISSUES TO BE RESOLVED

On the basis of public comments on the Notice of Preparation of an EIR (Appendix A to this EIR), and initial study (Appendix B to this EIR) potential areas of controversy for the proposed project include the following:

- Vehicular access
- Transportation impact study
- Encroachment permit
- Parking
- Public transportation
- Building height
- Open space
- Wind
- Unit mix
- Design options
- Loading and transportation network companies
- Vehicle miles traveled
- Cumulative impacts
- Bicycle transportation
- Access to public scoping meeting
- Pedestrian transportation mode and safety
- Loading and transportation network companies
- Housing supply and affordability
- Traffic and private shuttle buses
- Parking garage hours

- Truck traffic
- Housing supply and demand
- Cultural resources mitigation

See **Chapter 1, Introduction**, pp. 1.4-1.6, for a list of issues raised by comments on the NOP/IS and where those issues are addressed in the EIR.

1. INTRODUCTION

1.1 PROJECT SUMMARY

This environmental impact report (EIR) analyzes the potential environmental effects associated with the 10 South Van Ness Avenue Mixed-Use Project (proposed project). 10 SVN, LLC, the project sponsor, proposes to redevelop the property located on the southwest corner of the intersection of Van Ness Avenue and Market Street in central San Francisco. The project site is privately owned by 10 SVN, LLC, (the project sponsor) and totals approximately 1.17 acres. The proposed project would involve construction of two 400-foot-tall,[1] 41-story-over-podium buildings containing a total of 984 dwelling units, retail space on the ground floor, and two levels of underground parking. The project site would be developed in a single phase and would also include open space uses.

A variant is proposed in addition to the proposed project. The variant would involve construction of one 590-foot-tall,[2] 55-story tower over a podium structure, which would contain 984 dwelling units, ground-floor retail space, and two levels of underground parking. Either the proposed project or the variant would include a mid-block alley. The alley would be open air and accessible to the public and would serve as a pedestrian connection across the site (from South Van Ness Avenue to 12th Street under the proposed project or from Market Street to 12th Street under the variant).

Both the proposed project and the variant would involve improvements to 12th Street that are consistent with the base requirements of the Better Streets Plan. In addition, the project sponsor is considering an alternate set of improvements to 12th Street (referred to as the "straight-shot streetscape option" in this EIR) for both the proposed project and variant that would extend the eastern sidewalk and pedestrian promenade adjacent to the project site from 15 to 40 feet in width on 12th Street. Under this option, the western sidewalk on 12th Street would be expanded to a width of 18 feet. There would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction. Both proposed 12th Street options (the base option and the straight-shot streetscape option) were developed in coordination with 10 SVN, LLC, the San Francisco Planning Department (planning department), the San Francisco Municipal Transportation Agency, and the project sponsor for the adjacent 1629 Market Street Project and 30 Otis Street

[1] Including roof screens and elevator penthouses, the two buildings constructed under the proposed project would each be a total of 420 feet tall.

[2] Including roof screens and elevator penthouses, the building constructed under the variant would be a total of 610 feet tall.

Project, to create a *"living street."*[3] It would be located on 12th Street between Market Street and South Van Ness Avenue. (See Chapter 2, Project Description, for a complete project description.)

1.2 PURPOSE OF THIS EIR

This EIR for the proposed project was prepared in accordance with, and complies with, all criteria, standards, and procedures of the California Environmental Quality Act (CEQA), as amended (California Public Resources Code section 21000 et seq.); the CEQA Guidelines (California Code of Regulations title 14, section 15000 et seq.); and chapter 31 of the San Francisco Administrative Code. In accordance with CEQA section 21067 and sections 15367 and 15050–15053 of the CEQA Guidelines, the City and County of San Francisco (City) is the lead agency under whose authority this document has been prepared.

As described by CEQA and in the CEQA Guidelines, public agencies are charged with the duty to avoid or substantially lessen significant environmental effects, where feasible. In undertaking this duty, a public agency has an obligation to balance a proposed project's significant effects on the environment with its benefits, including economic, social, technological, legal, and other nonenvironmental characteristics.

As defined in CEQA Guidelines section 15382, a "significant effect on the environment" is:

> … a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

CEQA states that before a discretionary decision can be made to approve a project that may cause a significant effect on the environment that cannot be mitigated, an EIR must be prepared. The EIR is a public information document for use by governmental agencies and the public to identify and evaluate the potential environmental impacts of a project, to identify mitigation measures to lessen or eliminate significant adverse impacts, and to examine feasible alternatives to the project. The City must consider the information in this EIR and make certain findings with respect to each significant effect identified. The decision-makers will review and consider the information in this EIR, along with other information available during the public review process, before they decide to approve, disapprove, or modify the proposed project, or to adopt an alternative to the proposed project.

[3] A "living street" or "living alley" is an alley into which special paving, traffic calming, lighting, seating, greening, and other elements are introduced to create a shared space that prioritizes pedestrian access over vehicle use. More information is available at http://www.sfbetterstreets.org/find-project-types/reclaiming-roadway-space/living-alleys/ (accessed June 23, 2017).

1.3 TYPE OF EIR

This document is a project-level EIR pursuant to CEQA Guidelines section 15161. A project-level EIR focuses on the changes in the environment that would result from construction and operation of a specific development project.

Furthermore, this EIR is a focused EIR pursuant to CEQA Guidelines section 15063(c). An initial study was prepared for the proposed project in accordance with section 15128 (see Appendix B of this EIR) and issued for public review on May 2, 2018. The initial study identified the topics for which the proposed project would result in less-than-significant impacts and therefore do not require further analysis, and the topics warranting more detailed environmental analysis in the EIR. Thus, this EIR focuses the environmental analysis on those topics identified in the initial study with the potential to have significant environmental impacts.

An EIR is an informational document used by a lead agency (in this case, the City) when considering approval of a project. The purpose of an EIR is to provide public agencies and members of the public with detailed information regarding the environmental effects of implementing a proposed project. An EIR should analyze a project's environmental consequences, identify ways to reduce or avoid the project's potential environmental effects, and identify alternatives to the project that can avoid or reduce impacts. This EIR provides information to be used in the planning and decision-making process. It is not the purpose of an EIR to recommend approval or denial of a project.

Before it can approve the project, the City, as the lead agency and decision-making entity, must certify that this EIR has been completed in compliance with CEQA, that the information in the EIR has been considered, and that the EIR reflects the City's independent judgment. CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental consequences. If environmental impacts are identified as significant and unavoidable, the City may still approve the project if it finds that social, economic, or other benefits outweigh the unavoidable impacts. The City would then be required to state in writing the specific reasons for approving the project, based on information in the EIR and other information sources in the administrative record. This reasoning is called a "statement of overriding considerations" (Public Resources Code section 21081; CEQA Guidelines section 15093).

In addition, the City must adopt a mitigation monitoring and reporting program describing the measures that were made a condition of project approval to avoid or mitigate significant effects on the environment (Public Resources Code section 21081.6; CEQA Guidelines section 15097). The mitigation monitoring and reporting program is adopted at the time of project approval and is designed to ensure compliance with the project description and EIR mitigation measures during and after project implementation. If the City decides to approve the project, it will be responsible

for verifying that the mitigation monitoring and reporting program for this project is implemented.

The EIR will be used primarily by the City during approval of future discretionary actions and permits.

1.4 CEQA ENVIRONMENTAL REVIEW PROCESS

Notice of Preparation and Public Scoping Process

In accordance with sections 15063 and 15082 of the CEQA Guidelines, the San Francisco Planning Department sent a Notice of Preparation of an Environmental Impact Report and Public Scoping Meeting (NOP) regarding the proposed project to responsible and trustee agencies and interested entities and individuals on July 12, 2017, thus beginning the formal CEQA scoping process. The purpose of the scoping process is to allow the public and government agencies to comment on the issues and provide input on the scope of the EIR. The mailing list for the NOP included federal, state, and local agencies; regional and local interest groups; and property owners within 300 feet of the project site.

Pursuant to section 15083 of the CEQA Guidelines, the planning department held a public scoping meeting on August 2, 2017, starting at 6 p.m. at 1 South Van Ness Avenue in San Francisco. Attendees were given an opportunity to provide comments and express concerns about the potential effects of the project. four people spoke at the scoping meeting. The scoping period began on July 12, 2017, and ended on August 11, 2017.

Comments on the Notice of Preparation

Twelve comment letters, comment cards, and emails were received during the public scoping period. **Table 1.1: Summary of EIR Scoping Comments** summarizes the environmental concerns raised in these written communications. The table also cross-references the applicable EIR sections that address these comments.

Table 1.1: Summary of EIR Scoping Comments

Commenter	Comment Topic(s)	Coverage in the EIR
California Department of Transportation	Vehicular access Transportation impact study Encroachment permit	• Section 4.2, Transportation and Circulation
San Francisco Transit Riders	Parking Public transportation	• Section 4.2, Transportation and Circulation
Jim Warshell (one letter and one email)	Parking Building height Open space Wind Unit mix Design options	• Section 4.2, Transportation and Circulation • Section 4.5, Wind • Appendix B (initial study)
Robert Anderson	Wind Loading and transportation network companies Vehicle miles traveled	• Section 4.2, Transportation and Circulation • Section 4.5, Wind
Jason Henderson	Vehicle miles traveled Wind Loading and transportation network companies Cumulative impacts	• Section 4.2, Transportation and Circulation • Section 4.5, Wind
Shirley Johnson	Parking Vehicle miles traveled Bicycle transportation Wind Access to public scoping meeting	• Section 4.2, Transportation and Circulation • Section 4.5, Wind • Appendix A (notice of preparation)
Anna Sojourner	Parking Public transportation Bicycle transportation Pedestrian transportation mode and safety	• Section 4.2, Transportation and Circulation
Elizabeth Creely	Parking Public transportation Bicycle transportation Pedestrian transportation mode and safety	• Section 4.2, Transportation and Circulation
Ben Zotto	Loading and transportation network companies Public transportation Pedestrian transportation mode and safety Housing supply and affordability	• Section 4.2, Transportation and Circulation • Appendix B (initial study)
Katherine Roberts	Parking Public transportation Bicycle transportation Pedestrian transportation mode and safety Wind	• Section 4.2, Transportation and Circulation • Section 4.5, Wind

Table 1.1: Summary of EIR Scoping Comments

Commenter	Comment Topic(s)	Coverage in the EIR
Sue Hestor	Wind Cumulative analysis Traffic Shuttle buses Parking E-commerce deliveries Housing demand Transit	• Section 4.5, Wind • Chapter 4, Environmental Setting and Impacts • Chapter 5, Alternatives • Section 4.2, Transportation and Circulation
James Dyer	Parking Traffic Transit	• Section 4.2, Transportation and Circulation

Source: Compiled by AECOM in 2017

Initial Study

The planning department published an initial study for the proposed project on May 2, 2018 (the initial study is shown in Appendix B). The initial study was prepared to determine whether any aspect of the project, either individually or cumulatively, would cause a significant effect on the environment. The initial study narrowed the focus (or scope) of the environmental analysis by identifying which impacts would be less than significant (with or without mitigation) and therefore were adequately analyzed in the initial study, and which impacts require further study in the EIR. The initial study included the following findings:

- Impacts related to aesthetics and parking are not applicable to the project.[4]
- The project would result in less-than-significant impacts related to land use planning; aesthetics; population and housing; greenhouse gas emissions; recreation; utilities and service systems; public services; biological resources; geology and soils; hydrology and water quality; hazards and hazardous materials; and mineral and energy resources. These topics are not evaluated further in this EIR.
- The project would result in no impact related to agriculture and forestry resources.

[4] Senate Bill 743 was signed into law on September 27, 2013; became effective on January 1, 2014; and amends CEQA by adding Public Resources Code section 21099 regarding analysis of aesthetics, parking, and transportation impacts for urban infill projects. Section 21099(d) provides that "aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Thus, aesthetics and parking are no longer to be considered in determining whether a project has the potential to result in significant environmental effects for projects that meet the following three criteria: (1) is located in a transit priority area; (2) is located on an infill site; and (3) is residential, mixed-use residential, or an employment center. Both the proposed project and the variant meet each of these three criteria: They are located near major transit routes and on an infill site that has been previously developed with industrial and commercial uses and surrounded by areas of either recently completed or planned urban development. Further, the proposed project and variant are both considered mixed-use residential use projects. Thus, this EIR does not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA.

The initial study also found that the project would result in potentially significant impacts related to the topics of cultural resources, transportation and circulation, noise, air quality, wind, and shadow. All of these topics are included in this EIR. The analysis and conclusions of the initial study are incorporated into this EIR by reference.

Four written communications were received during the Initial Study public scoping period, which began on May 2, 2018, and ended on June 4, 2018. **Table 1.2: Summary of Comments on the Initial Study** summarizes the environmental concerns raised in these communications. The table cross-references the applicable EIR sections that address these comments.

Table 1.2: Summary of Comments on the Initial Study

Commenter	Comment Topic(s)	Coverage in the EIR
Jason Henderson Hayes Valley Neighborhood Assoc.	Vehicle miles travelled and traffic E-commerce loading demand and transportation network companies Wind Impacts Cumulative transportation and wind Impacts	• Section 4.2, Transportation and Circulation • Section 4.5, Wind
Mike Buhler San Francisco Heritage	Cultural resources mitigation	• Section 4.1 Cultural Resources (Historic Architectural)
Dennis Wong	Support for project	• Not Applicable

Source: Compiled by SWCA in 2018

Assembly Bill 900

On October 8, 2018, the Governor certified this project as an environmental leadership development project under the Jobs and Economic Improvement through Environmental Leadership Act of 2011 (Assembly Bill 900 or AB 900, as updated to comply with Senate Bill 734 and Assembly Bill 246).[5] The planning department issued a public notice pursuant to CEQA sections 21092(b)(3) and 21178 on October 17, 2018.

AB 900[6] provides streamlining benefits under CEQA for environmental leadership development projects and defines an environmental leadership development project as the following:

- the project is residential, retail, commercial, sports, cultural, entertainment, or recreational in nature;

[5] State of California, Governor Edmund G. Brown, Jr., Governor's Recertification Granting Streamlining for the 10 South Van Ness Project in the City of San Francisco, October 8, 2018.

[6] California Public Resources Code 21178 et. seq. and Governor's Office of Planning and Research, California Jobs (AB 900), *Governor's Guidelines for Streamlining Judicial Review Under the California Environmental Quality Act Pursuant to AB 900, Updated to Comply with Senate Bill 734 and Assembly Bill 246.* Available online at http://opr.ca.gov/ceqa/california-jobs.html, accessed September 6, 2018.

- the project, upon completion, will qualify for Leadership in Energy and Environmental Design (LEED) gold certification or better;
- the project will achieve at least 15 percent greater transportation efficiency than comparable projects;
- the project is located on an infill site and in an urbanized area; and
- for projects within a metropolitan planning organization's jurisdiction for which a sustainable communities strategy or alternative planning strategy is in effect, the infill project is consistent with the general use designation, density, building intensity and applicable policies specified for the project area in either a sustainable communities strategy or an alternative planning strategy, for which the California Air Resources Board has accepted that the strategy would achieve the greenhouse gas emission reduction targets.[7]

In order for the Governor to certify a leadership project, the project (or project applicant) must: (1) result in a minimum investment of $100 million dollars in California upon completion of construction; (2) create high-wage, highly skilled jobs that pay prevailing wages and living wages and provide construction jobs and permanent jobs for Californians, and help reduce unemployment; (3) not result in any net additional greenhouse gas emissions; (4) comply with requirements for commercial and organic waste recycling; (5) have a binding agreement with the lead agency establishing the requirements set forth in Public Resources Code sections 21183(e) and (g); and (6) agree to pay the costs of the Court of Appeal in hearing and deciding any case.[8, 9] Multifamily residential projects certified as environmental development leadership projects are also required to provide unbundled parking, such that private vehicle parking spaces are priced and rented or purchased separately from dwelling units.

On December 18, 2017, the California Air Resources Board determined the proposed project would not result in any net additional greenhouse gas emissions for purposes of certification under AB 900.[10]

In accordance with the requirements of AB 900, the planning department has provided a record of proceedings for the proposed project that can be accessed and downloaded from the following website: https://www.ab900record.com/10svn. The record of proceedings includes the EIR and all other documents and materials submitted to, or relied upon by, the lead agency in the preparation of the EIR or the approval of the project. In addition, a document prepared by the lead agency or submitted by the applicant after the date of the release of the draft EIR that is a part of

[7] California Public Resources Code Section 21180(b).
[8] California Public Resources Code Section 21183.
[9] Adam Tartakovsky, Vice President, 10 SVN, LLC, Letter agreeing to obligations under the Jobs and Economic Improvement through Environmental Leadership Act of 2011 (California Public Resources Code Section 21178 et seq., as amended by SB763 and AB 734), December 5, 2017.
[10] California Air Resources Board, Executive Order G-17-081 Relating to Determination of No Net Additional Greenhouse Gas Emissions Under Public Resources Code section 21183, subdivision (c) for 10 South Van Ness Project. December 18, 2017.

the record of proceedings, and comments received on the draft EIR, will be made available to the public on this same website in a readily accessible electronic format within the timeframes specified by this act. Comments on this draft EIR should be emailed to CPC.10SouthVanNess@sfgov.org.

Within 10 days of the Governor certifying the proposed project as an environmental leadership development project, the planning department is required to issue a public notice stating that the applicant has elected to proceed under chapter 6.5 (commencing with section 21178) of the Public Resources Code, which provides, among other things, that any judicial action challenging the certification of the EIR or the approval of the project described in the EIR is subject to the procedures set forth in sections 21185 to 21186, inclusive, of the Public Resources Code. The planning department issued a public notice pursuant to CEQA sections 21092(b)(3) and 21178 on October 17, 2018.

As required by section 21185 of the Public Resources Code, the Judicial Council adopted rules of court that establish procedures applicable to actions or proceedings brought to attack, review, set aside, void, or annul the certification of the environmental impact report for an environmental leadership development project (certified by the Governor pursuant to this act) or the granting of any project approvals that require the actions or proceedings, including any potential appeals therefrom, be resolved, to the extent feasible within 270 days of the filing of the certified record of proceedings with the court. This creates an accelerated timeframe for CEQA litigation. The procedures can be found in California Rules of Court rules 3.2220 to 3.2231.

The provisions of AB 900 apply to projects that have been certified by the Governor as environmental leadership development projects by January 1, 2020. This act remains in effect until January 1, 2021.

Public Review

The City filed the notice of completion with the State Clearinghouse, indicating that this draft EIR has been completed and is available for review. The notice of availability of the EIR has been published concurrently with distribution of this document. This draft EIR is being circulated for a 45-day public review and comment period.

How to Comment on the Draft EIR

This draft EIR was published on October 17, 2018There will be a public hearing before the San Francisco Planning Commission (planning commission) during the public review and comment period for this EIR to solicit public comment on the adequacy and accuracy of information presented in this draft EIR. The public comment period for this EIR is October 18, 2018 to December 11, 2018. The public hearing before the planning commission has been scheduled for December 6, 2018, in Room 400, City Hall, 1 Dr. Carlton B. Goodlett Place, San Francisco,

beginning at 1 p.m. or later. Please call (415) 558-6422 the week of the hearing for a recorded message that will identify the specific time of the public hearing.

During the public review and comment period for the draft EIR, comments from the general public, organizations, and agencies regarding environmental issues identified in the EIR and concerning the EIR's accuracy and completeness may be submitted to the lead agency at the following address:

Rachel Schuett
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, CA 94103

Or

CPC.10SouthVanNess@sfgov.org

In addition, this draft EIR and all related technical appendices are available for review during the public review and comment period in the planning department office at 1650 Mission Street, Suite 400, San Francisco, CA 94103. Copies of this draft EIR are also available at the following location:

San Francisco Public Library
100 Larkin Street
San Francisco, CA 94102

Comments may also be made on this draft EIR in writing before the end of the comment period. The City will prepare written responses to all comments made at the public hearing and in writing. Upon completion of the public review and comment period, a final EIR will be prepared. The final EIR will include the comments on this draft EIR received during the formal public review period and responses to those comments.

Final EIR and EIR Certification

Following the close of the public review and comment period, the City will prepare and publish the final EIR, which will contain all written and recorded oral comments on this draft EIR and written responses to those comments, along with copies of the letters or emails received, and any necessary revisions to the draft EIR. Not less than 10 days before the San Francisco Planning Commission's hearing to consider certification of the final EIR, the final EIR will be made available to the public and to any board(s), commission(s), or department(s) that will carry out or approve the proposed project or variant.

The planning commission hearing will consider the documents and, if found adequate, will certify that the final EIR: (1) has been completed in compliance with CEQA; (2) was presented to the planning commission and the planning commission reviewed and considered the information contained in the final EIR before approving the proposed project or variant; and (3) reflects the lead agency's independent judgment and analysis. CEQA requires that agencies shall neither approve nor implement a proposed project unless the project's significant environmental impacts have been reduced to a less-than-significant level, essentially eliminating, avoiding, or substantially lessening the potentially significant impacts, except when certain findings are made. If an agency approves a project that would result in the occurrence of significant adverse impacts that cannot feasibly be mitigated to less-than-significant levels (that is, significant and unavoidable impacts), the agency must state the reasons for its action in writing, demonstrate that mitigation is infeasible based on the EIR or other information in the record, and adopt a statement of overriding considerations, as described above.

1.5 DOCUMENT ORGANIZATION

This EIR is divided into the following chapters and appendices:

- The **Summary** chapter provides a concise overview of the project, the environmental impacts that would result from the proposed project or variant, mitigation and improvement measures identified to reduce or eliminate these impacts, project alternatives and their comparative environmental effects, and areas of controversy and issues to be resolved.
- **Chapter 1, Introduction**, provides introductory information, including the history of the project, and identifies the lead agency for the project.
- **Chapter 2, Project Description**, presents a detailed discussion of the location, setting, and characteristics of the project site, the project objectives, project features, and environmental review requirements and approvals.
- **Chapter 3, Plans and Policies**, describes specific plans and policies that are relevant to the proposed project and variant.
- **Chapter 4, Environmental Setting and Impacts**, addresses the following topics: cultural resources (historic architectural); transportation and circulation; noise; air quality; wind; and shadow. Each topic section includes a description of existing conditions with respect to the particular environmental topic (environmental setting); the regulatory framework by topic; the approach to analysis, when appropriate; identification and evaluation of project-specific and cumulative impacts; and mitigation measures and improvement measures, when appropriate.
- **Chapter 5, Alternatives**, presents and analyzes alternatives to the proposed project and compares their environmental effects to those of the proposed project and variant. Four alternatives are described and evaluated: the No Project Alternative (Alternative 1), the Proposed Project Full Preservation Alternative (Alternative 2), the Proposed Project Partial Preservation Alternative (Alternative 3), the Variant Full Preservation Alternative (Alternative 4), and the Variant Partial Preservation Alternative (Alternative 5). This chapter also identifies the environmentally superior alternative and discusses alternatives considered but rejected as infeasible.

- **Chapter 6, Other CEQA Considerations**, describes the project's significant and unavoidable environmental impacts and the significant irreversible environmental changes that would result from project implementation.
- **Chapter 7, List of Preparers**, identifies City staff members and consultants who helped prepare the EIR and the persons and organizations consulted during the preparation of the EIR.
- **Appendix A** provides a copy of the Notice of Preparation of an Environmental Impact Report and Public Scoping Meeting that was prepared for the project.
- **Appendix B** provides a copy of the Notice of Availability/Initial Study that was prepared for the project.

2. PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The project sponsor, 10 SVN, LLC, proposes to redevelop a 51,150-square-foot (1.17-acre) triangle-shaped property at the southwest corner of South Van Ness Avenue and Market Street, in the South of Market (SoMa) neighborhood of San Francisco, with a large residential complex with ground-floor retail. The northern end of the project site is occupied by the San Francisco Honda Dealership, a two-story, 30- to 45-foot-high building, and the southern end of the site encompasses a small, undeveloped area. The proposed 10 South Van Ness Avenue Mixed-Use Project would involve the demolition of the existing building and the construction of two 41-story towers. The towers would be 400 feet tall (420 feet total, including roof screens and elevator penthouses) and would contain a total of 984 dwelling units and retail space on the ground floor. Below grade, the two structures would be connected by two basement parking levels. New publicly accessible open space would be provided in the form of a new pedestrian-oriented right-of-way (or alley) that would run from South Van Ness Avenue to 12th Street under the proposed project or from Market Street to 12th Street under the variant, as discussed below.

The project sponsor is considering a variant to the proposed project that would include construction of a single 55-story tower over a podium structure. Under the variant, the tower would be up to 590 feet in height (610 feet total, including roof screens and elevator penthouses). The variant would be similar to the proposed project in that it would provide 984 dwelling units, ground-floor retail space, two levels of underground parking, and a pedestrian-oriented right-of-way through the project site.

Both the proposed project and variant would involve improvements to 12th Street that are consistent with the base requirements of the Better Streets Plan. In addition, the project sponsor is considering an alternate set of improvements to 12th Street (referred to as the "straight-shot streetscape option" in this EIR) for both the proposed project and variant that would extend the eastern sidewalk and pedestrian promenade adjacent to the project site from 15 to 40 feet in width on 12th Street. The western sidewalk on 12th Street would be expanded to a width of 18 feet. There would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction. In addition, both the proposed project and variant may include a street-level elevator to provide access to the San Francisco Municipal Railway (Muni) Metro station at Market Street and South Van Ness Avenue.

2.2 PROJECT SPONSOR OBJECTIVES

The project sponsor seeks to achieve the following objectives by undertaking the 10 South Van Ness Avenue Mixed-Use Project:

- Redevelop a large, underused site at a prominent location with a residential development that will serve as an iconic addition to the City's skyline demarking the Market Street and Van Ness Avenue intersection and including a range of residential unit types and neighborhood-serving retail uses.
- Provide the maximum number of dwelling units on a site that currently has no housing, and was designated through community planning processes for higher density due to its proximity to downtown and accessibility to local and regional transit, in order to increase the city's supply of housing, contribute to the City's General Plan Housing Element goals, and the Association of Bay Area Governments' Regional Housing Needs Allocation for San Francisco.
- Implement the objectives and policies of the Market & Octavia Area Plan and the proposed Market Street Hub Plan by activating a key site along the Van Ness Avenue and Market Street transit corridors, providing small business and employment opportunities, building housing that is affordable to a range of incomes, improving the quality and safety of the open space and streetscape, and providing other public benefits that would strengthen the mixed-use character of the neighborhood.
- Promote transit ridership by constructing a substantial number of new housing units at a major transit hub at the development density and building heights anticipated by the Market & Octavia Area Plan and the proposed Market Street Hub Plan.
- Encourage pedestrian activity and increase connectivity to the proposed Brady Park by creating a welcoming mid-block passageway that connects either South Van Ness Avenue to 12th Street under the proposed project or Market Street to 12th Street under the single-tower variant.
- Construct a project that qualifies as an Environmental Leadership Development Project (as defined by the California Jobs and Economic Improvement Through Environmental Leadership Act [AB 900], as amended) to promote environmental sustainability, transportation efficiency, greenhouse gas reduction, stormwater management using green technology, substantial economic investment, and job creation.
- Encourage and enliven pedestrian activity by improving 12th Street with wider sidewalks, street trees, special sidewalk paving, and bulb-outs, and developing ground-floor retail and public amenity space that serves neighborhood residents and visitors and responds to future users who will be accessing the site and future Bus Rapid Transit (BRT) stations in the area.
- Improve the architectural and urban design character of the project site by replacing the existing utilitarian structures with a prominent residential tower or towers that provide a transition between two planning districts and increase building heights at the corner of Market Street and Van Ness Avenue to demarcate the significance of this intersection.
- Provide publicly accessible open space on a site that would be privately owned by the project sponsor.

- Provide well-designed parking, loading, and other transportation facilities and amenities with adequate access to serve the needs of the project's residents, employees, and guests, and respond to the neighborhood context and location.
- Construct a high-quality project with enough residential floor area to produce a return on investment sufficient to attract private capital and construction financing.

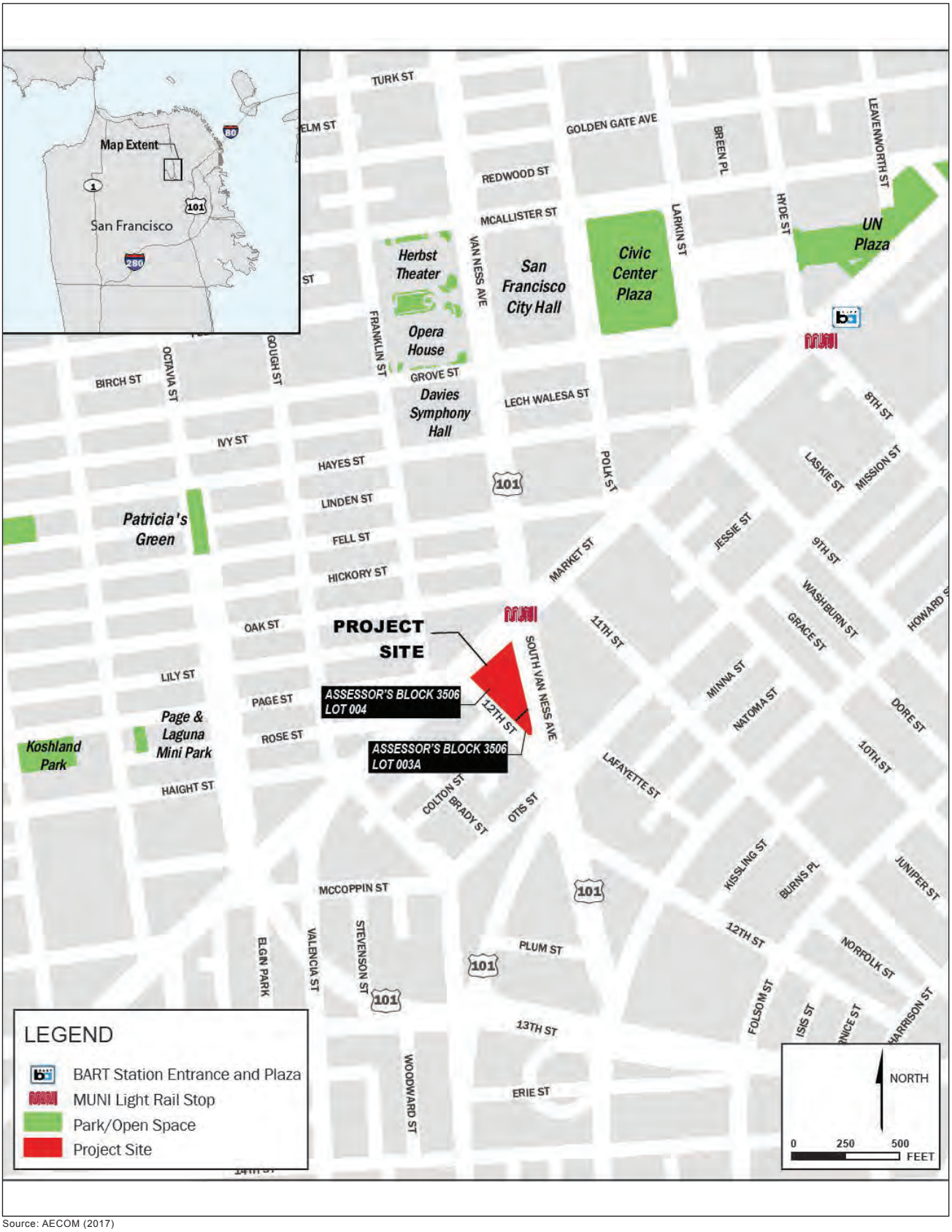
2.3 PROJECT LOCATION AND EXISTING CONDITIONS

Project Location

The 51,150-square-foot parcel is located at the southwest corner of Market Street and South Van Ness Avenue and comprises the entire block bounded by South Van Ness Avenue to the east, Market Street to the north, and 12th Street to the west (see **Figure 2.1: Project Location** and **Figure 2.2: Project Site**). The project site comprises Assessor's Block 3506, Lots 004 and 003a, and is roughly triangular in shape.

Both South Van Ness Avenue and Market Street are major roadways through the Downtown/Civic Center and SoMa neighborhoods. South Van Ness Avenue, which becomes Van Ness Avenue north of Market Street, is a major north-south arterial through San Francisco and is considered U.S. Highway 101 (U.S. 101) between the Lombard Street and the Central Freeway portions of U.S. 101. Adjacent to the project site, South Van Ness Avenue has three travel lanes in each direction and parallel parking on both sides of the street. Market Street is a major east-west roadway through San Francisco that connects The Embarcadero to the Twin Peaks neighborhood. Market Street operates as a two-way roadway, generally with two travel lanes, for motorized modes of travel. Adjacent to the project site, eastbound Market Street has one mixed-flow travel lane, one dedicated-transit/taxi lane, and a bicycle lane. In the westbound direction, Market Street has two mixed-flow travel lanes and a bicycle lane.

The regional roadways that serve the project site are U.S. 101, Interstate 80, and Interstate 280. U.S. 101 provides access to and from the site via the adjacent South Van Ness Avenue, an on-ramp at South Van Ness Avenue and Division Street, and an off-ramp at Mission Street and Duboce Avenue. The intersection of South Van Ness Avenue and Market Street is also connected to the transit network via the subsurface San Francisco Municipal Railway (Muni) station at Market Street and South Van Ness Avenue, which is accessible from an entrance located along the Market Street frontage of the project site. This Muni station is served by the J, KT, L, M, and N Muni Metro light rail lines, and the aboveground Market Street and South Van Ness Avenue Muni bus and streetcar stops. These stops are served by the K Owl, L Owl, N Owl, 6, 7, 7R, 14, 47, 49, and 90 bus routes and the historic F line streetcar. The Civic Center Bay Area Rapid Transit (BART) station is also located 0.4 mile east of the project site on Market Street.



Source: AECOM (2017)

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FIGURE 2.1: PROJECT LOCATION

Source: Handel Architects (2016)

10 SOUTH VAN NESS AVENUE MIXED-USE PROJECT

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FIGURE 2.2: PROJECT SITE

Existing Conditions

Project Site

The project site slopes gently downward to the south. The ground surface elevation of the project site is approximately 40 feet above mean sea level along Market Street and approximately 32 feet above mean sea level at the southern boundary of the site.

The project site is occupied by a 91,088-square-foot, two-story building, ranging from 30 to 45 feet in height, at the northern end of the site (Lot 004), and a small, undeveloped area at the southern end of the site (Lot 003A). The building was constructed in 1927. It is the former home of the Fillmore West concert venue and is considered to be a historic resource.[1] The building is currently occupied by the San Francisco Honda auto dealership (a former automobile service center on the project site was relocated in 2017, but the dealership remains open).

Surrounding Uses

The Muni Metro light rail tunnel and Van Ness station are located beneath Market Street approximately 30 feet north of the property line. The northern third of the project site includes a subsurface easement for the existing BART tunnel, the top of which is located 19.62 feet below grade. The bottom of the BART tunnel (also referred to as the "invert') is approximately 85 feet below ground surface.[2] Six curb cuts and associated driveways are located along the perimeter of the project site: three curb cuts along South Van Ness Avenue, and three along 12th Street. There are no curb cuts along Market Street.

Along the west side of South Van Ness Avenue, there are six metered vehicle parking spaces, with five spaces subject to restricted hours for street cleaning (the no parking restriction is in effect between 12:01 a.m.–6:00 a.m.). The east side of 12th Street along the project site's frontage has 10 general metered parking spaces, and one metered commercial loading space with restricted loading hours. On the west side of 12th Street, across from the project site, there are five general metered parallel parking spaces, 16 angled general metered parking spaces, three metered commercial loading spaces with restricted loading hours, one passenger loading space, and one parking space with Americans with Disabilities Act (ADA) access. Improvements to Van Ness and South Van Ness avenues between Aquatic Park and Mission Street are currently underway as part of the Van Ness Improvement Project. The Van Ness Improvement Project includes

[1] See EIR Section 4.1, Cultural Resources (Historic Architectural).

[2] Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation, 10 Van Ness Avenue,* March 16, 2017. This document (and all other documents cited in this report, unless otherwise noted) is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400 as part of Case File No. 2015.004568ENV.

replacement of the water and sewer networks and infrastructure improvements to support the Van Ness Bus Rapid Transit system, which is currently under construction.[3]

The land uses in the immediate vicinity of the project site are characterized by a mix of residential, commercial, and civic uses. The maximum permitted building heights in the vicinity of the project site (as allowed by existing height and bulk districts) range from 40 to 400 feet. Several large, mixed-use commercial, office, and residential buildings are located along Van Ness and South Van Ness avenues and Market Street; they are interspersed with smaller buildings hosting office, commercial, warehouse/storage, and multifamily residential uses. The scale of the built environment generally increases in height traveling eastward along Market Street from the project site.

Class I and II bicycle facilities currently run along Market Street in both directions. The nearest San Francisco Bike Share station is approximately 120 feet to the east of the project site on the east side of South Van Ness Avenue, directly across the street from the project site.

Existing Zoning/Height and Bulk Requirements

The project site is within the South of Market neighborhood of San Francisco, which borders the Civic Center neighborhood. The project site is also within the Market & Octavia Area Plan area, the Downtown-General (C-3-G) zoning district, and the Van Ness and Market Downtown Residential Special Use District (SUD). The northern portion of the site is in the 120-R-2 height and bulk district, and the southern portion is in the 120/400-R-2 height and bulk district (see **Figure 2.3: Zoning Districts and Height and Bulk Districts**). These height and bulk districts allow for a building of 120 feet in height on the northern portion of the project site and a podium of up to 120 feet in height and a tower, or towers, of up to 400 feet in height on the southern portion of the site. For buildings over 120 feet in height, all portions of structures above the podium height are subject to the bulk restrictions in San Francisco Planning Code (planning code) section 270(e)(2).

Per planning code section 270(e)(2)(D), buildings between 351 and 550 feet in height may not exceed a plan length of 115 feet, a diagonal dimension of 145 feet, and a maximum average floor area of 10,000 gross square feet. Per planning code section 270(e)(2)(F), to encourage tower sculpting, the gross floor area of the top one-third of the tower shall be reduced by 10 percent from the maximum floor plate, unless the overall tower floor plate is reduced by an equal or greater volume. A minimum distance of 115 feet must be preserved between all structures above 120 feet in height at all levels above 120 feet in height, as required by the controls for the R-2

[3] San Francisco Municipal Transportation Agency, Van Ness Improvement Project, Spring 2017, https://www.sfmta.com/sites/default/files/projects/2017/VN_Newsltr_17.02_170502.pdf, accessed July 5, 2017.

Source: City and County of San Francisco (2017)

bulk district. The permitted floor area ratio (FAR) in the C-3-G zone is 6:1.[4] The existing FAR of the project site is approximately 2:1.

2.4 PROJECT CHARACTERISTICS

With the proposed project, the existing San Francisco Honda dealership on the project site would relocate and the existing 91,088-square-foot, two-story, 30- to 45-foot-tall building would be demolished. The proposed project would result in the construction of a new 1,071,095-gross-square-foot, 984-unit development consisting of two 41-story, 400-foot-tall (420 feet including roof screens and elevator penthouses) mixed-use residential towers which would be connected below grade by a parking garage.

Proposed Project Site Plan

The two tower volumes would be separated by a mid-block alley running from 10 South Van Ness Avenue to 12th Street, defining a north tower and a south tower. Each tower would have its own central building entrance lobby along the west side of South Van Ness Avenue (see **Figure 2.4: Proposed Project – Ground Floor Plan**).

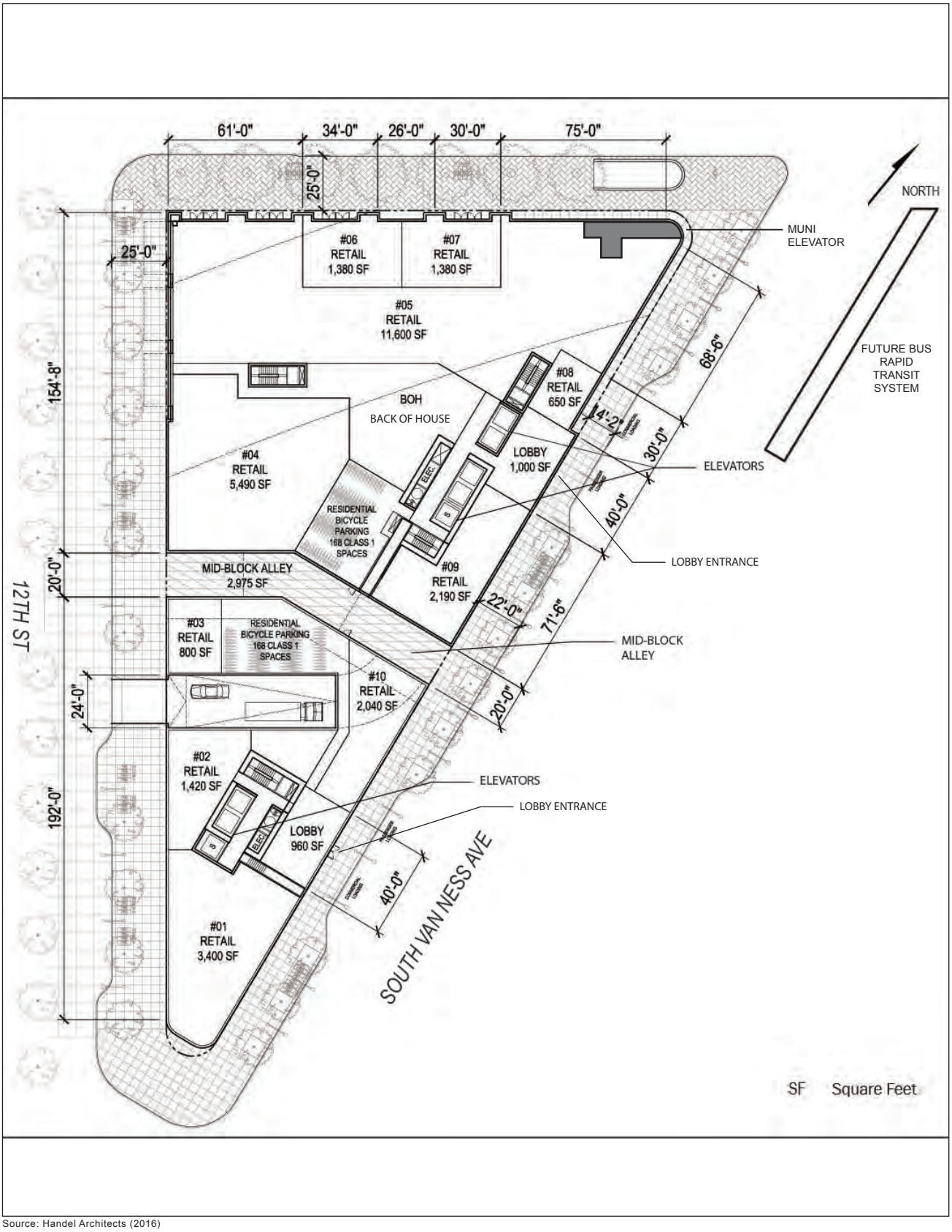
Proposed Project Development Program

The proposed development program is summarized in **Table 2.1: Summary of Proposed Project Uses**, p. 2.11.

Residential Use

As shown in Table 2.1, the proposed project would include a total of 984 units totaling 935,745 gross square feet of residential uses. The proposed project would include the following mix of unit sizes: 375 studios, 461 one-bedroom units, 100 two-bedroom units, and 48 three-bedroom units. The north tower would include approximately 267 studios, 294 one-bedroom units, 51 two-bedroom units, and 19 three-bedroom units. The south tower would include approximately 108 studios, 167 one-bedroom units, 49 two-bedroom units, and 29 three-bedroom units.

[4] FAR is the gross floor area of a building or buildings on a zoning plot divided by the area of such zoning plot. FAR is calculated to determine whether the mass and scale of a structure is compatible with zoning district requirements. In the Van Ness and Market Downtown Residential SUD FAR greater than 6:1 is allowed with payment of development impact fees (the Van Ness inclusionary affordable housing fee and the Van Ness and Market Neighborhood infrastructure fee).



Source: Handel Architects (2016)

Table 2.1: Summary of Proposed Project Uses

BUILDING AREAS	Gross Square Feet
TOTAL	**1,071,095**
Residential Space	935,745
Residential Parking	102,000
Retail/Restaurant	30,350
Rooftop Mechanical	3,000
DWELLING UNITS	**No. of Units**
TOTAL	**984**
Studio	375
One Bedroom	461
Two Bedroom	100
Three Bedroom	48
PARKING, LOADING, AND BICYCLE SPACES	**No. of Spaces**
Residential Parking	491
Retail Parking	14
Carshare	6
Off Street Freight Loading	7
Bicycle Spaces	
Class 1	336
Class 2	61
OPEN SPACE	**Square Feet**
Publicly Accessible	2,975
Common Residential	45,176
Private Residential	0

Source: 10 South Van Ness LLC, One Oak Owner, LLC, 2018

Retail Use

The proposed retail spaces, totaling 30,350 gross square feet, would include 10 retail spaces ranging in size from 800 to 11,600 square feet. The retail uses would front onto South Van Ness Avenue, Market Street, 12th Street, and the proposed mid-block alley. The retail spaces would all have a minimum floor-to-ceiling height of 19 feet.

Proposed Project Upper-Floor Plans

The north tower and south tower would each consist of a podium base surmounted by a tower form.

At Level 2, a passageway bridge would connect the two tower podiums and would feature openings to the mid-block alley below. Shared residential amenities for project residents would be located at Level 2 (see **Figure 2.5: Proposed Project – Level 2 Floor Plan**).

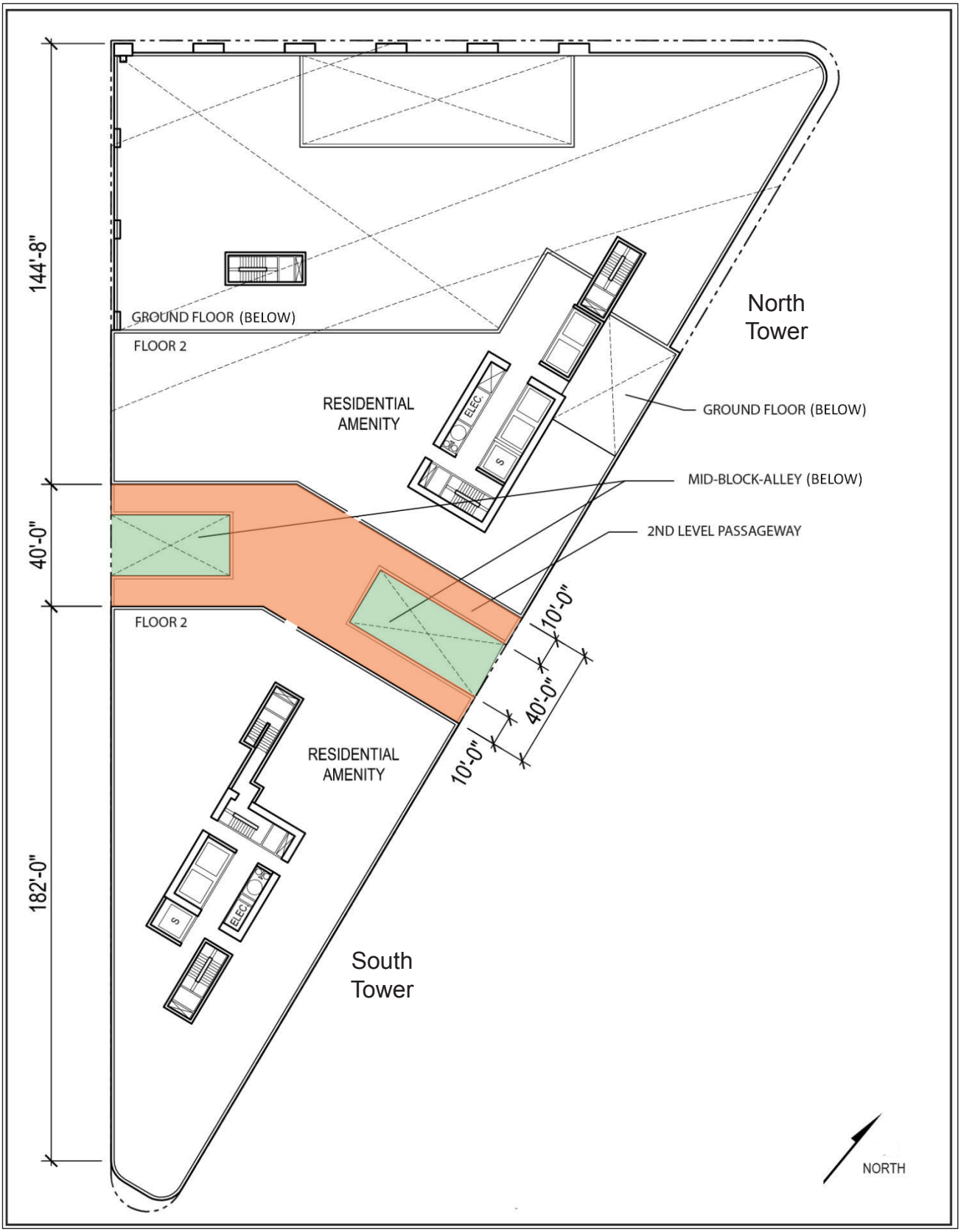
Levels 3 through 12 would include residential units within the podium levels of each tower (see **Figure 2.6: Proposed Project – Levels 3 through 12 Representative Floor Plan**).

Levels 13 through 22 of the north tower would be stepped back from Market Street, 12th Street, and the mid-block alley to form a residential tower feature atop the north tower podium (see **Figure 2.7: Proposed Project – Levels 13 through 22 Representative Floor Plan**). The northern corner of the north tower would be blunted with a "chamfer" feature extending each floor successively northward, from the 13th floor through the 22nd floor.

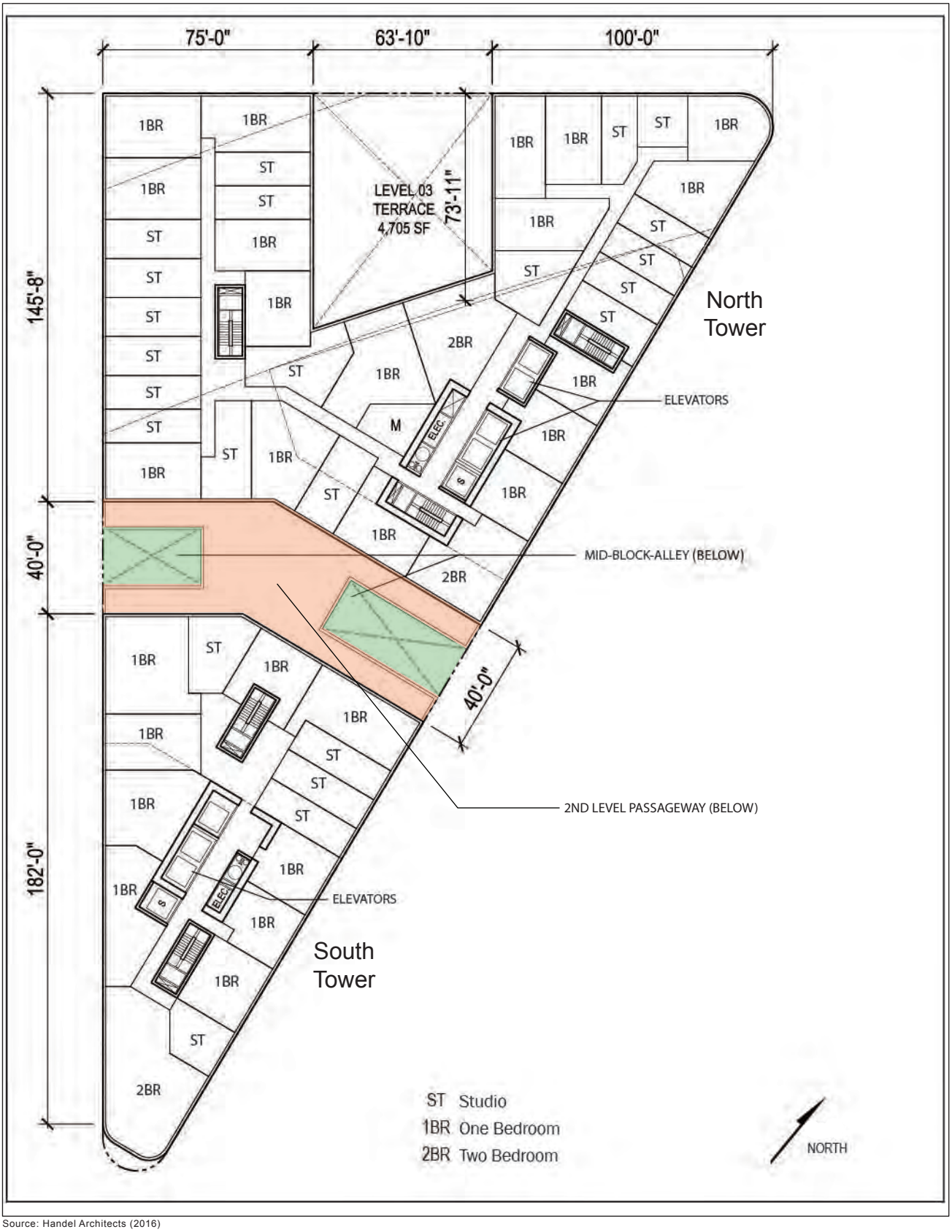
Levels 13 through 22 of the south tower would be stepped back from the mid-block alley to the north to form a residential tower feature atop the south tower podium. The minimum tower separation between the north tower and the south tower at these levels would be 115 feet. As at Level 2, at Level 13 a passageway bridge would span the north tower and south tower podiums and would feature openings to the mid-block alley below.

Levels 23 through 41 would be similar to Levels 13 through 22, except that these tower floors would be above the chamfer feature and would therefore be uniform from floor to floor (see **Figure 2.8: Proposed Project – Levels 23 through 41 Representative Floor Plan**).

The roof level of the north tower would include a roof terrace at the northern end of the roof. Mechanical enclosures and an elevator penthouse would occupy the southern end of the north tower roof (see **Figure 2.9: Proposed Project – Roof Plan**). The roof level of the south tower would include a roof terrace at the southern end of the roof. Mechanical enclosures and an elevator penthouse would occupy the northern end of the south tower roof.



Source: Handel Architects (2016)

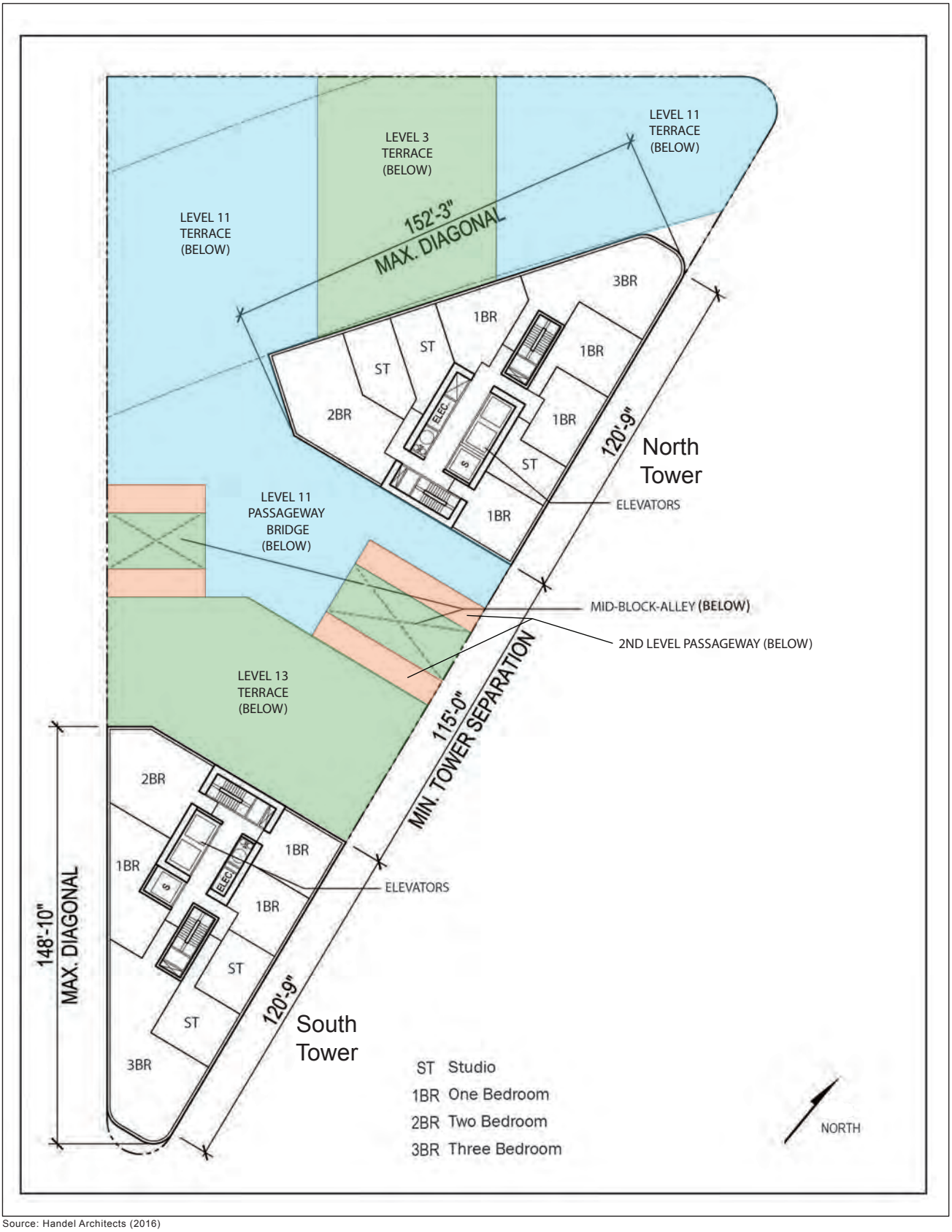


Source: Handel Architects (2016)

FIGURE 2.6: PROPOSED PROJECT - LEVELS 3 THROUGH 12 REPRESENTATIVE FLOOR PLAN

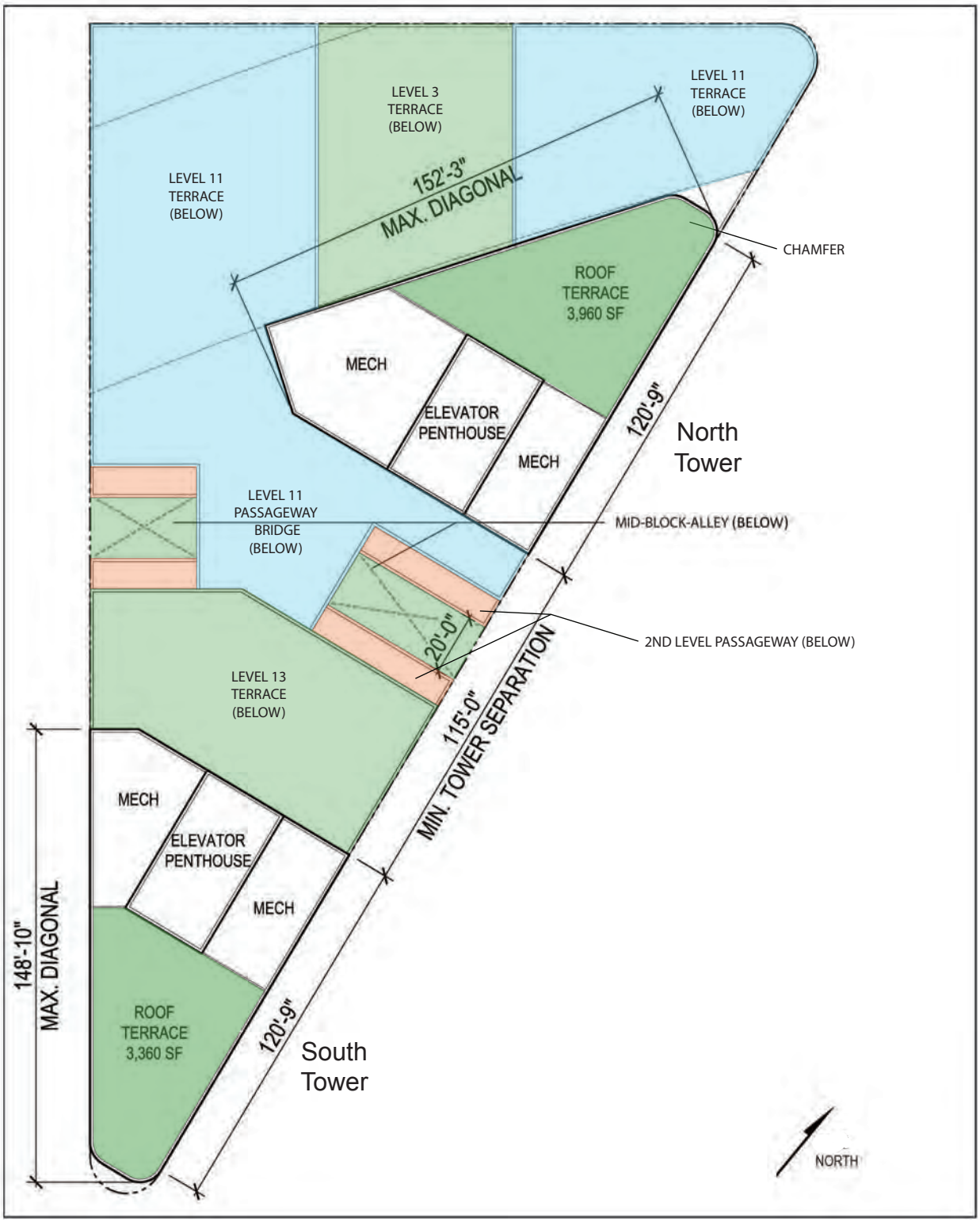
Source: Handel Architects (2016)

FIGURE 2.7: PROPOSED PROJECT - LEVELS 13 THROUGH 22 REPRESENTATIVE FLOOR PLAN



Source: Handel Architects (2016)

FIGURE 2.8: PROPOSED PROJECT - LEVELS 23 THROUGH 41 REPRESENTATIVE FLOOR PLAN



Source: Handel Architects (2016)

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FIGURE 2.9: PROPOSED PROJECT - ROOF PLAN

Proposed Project Elevations and Renderings

Each tower would have a maximum height of 400 feet (420 feet total, including roof screens and the elevator penthouse on each tower).[5] The tower podiums would contain the ground floor through Level 12, and the towers would contain Levels 13–41. The towers would be separated by a minimum of 115 feet. The north tower podium would be 114 feet in height, and the south tower podium would be 120 feet in height.[6] (See **Figure 2.10: Proposed Project – Building Elevation South Van Ness Avenue (East) Façade**; **Figure 2.11: Proposed Project – Building Elevation Market Street (North) Façade**; and **Figure 2.12: Proposed Project - Rendering Looking East from Market Street**.)

Site Access and Circulation

The proposed project would remove the existing curb cuts along South Van Ness Avenue and 12th Street and replace them with a single, new 24-foot-wide curb cut along 12th Street. This would provide vehicle access (two 10-foot-wide lanes for two-way, bi-directional traffic) to the parking garage for residents and retail visitors, as shown in Figure 2.4, p. 2.10. In addition to stairs, two elevators would provide access to the residential lobbies from the parking garage/basement. From the residential lobbies, a second elevator would provide access to each tower. Elevator access would also be available between the below-grade parking garage/basement and the ground-floor retail spaces. As described above, two street-level residential entrances, one for each tower, would be located along South Van Ness Avenue. Pedestrian access to the retail spaces would be from South Van Ness Avenue, Market Street, 12th Street, and the proposed mid-block alley. The proposed mid-block alley would also provide public access through the project site between South Van Ness Avenue and 12th Street.

Bicycle Parking

The proposed project would provide 336 class I bicycle parking spaces in two secure bicycle rooms on the north and south tower podiums' ground floor: 332 for residential use and four for retail use, as shown on Figure 2.4. On-street bicycle parking would include 61 class II bicycle parking spaces, 49 for residential use and 12 for retail use.

[5] Pursuant to planning code section 260(b)(1)(B), the mechanical and elevator penthouses are exempt from the planning code height limits, but are considered in the context of environmental review.

[6] A height of 114 feet and 120 feet for the north and south tower podiums, respectively, is consistent with the height and bulk district for the site (120-R-2).

Source: 10 SVN LLC (2017)

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FIGURE 2.10: PROPOSED PROJECT - BUILDING ELEVATION
SOUTH VAN NESS AVENUE (EAST) FAÇADE

Source: 10 SVN LLC (2017)

FIGURE 2.11: PROPOSED PROJECT - BUILDING ELEVATION MARKET STREET (NORTH) FAÇADE

Source: KPF Associates (2018)

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FIGURE 2.12: PROPOSED PROJECT - RENDERING LOOKING EAST FROM MARKET STREET

Access to the proposed class I bicycle parking spaces would be provided via a secured doorway to the bicycle room on the mid-block alleyway near 12th Street. The class I bicycle parking spaces would be for residents and retail visitors and the bicycle storage room would also be connected to the building's lobby. The on-site class I bicycle parking would be accessible to the Market Street bike lane via 12th Street and the mid-block alley. A bicycle repair station would be located within the building. The class II bicycle parking spaces would be located along Market Street, 12th Street, and South Van Ness Avenue within the sidewalk areas.

Parking and Loading

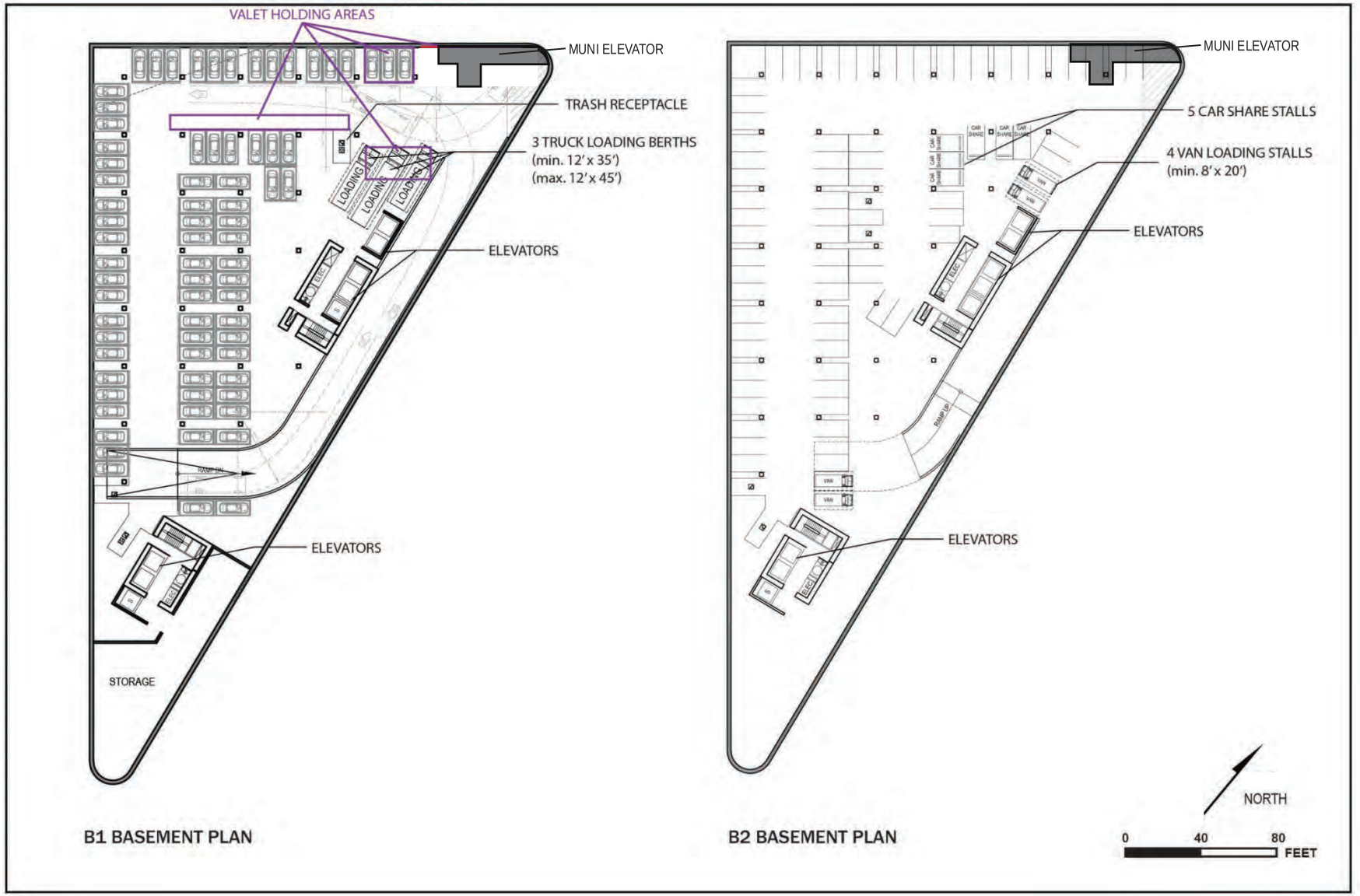
The proposed project would include 102,000 gross square feet of parking and building services, with up to 518 accessory vehicle parking and loading spaces, in two basement levels, as shown in **Figure 2.13: Proposed Project – Parking Garage / Basement Plan**. Ingress and egress for the secured garage would be provided via a single curb cut on 12th Street. The proposed project would include 491 spaces for residential use, 14 spaces for retail use, and 6 spaces for car-share vehicles. In addition, a total of seven off-street freight-loading spaces would be located in the two basement levels: three standard freight-loading spaces and four service vehicle spaces. One freight-loading space would accommodate up to a 45-foot-long vehicle.

The majority of the parking spaces would be provided in stackers and would not be independently accessible. The garage would be staffed 24 hours per day, seven days per week by a valet service, via a valet station within the garage. The valet would serve residents, visitors, and car-share users. Valet staff would also direct delivery and moving trucks.

Trash storage would also be located in the garage/basement, adjacent to an accessible loading area. The garage/basement would be secured, and would be accessible only to residents and retailers.

Transportation Demand Management

The proposed project would result in more than 10 dwelling units and thus would be required to comply with San Francisco Planning Code section 169, Transportation Demand Management Program (added by Ordinance 34-17, approved February 2017). As required under planning code section 169, the project sponsor is required to develop a transportation demand management (TDM) plan that includes measures that would be implemented by the property owner to reduce single-occupancy driving to and from the project site. Compliance with the project's TDM plan



Source: Handel Architects (2016), SITELAB Urban Studio (2017)

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FIGURE 2.13: PROPOSED PROJECT - PARKING GARAGE/BASEMENT PLANS

would be included as a Condition of Approval for the proposed project and would be subject to monitoring by the San Francisco Planning Department (planning department) for the life of the project.[7]

The TDM plan for the proposed project would be comprised of the following TDM measures:

PKG-1: Unbundle Parking. Unbundle[8] parking in transportation analysis zone 578, where the project site is located.

PKG-4: Parking Supply. Provide parking at a rate that is less than or equal to 80 percent and greater than 70 percent of the neighborhood residential parking rate.

ACTIVE-1: Improve Walking Conditions. Complete streetscape improvements consistent with the Better Streets Plan and any local streetscape plan so that the public right-of-way is safe, accessible, convenient, and attractive to persons walking by: widening the sidewalk along the east side of 12th Street, providing a mid-block pedestrian alley to allow public access through the project site, and providing sidewalk bulb-outs along the east side of 12th Street to shorten the crossing distances at intersections with Market Street and South Van Ness Avenue, and to reduce vehicle speed.

The streetscape improvements would meet TDM ordinance criteria by providing the following 10 streetscape elements defined in Table 1 of planning code section 138.1:[9]

- High-visibility crosswalks
- Special crosswalk treatments
- Mid-block crosswalks
- Raised crosswalks
- Extended bulb-outs[10]
- Mid-block bulb-outs
- Reuse of "pork chop islands"[11] and excess right-of-way
- Shared public ways
- Pedestrian-only streets
- Aboveground landscaping

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7 According to planning code section 169, a property owner must facilitate a site inspection by the planning department before issuance of a certificate of occupancy, and must document implementation of applicable aspects of the TDM plan, maintain a TDM coordinator, allow for department inspections, and submit periodic compliance reports throughout the life of the project.

8 Where the cost of a parking space is separated from the cost of rent, lease, or ownership.

9 Table 1: Pedestrian and Streetscape Elements per the Better Streets Plan (section 138.1), http://library.amlegal.com/nxt/gateway.dll/California/planning/planningcode?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$sync=1.

10 A bulb-out is a traffic calming measure, which reduces the crossing distance for pedestrians by extending the sidewalk.

11 Pork chop islands are irregularly shaped, raised islands placed between a right-turn slip lane and through-travel lanes.

ACTIVE-2: Bicycle Parking. Provide class I and class II bicycle parking spaces as required by the planning code. The proposed project would provide 332 class I and 49 class II bicycle spaces for the residential use, and four class I and 12 class II bicycle spaces for the retail use.

ACTIVE-5A: Bicycle Repair Station. Provide on-site tools and space for bicycle repair. The proposed project would provide this repair station within the class I bicycle parking area on the building's ground floor.

CSHARE-1: Car-Share Parking. Provide car-share space parking spaces as required by the planning code. The proposed project would provide six car-share spaces, to be located on Level B2.

DELIVERY-1: Delivery Supportive Amenities. The proposed project would facilitate delivery services by providing a staffed reception area for receipt of deliveries and offering one of the following: (1) clothes lockers for delivery services, or (2) temporary storage for package deliveries, laundry deliveries, and other deliveries. These amenities would be provided on Level B1.

FAMILY-1: Family TDM Amenities. The proposed project would provide an onsite secure location on Level B1 for storage of personal car seats, strollers, and cargo bicycles or other large bicycles.

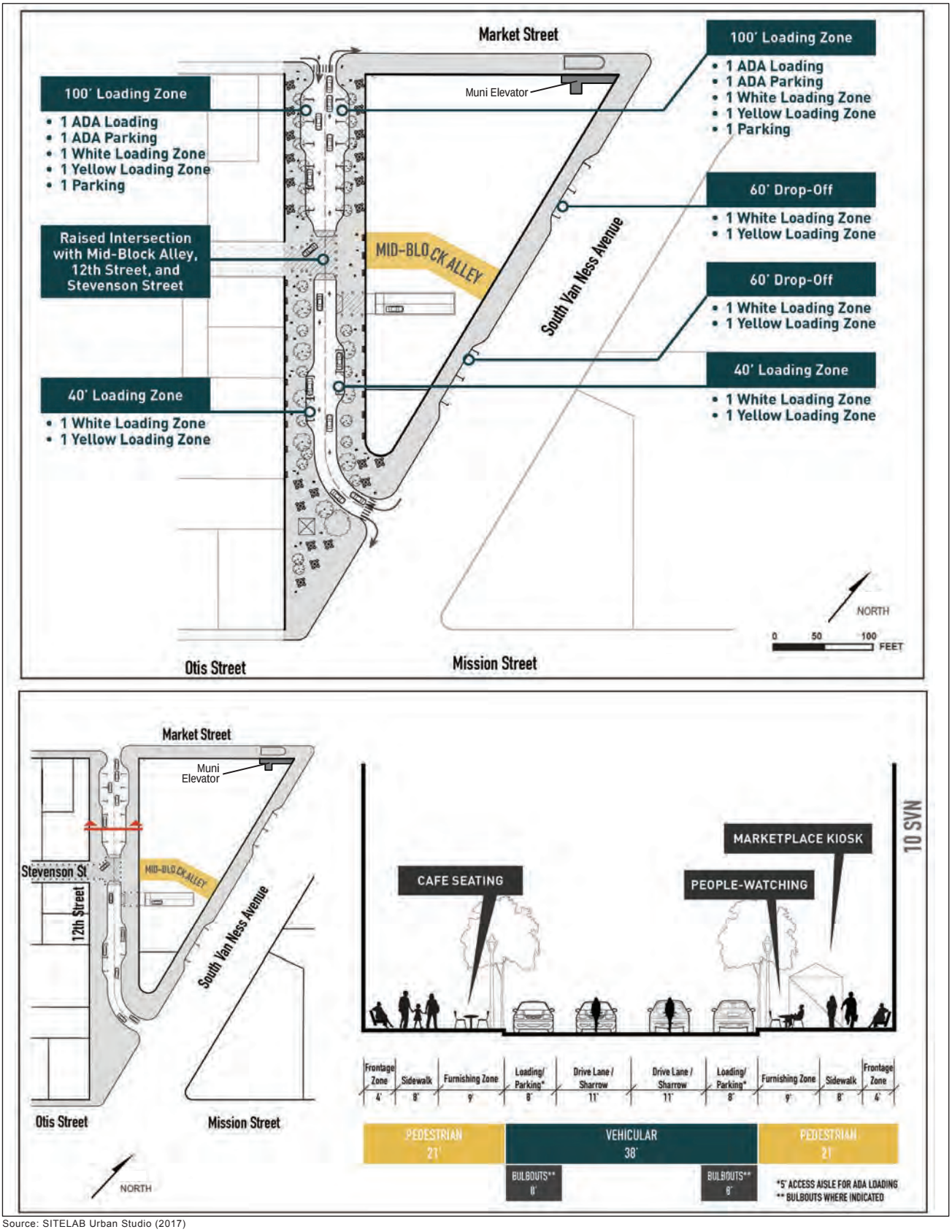
INFO-1: Multimodal Wayfinding Signage. The proposed project would provide multimodal wayfinding signage in key locations to support access to transportation services and infrastructure, including transit, bike share, car-share parking, bicycle parking and amenities (including repair stations and fleets), showers and lockers, taxi stands, and shuttle/carpool/vanpool pick-up/drop-off locations.

INFO-2: Real Time Transportation Information Displays. The proposed project would provide real time transportation information on displays in prominent locations on the project site and within the buildings to highlight sustainable transportation options and support informed trip-making.

INFO-3: Tailored Transportation Marketing Services. The property owner would provide promotions and welcome packets to all new residents/employees, personal consultation for each new resident/employee, and request commitment to try new transportation options.

Streetscape Improvements

The proposed streetscape plan, called the "Market Octavia Streetscape Plan," would conform to Market & Octavia Area Plan and the Better Streets Plan and is shown in **Figure 2.14: Proposed Project–Market Octavia Streetscape Plan and 12th Street Section**. Under the Market Octavia Streetscape Plan, the eastern and western sidewalks along 12th Street would be expanded from 15 feet to a width of 21 feet (4 feet of frontage, 8 feet of pedestrian throughway, and 9 feet of pedestrian furnishing space). Eight-foot-wide bulb-outs would be installed at the intersection of 12th and Market streets. A raised crosswalk would be installed at the intersection of 12th and



Source: SITELAB Urban Studio (2017)

FIGURE 2.14: PROPOSED PROJECT - MARKET OCTAVIA STREETSCAPE PLAN AND 12TH STREET SECTION

Stevenson streets. The "pedestrian island" at the intersection of 12th Street and South Van Ness Avenue would be removed and replaced by bulb-outs on both sides of 12th Street and a pedestrian plaza on the southwest side of the intersection.

Two 60-foot-long white and yellow loading zones[12] are proposed along the South Van Ness Avenue frontage, near the entrances to the residential lobbies, to provide an area for passenger drop-off and pick-up, and commercial loading activities. Proposed changes to the right-of-way are described below. Four passenger and commercial loading zones are proposed on 12th Street, one 100-foot-long loading zone and one 40-foot-long loading zone on each side of 12th Street. Each 100-foot loading zone would include one ADA loading space, one ADA parking space, one passenger loading space, one commercial loading space, and one regular parking space. Each 40-foot loading zone would include one passenger loading space and one commercial loading space.

In addition to the streetscape improvements described above, 33 net new street trees would be planted along the perimeter of the project site frontage. Class II bicycle racks, with capacity for 61 bicycles, would be installed along South Van Ness Avenue, Market Street, and 12th Street, in compliance with the City's Better Streets Plan.

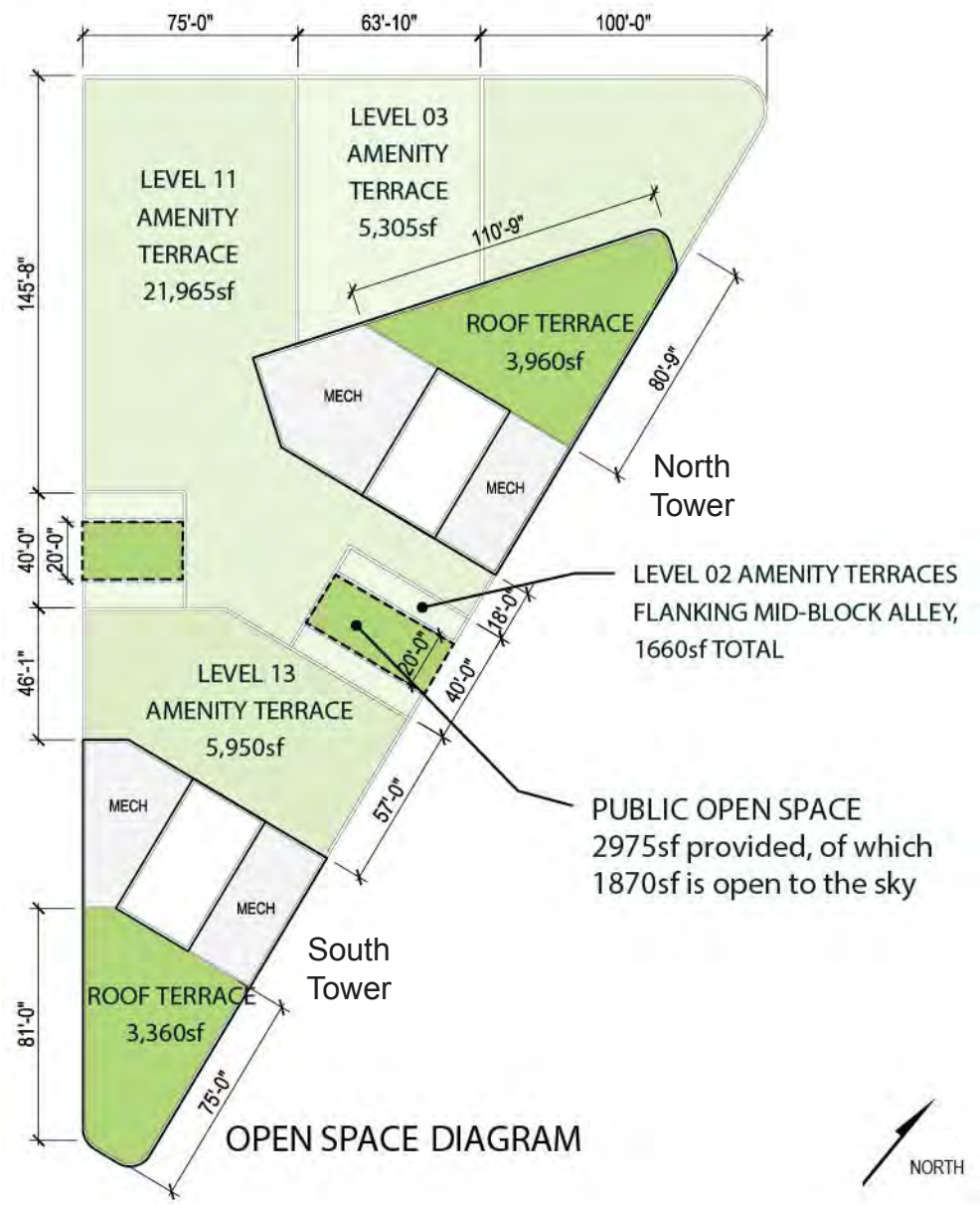
Muni Elevator

The proposed project may include construction of a new station entrance to the Muni Metro station at Market Street and South Van Ness Avenue, via a new elevator, in order to enhance ADA accessibility to the station. The specific location of the proposed elevator is not known at this time, but it would be located within a short distance from the intersection of Market Street and South Van Ness Avenue. The subterranean areas necessary to accommodate the Muni station elevator would likely require the relocation of certain structural elements of the 10 South Van Ness Avenue building to an area beneath the 12th Street right of way and could result in changes to the basement level plan.

Open Space

The proposed project would include 48,150 square feet of usable open space per planning code section 135, which would be provided through a combination of publicly accessible open spaces and common open spaces for residents. Publicly accessible open space would include the 2,975-square-foot mid-block alley between the two tower podiums, which would provide a pedestrian connection between South Van Ness Avenue and 12th Street. Privately accessible common open spaces would include amenity terraces on Level 2 of both tower podiums, Levels 3 and 11 of the north tower, Level 13 of the south tower, and on the roofs of both towers, as shown in **Figure 2.15: Proposed Project – Open Space Diagram**.

[12] White zones are for passenger loading and unloading during certain hours, with a time limit of five minutes. Yellow zones are for commercial loading activities.



Source: 10 SVN LLC (2017)

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FIGURE 2.15: PROPOSED PROJECT - OPEN SPACE DIAGRAM

Sustainability

The San Francisco Building Code includes a chapter on requirements for green buildings; these requirements establish either Leadership in Energy and Environmental Design (LEED)[13] certification levels or Green Point Rated[14] system points for types of proposed residential and commercial buildings. The proposed project would seek LEED Gold certification, which includes measures applicable to both construction and operation of the proposed project. The proposed project would incorporate a number of sustainability features, including stormwater and rainwater collection features and a wastewater treatment system. The wastewater treatment system would be sized to treat and utilize recycled water from the proposed building for nonpotable uses in the building, including flushing toilets, irrigation, and cooling tower water for the HVAC system. The proposed project would remove the existing 28 trees along the perimeter of the project site frontage on all three sides of the property. In compliance with Public Works Code section 806(c)(2), the proposed project would install 61 new street trees, with one tree every 20 feet along the perimeter of the project site frontage, for a total of 33 net new street trees.

The project sponsor has obtained a certification from the Governor's Office which qualifies the proposed project as an environmental leadership development project pursuant to Assembly Bill 900, the Jobs and Economic Improvement through Environmental Leadership Act of 2011, and the California Environmental Quality Act (CEQA) section 21178 et seq. An environmental leadership development project does not result in any net increase in greenhouse gas (GHG) emissions and achieves a 15 percent higher standard for transportation efficiency than comparable projects. The California Air Resources Board (ARB) provided a letter of determination on December 18, 2017, stating that the proposed project would not result in any net additional GHG emissions and authorized the governor to certify the project. The governor's signature was received on December 21, 2017, certifying that the project is an environmental leadership development project.[15, 16]

[13] LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council, which involves third-party verification that a building or community was designed and built using strategies aimed at improving performance across metrics that include energy savings, water efficiency, indoor air quality, use of recycled materials, and proximity to public transportation.

[14] Green Point Rated is a program of Build it Green, established for evaluating residential building performance in the areas of resource conservation, indoor air quality, water conservation, energy efficiency, and livable communities (infill development, increased density, diversity of land uses).

[15] The certification process for environmental leadership development projects is separate from the environmental review process conducted for the proposed project.

[16] On August 7, 2018, the project sponsor applied to the Governor's Office for recertification as an environmental leadership development project. ARB confirmed on August 13, 2018 that it continues to concur with its GHG analysis for the proposed project, dated as of December 18, 2017. The governor's recertification of the project is anticipated in October 2018.

Wind-Reducing Features

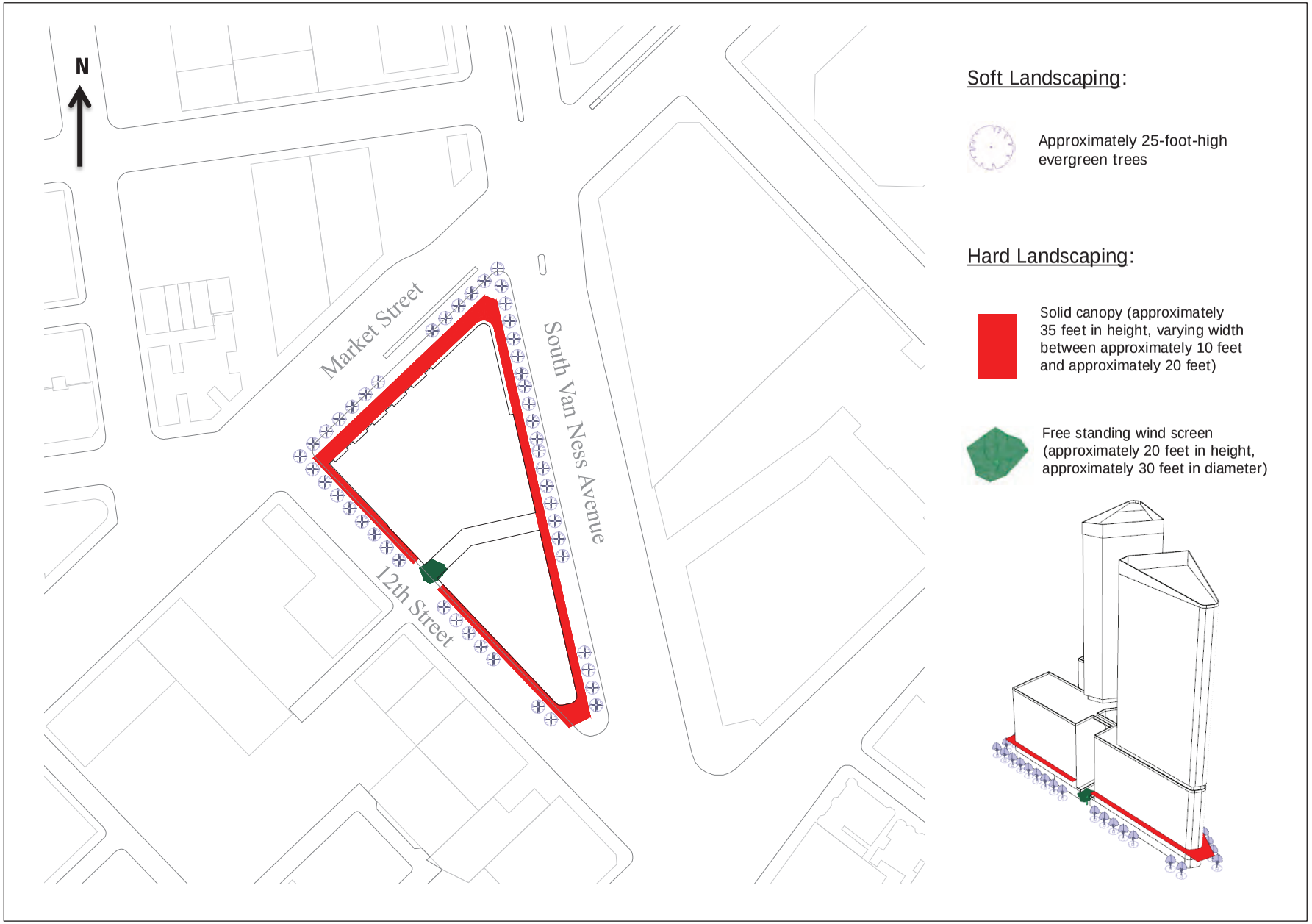
The proposed project incorporates building massing features (including the podium, building articulation, and the north tower chamfer) that were developed through wind tunnel testing in order to improve the building's performance with respect to wind safety and comfort impacts.

The proposed project would include canopy and landscape features that are intended to further reduce ground-level wind speeds and enhance pedestrian safety and comfort, specifically 25-foot-tall evergreen street trees lining the adjacent sidewalks, a 35-foot-tall attached wind canopy or canopies (varying in width between 10 and 20 feet) around the perimeter of the building's podium, and a 20-foot-tall free-standing wind screen (approximately 30 feet in diameter) at the 12th Street entrance to the mid-block passage under the proposed project. (See **Figure 2.16: Proposed Project - Wind-Reducing Features**.) These features would be subject to further design refinement during implementation of mitigation measure M-C-WI-1: Design Measures to Reduce Cumulative Wind Impacts based on further analysis to identify design measures that may reduce the project's contribution to off-site wind impacts in the cumulative-plus-project setting (see p. 4.5.15), and for aesthetic reasons.

In addition, the proposed project includes 25-foot-tall evergreen trees that would be planted along the east side of South Van Ness Avenue (along the 1 South Van Ness Avenue frontage), consistent with those to be planted along the east side of South Van Ness Avenue as part of the 1500 Mission Street project that is currently under construction.

Construction

This section describes the construction activities associated with the proposed project. Construction is anticipated to occur over approximately 36 months and would include the following phases: (1) demolition; (2) shoring and excavation; (3) foundation and podium construction; (4) towers/superstructure/skin; and (5) interior work. Construction hours would typically be from 7 a.m. to 8 p.m., Monday through Thursday; and 7 a.m. to 5 p.m. on Fridays and Saturdays. Limited evening work (8 p.m. to 7 a.m.) and work on weekends (7 a.m. to 5 p.m.) would be required for phases 3 and 4.



Source: BMT (2018)

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FIGURE 2.16: WIND-REDUCING FEATURES

As discussed on p. 2.6, a subsurface BART easement runs underneath the northern portion of the project site, as shown in Figure 2.2, p. 2.5. In this portion of the site, structural loads associated with the proposed project must remain equal to or less than existing loads on the BART tunnel. The northern portion of the project site is within the BART zone of influence (ZOI, the area outside of, but adjacent to, the BART tunnel superstructure, where BART review and approval of plans are required to ensure that construction within the ZOI would not adversely affect BART facilities).[17] The portion of the structure within the BART easement would be supported by a concrete mat foundation, which would ensure that the existing load imposed on the BART tunnel is maintained. Outside of the easement, but within the BART ZOI, the tower and podium structures would be supported by a deep foundation consisting of double-cased, drilled cast-in-place piers. The installation of drilled cast-in-place piers involves digging cylindrical shafts and then filling them with wet concrete. Thus, no pile driving would be required. Outside of the BART easement and ZOI, the tower and podium structures could be supported by either a deep foundation system or a mat foundation.[18] Construction methods for the proposed project, including construction depth, techniques, and approval processes, are discussed in detail in the Geology and Soils section of the initial study for this project.[19]

Construction activities would require temporary sidewalk and parking-lane closures for the entire construction period. The proposed project would develop and implement a construction management plan to anticipate and minimize transportation-related impacts of various construction activities associated with the proposed project. The construction management plan would ensure that overall circulation in the project area is maintained to the extent possible, with particular focus on ensuring transit, pedestrian, and bicycle access and connectivity. The program would supplement and expand, rather than modify or supersede, any manual, regulations, or provisions set forth by the San Francisco Municipal Transportation Agency (SFMTA), the San Francisco Public Works Department or other City departments and agencies, and the California Department of Transportation.

2.5 VARIANT COMPONENTS

The project sponsor is considering a variant to the proposed project that consists of a single, taller tower and a podium. With the variant, the building would be 590 feet tall and would have 55

[17] While there are no legislated requirements related to construction noise or vibration near the Bay Area Rapid Transit (BART) subway structures, the agency requires that design and construction documents be submitted for review and approval, that dewatering monitoring and recharging plans be submitted if applicable, and that steel-lined BART tunnels be monitored for vibration effects (movement and deformation) during construction.

[18] Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation, 10 Van Ness Avenue, San Francisco California*, March 16, 2017.

[19] San Francisco Planning Department, *Notice of Availability of the Initial Study for the 10 South Van Ness Avenue Mixed Used Project: Planning Department Case No. 2015-004568ENV; State Clearinghouse No. 2017072018* (Appendix B to this EIR).

stories.[20] Similar to the proposed project, the variant would have stair/elevator penthouses extending up to 20 feet above the roof height, for a total height of 610 feet.[21]

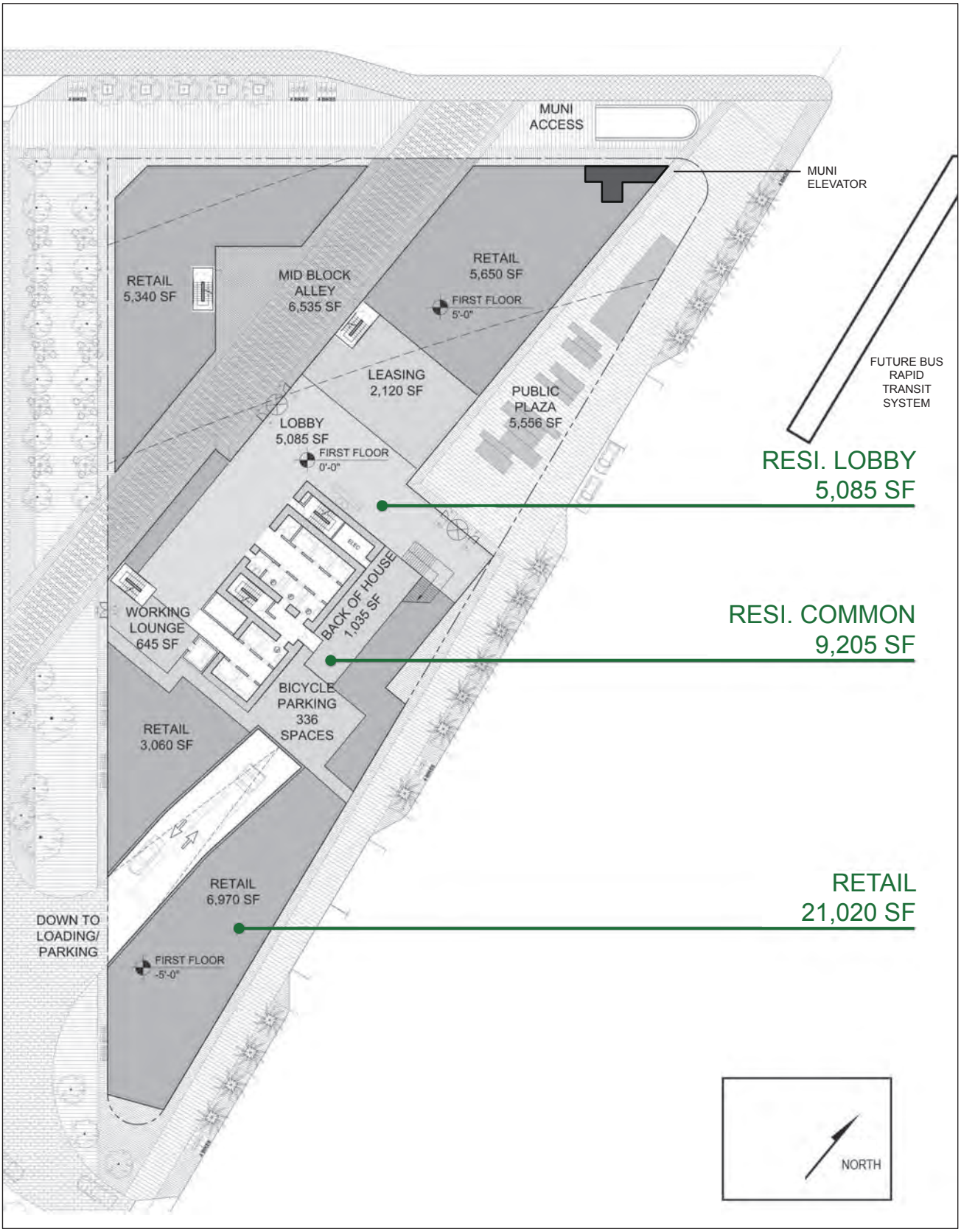
Variant Site Plan

Like the proposed project, the variant would require relocation of existing uses and demolition of existing structures on the project site. The ground floor would contain the same uses as the proposed project, including retail uses (see **Figure 2.17: Variant – Ground Floor Plan**) and a single residential lobby. The pedestrian entrances to the residential lobby would be located on South Van Ness Avenue and on the mid-block alley. One elevator from the parking garage/basement would provide access to the residential lobby. From the residential lobby, a second elevator would provide access to the tower. Elevator access may also be available between the below-grade parking garage/basement and the retail spaces.

As with the proposed project, 336 class I bicycle spaces would be provided on the ground floor for project residents and ground-floor retail spaces, and 61 class II bicycle spaces would be provided on the sidewalks adjacent to the project site, to meet planning code requirements. The variant would also include a mid-block alley running from Market Street to 12th Street and a public plaza along South Van Ness at the northeast corner of the site. The mid-block alley would serve as a pedestrian connection and public open space.

[20] The Van Ness and Market Downtown Residential SUD encourages transit-oriented, high-density, mixed-use residential neighborhood development around the intersections of Market Street and Van Ness Avenue and Mission Street and Van Ness Avenue. The current height limit for building towers ranges from 250 to 400 feet. The variant is intended to reflect the potential changes to the existing height limits proposed by the Market Street Hub Project. The Hub Project is expected to propose changes to existing height limits on certain parcels, including the project site, to provide greater variation in the heights of buildings proposed at the intersection of Market Street and Van Ness Avenue and to better ensure that the area's growth supports the City's goals for housing, transportation, the public realm, and the arts. The specific changes to the existing height limits proposed by the Hub Project have not yet been established.

[21] Pursuant to planning code section 260(b)(1)(B), the mechanical and elevator penthouses are exempt from the planning code height limits, but are considered in the context of environmental review.



Source: KPF Associates (2017)

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FIGURE 2.17: VARIANT - GROUND FLOOR PLAN

Variant Development Program

The variant development program is summarized and compared to that of the proposed project in **Table 2.2: Summary of Variant Uses Compared to Proposed Project**.

Table 2.2: Summary of Variant Uses Compared to Proposed Project

	Proposed Project	Variant
BUILDING AREAS	**Gross Square Feet**	
TOTAL	**1,071,095**	**1,072,989**
Residential Space	935,745	935,242
Residential Parking	102,000	102,000
Retail/Restaurant	30,350	30,450
Rooftop Mechanical	3,000	5,297
DWELLING UNITS	**No. of Units**	
TOTAL	**984**	**984**
Studio	375	347
One Bedroom	461	449
Two Bedroom	100	166
Three Bedroom	48	22
PARKING, LOADING, AND BICYCLE SPACES	**No. of Spaces**	
Residential Parking	491	491
Retail Parking	14	14
Carshare	6	6
Off-Street Freight Loading	7	7
Bicycle Spaces		
Class 1	336	336
Class 2	61	61
OPEN SPACE	**Square Feet**	
Publicly Accessible	2,975.	12,091
Common Residential	45,176	25,565
Private Residential	0	9,550

Source: 10 South Van Ness LLC, One Oak Owner, LLC, 2017

Residential Use

As shown in Table 2.2, like the proposed project, the variant would include a total of 984 units, totaling 935,242 gross square feet of residential uses. The variant would include the following mix of unit sizes: 347 studios, 449 one-bedroom units, 166 two-bedroom units, and 22 three-bedroom units.

Retail Use

The variant retail spaces would total 30,450 gross square feet and would include four retail spaces ranging in size from 3,060 to 6,970 square feet. The retail uses would front onto South Van Ness Avenue, Market Street, 12th Street, and the mid-block alley.

Variant Upper Floor Plans

Most of the Level 2 space would be occupied by the double-height volume of the ground-floor lobby and retail uses. Multipurpose amenity space for use by building residents would be located at the southern portion of Level 2. Residential units and ancillary residential uses would be provided on Levels 3-55.

The podium would range from 13 stories (139 feet, 9 inches) at the north end and 15 stories (164 feet, 10 inches) at the south end (see **Figure 2.18: Variant - Representative Podium Floor Plan**). Above the podium, a tower form would rise from the center of the site (see **Figure 2.19: Variant – Representative Tower Floor Plan**).

Variant Elevations and Renderings

As shown on **Figure 2.20: Variant – Building Elevations**, the proposed variant would be composed of a central tower form rising from a podium of varied heights. The design is intended to articulate the overall massing of the building into a varied composition of smaller-scaled horizontally and vertically oriented forms. (See also **Figure 2.21: Variant - Rendering Looking South from Van Ness Avenue**.)

Site Access and Circulation

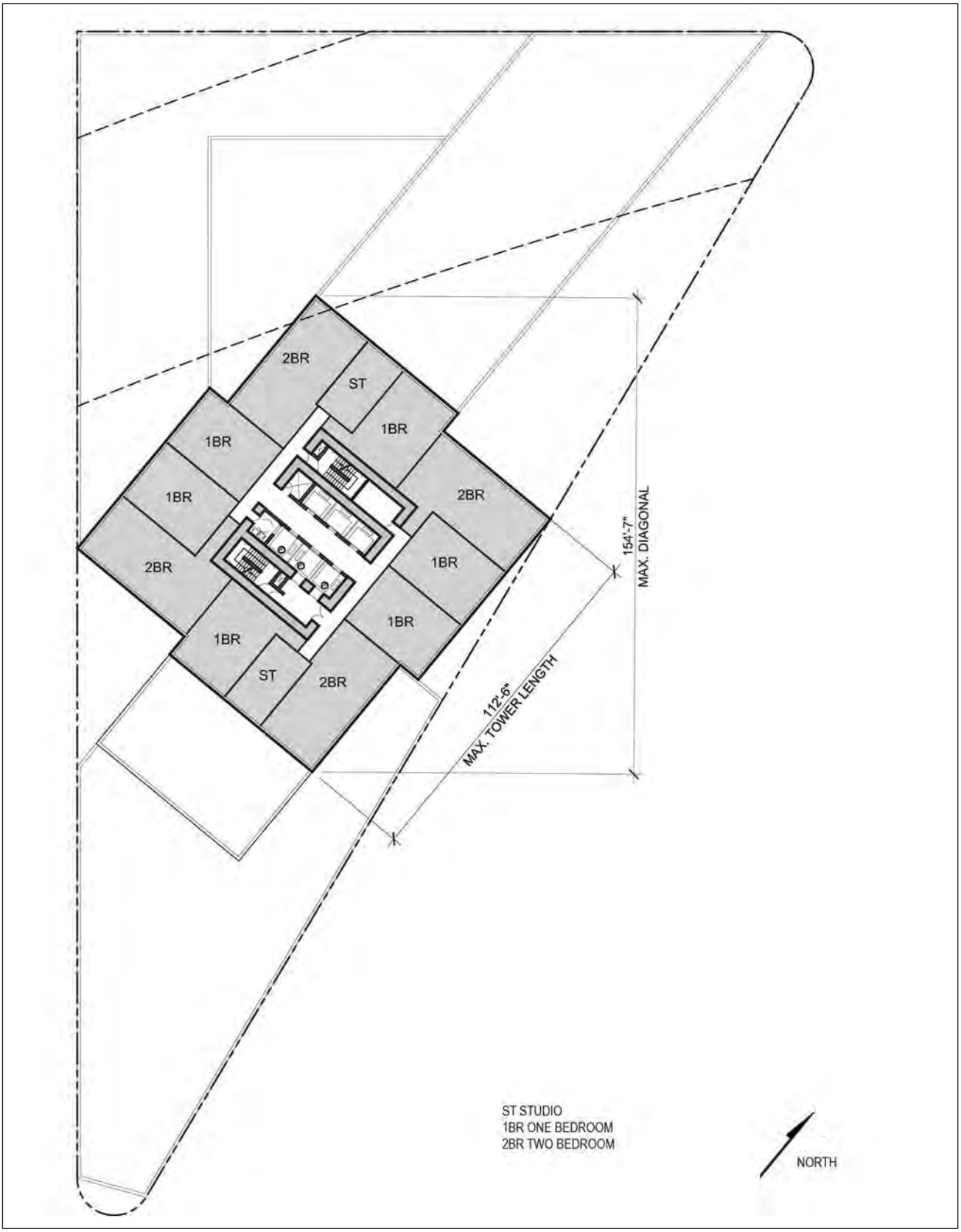
The proposed variant would include the same circulation and access as the proposed project, with the exception of the location of lobby entrances and the configuration of the mid-block alley. For the proposed variant, there would be two entrances to the single residential lobby, one from the mid-block alley and one from South Van Ness Avenue. The proposed mid-block alley would provide public access through the project site between Market Street and 12th Street.

Bicycle Parking

The proposed variant would provide 336 class I bicycle parking spaces (332 for residential use and 4 for retail use) in secure bicycle rooms, accessible from entrances along each right-of-way, on the ground floor and potentially the first basement level. On-street bicycle parking would include 61 class II bicycle parking spaces, 49 for residential use and 12 for retail use, which would be located within the public right-of-way along Market Street, 12th Street, and South Van Ness Avenue.

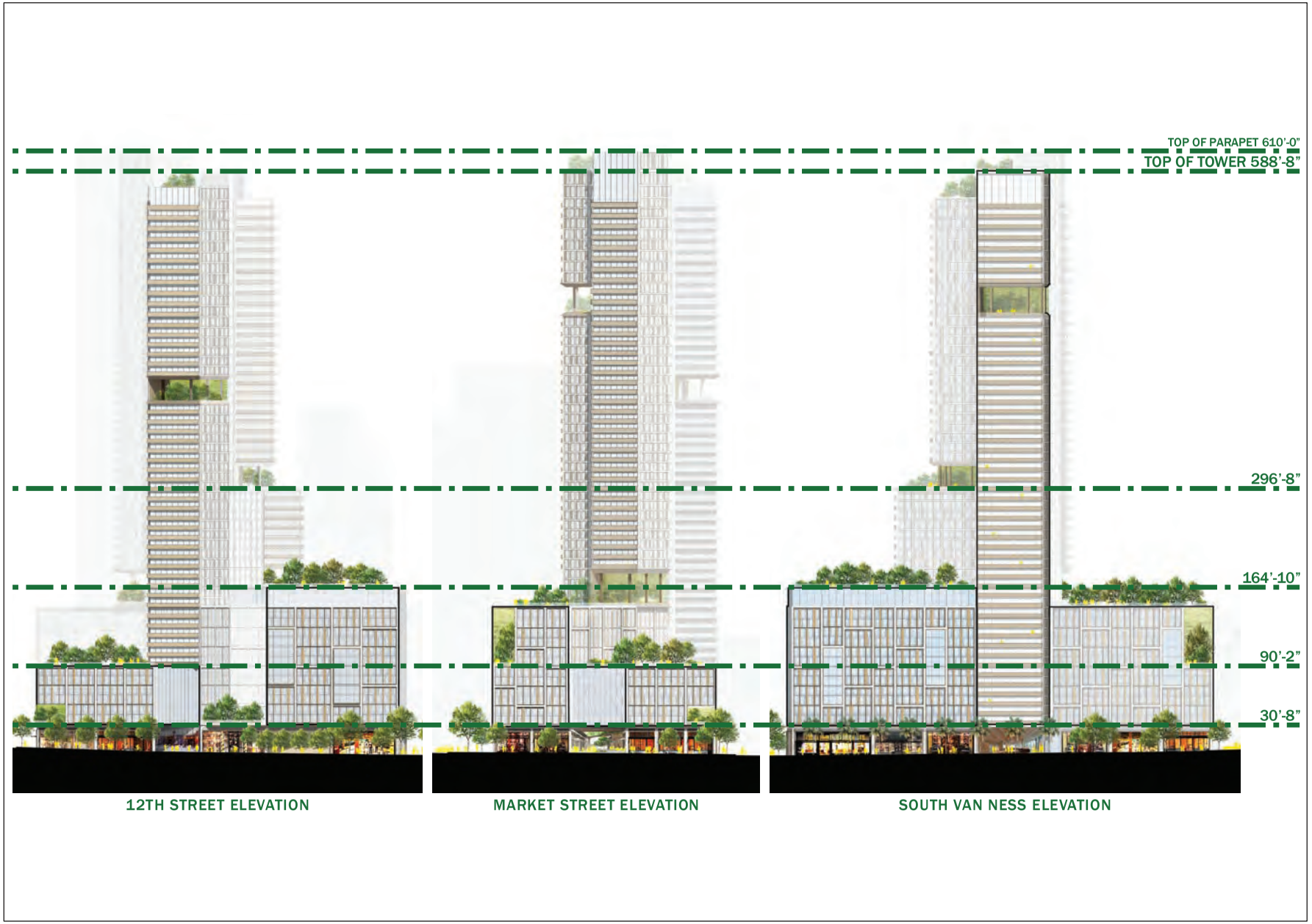
Source: KPF Associates (2017)

FIGURE 2.18: VARIANT - REPRESENTATIVE PODIUM LEVEL FLOOR PLAN



Source: KPF Associates (2017)

FIGURE 2.19: VARIANT - REPRESENTATIVE TOWER FLOOR PLAN



Source: KPF Associates (2017)

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FIGURE 2.20: VARIANT - BUILDING ELEVATIONS

Source: KPF Associates (2018)

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FIGURE 2.21: VARIANT - RENDERING LOOKING SOUTH FROM VAN NESS AVENUE

Parking/Loading

Vehicle parking would be the same as for the proposed project, with 518 vehicle parking and loading spaces provided in a two-level subgrade parking garage/basement with an entrance from 12th Street (see **Figure 2.22: Variant – Parking Garage / Basement Plans**).

Transportation Demand Management

The proposed variant would include the same TDM plan as the proposed project, as described above on pp. 2.22-2.25.

Streetscape Improvements

The proposed variant would include substantially the same streetscape improvements and on-street parking and loading as the proposed project, as shown on Figure 2.14 on p. 2.26.

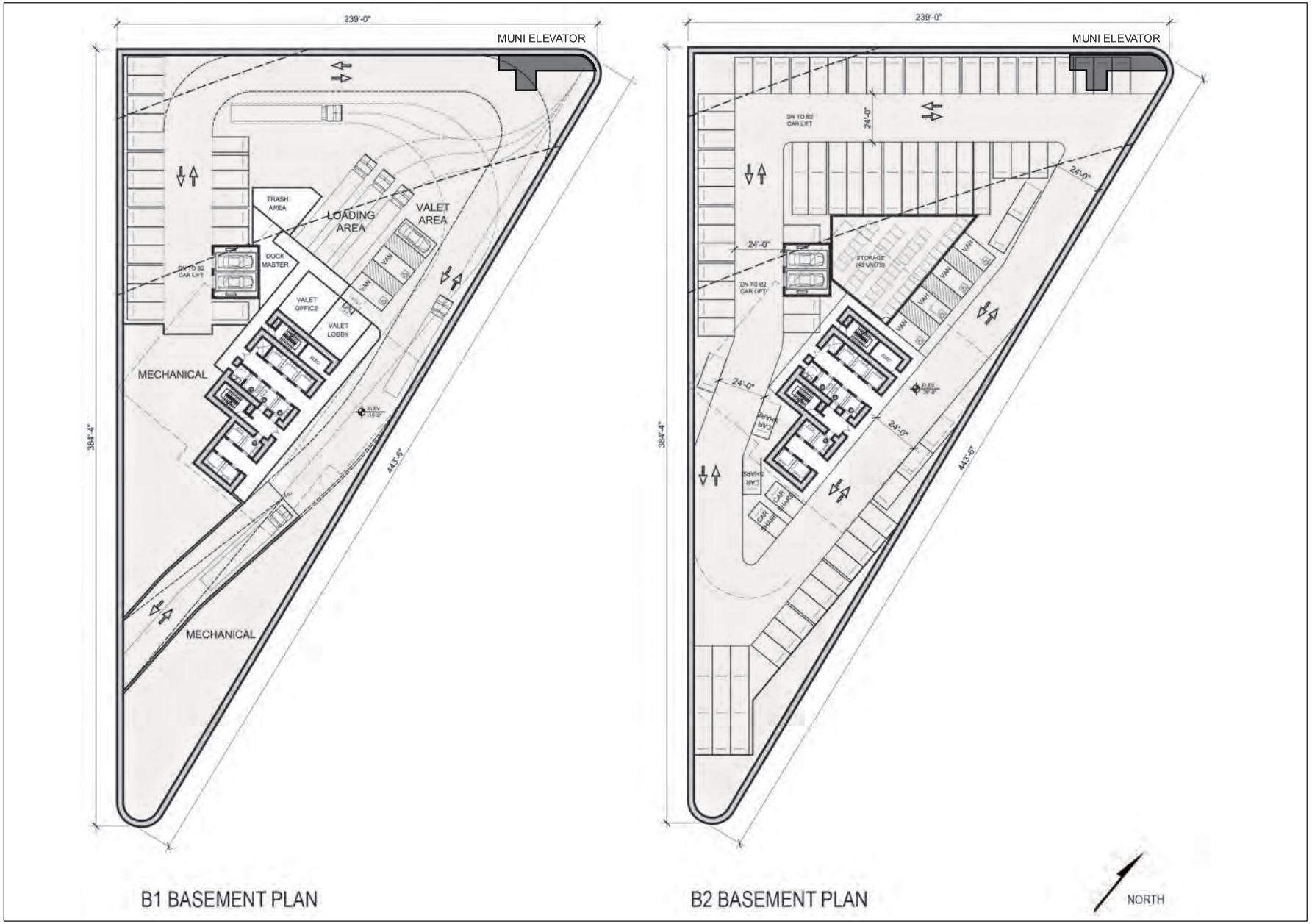
Muni Elevator

The variant may include construction of a new station entrance to the Muni Metro station at Market Street and South Van Ness Avenue, via a new elevator, in order to enhance ADA accessibility to the station. The design of the Muni elevator would be the same as under the proposed project.

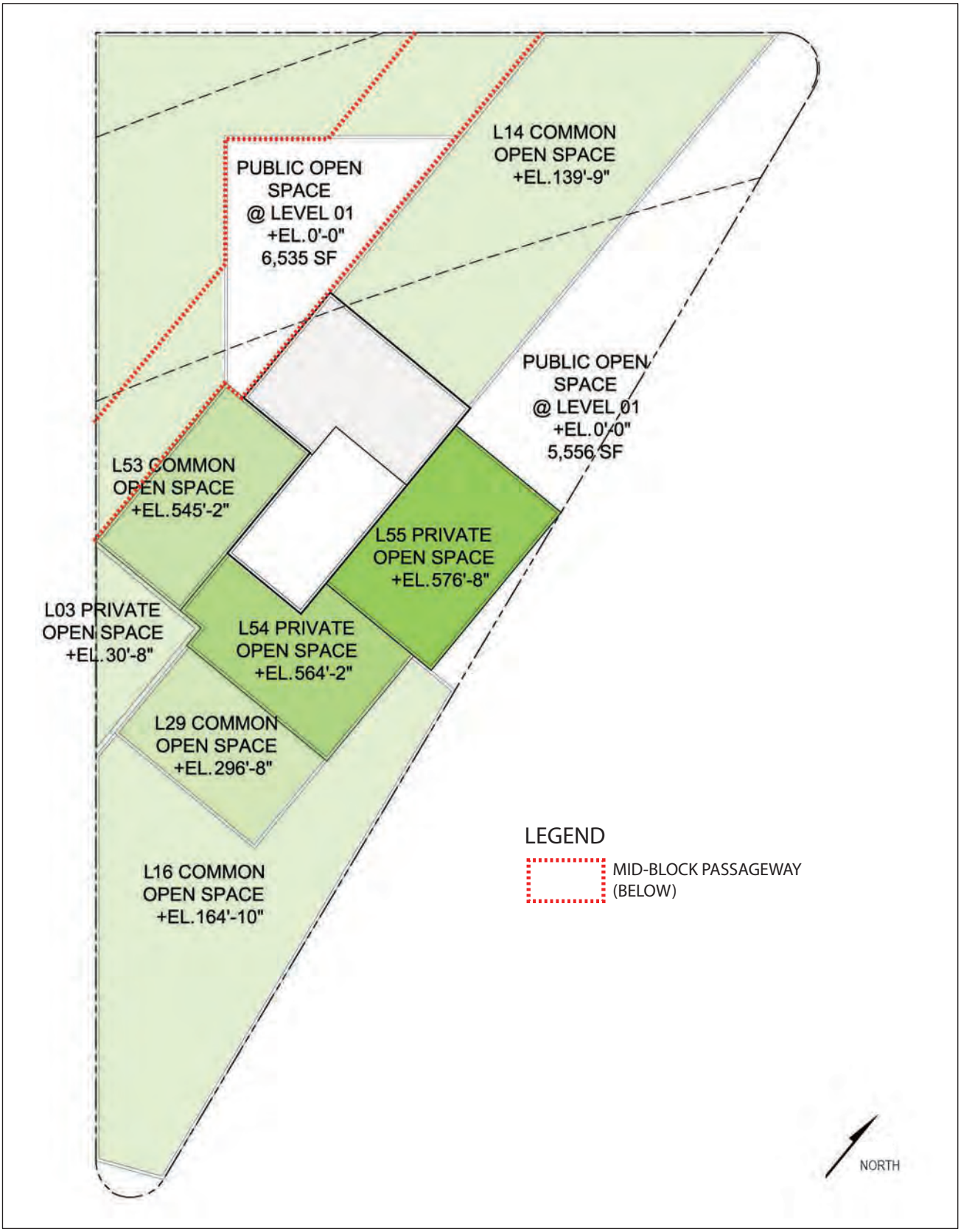
Open Space

The proposed variant would include usable open space in a combination of publicly accessible open space (12,091 square feet), common open space for project residents (25,565 square feet), and private open space (9,550 square feet) for a total of 47,206 square feet.[22] The open space would be dispersed throughout the building, as depicted in **Figure 2.23: Variant – Open Space Diagram.** The publicly accessible open space would consist of a mid-block alley connecting Market Street to 12th Street and a pedestrian plaza along the northeastern corner of the project site along South Van Ness Avenue. The common open space would be provided on Levels 14, 16, 29, and 53.

[22] Living streets convert standard streets and alleys "into shared spaces that prioritize the use of the space for pedestrians and open space – often by claiming street space to create enhanced and active places for landscaping and seating. Living alleys typically include special paving, traffic calming, lighting, seating, greening, and other elements to indicate that vehicles are visitors and pedestrians have primacy across the full width of the right-of-way." Source: SF Better Streets, available online at http://www.sfbetterstreets.org/find-project-types/reclaiming-roadway-space/living-alleys/



Source: KPF Associates (2017)



Source: KPF Associates (2017)

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FIGURE 2.23: VARIANT - OPEN SPACE DIAGRAM

Sustainability

The proposed variant would incorporate the same sustainability features as the proposed project. As with the proposed project, the variant has also been certified as an environmental leadership development project. The proposed variant would also remove the existing 28 trees along the perimeter of the project site's frontage on all three sides of the property, and would install 61 new street trees in compliance with Public Works Code section 806(c)(2), for a total of 33 net new street trees.

Wind-Reducing Features

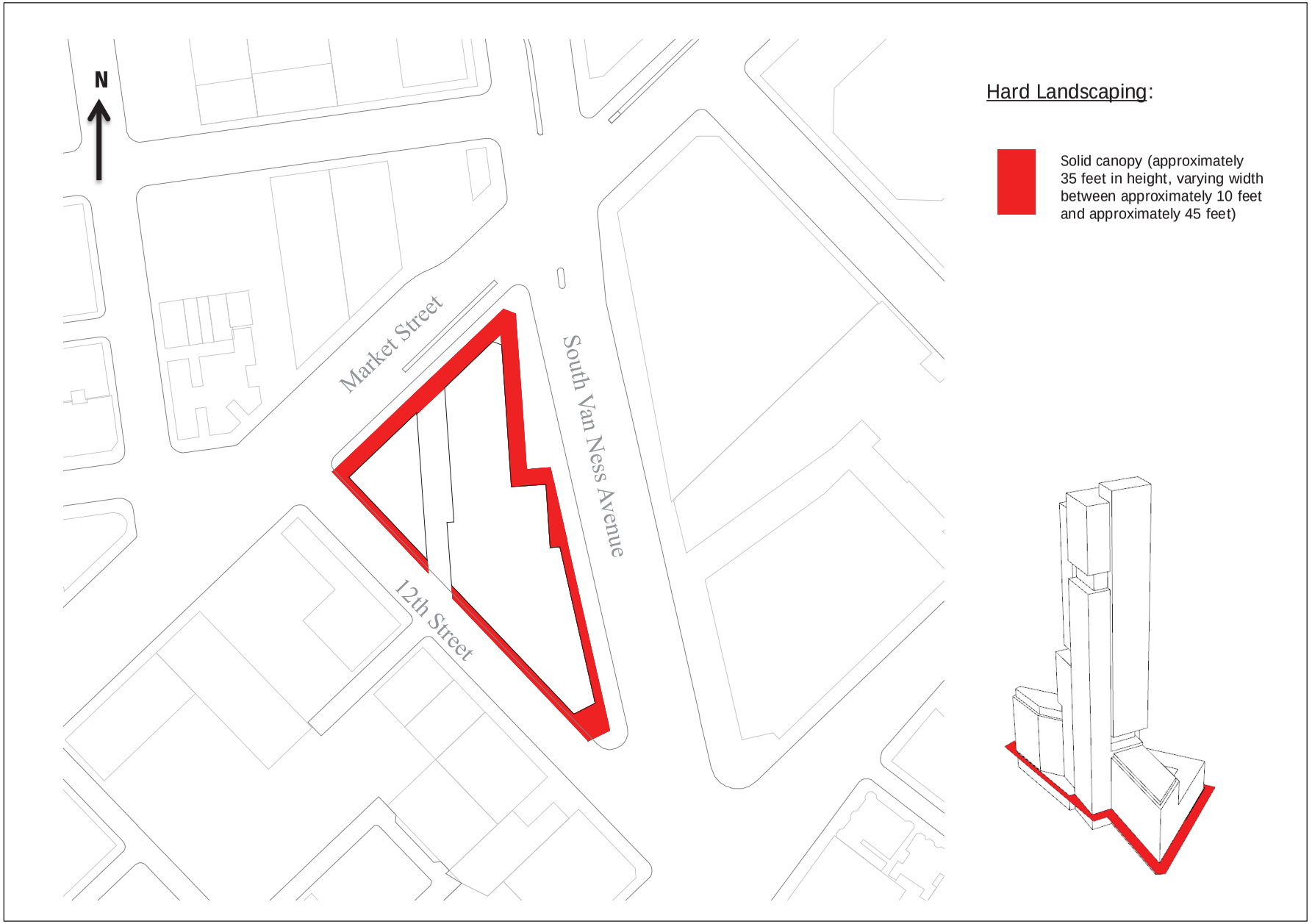
The variant incorporates building massing features (including the podium, building articulation, and the single tower placement and configuration) that were developed through wind tunnel testing in order to improve the building's performance with respect to wind safety and comfort impacts.

The variant would include an attached canopy, or canopies, intended to further reduce ground-level wind speeds and enhance pedestrian safety and comfort. The canopy, or canopies, would be 35 feet tall (varying in width between 10 and 45 feet) around the perimeter of the building's podium. (See **Figure 2.24: Variant – Wind-Reducing Features**.) These features would be subject to further design refinement during implementation of Mitigation Measure M-C-WI-1; Design Measures to Reduce Cumulative Wind Impacts based on further analysis to identify design measures that may reduce the project's contribution to off-site wind impacts in the cumulative-plus-project setting (see p. 4.5.15), and for aesthetic reasons.

In addition, the variant includes 25-foot-tall evergreen trees that would be planted along the east side of South Van Ness Avenue (along the 1 South Van Ness Avenue frontage), consistent with those to be planted along the east side of South Van Ness Avenue as part of the 1500 Mission Street project that is currently under construction.

Construction

Construction activities for the variant would be the same as those for the proposed project in terms of phasing, duration, and potential for temporary sidewalk and roadway closures. The proposed 55-story single-tower variant would fundamentally have the same foundation type and design methodology as the 41-story double-tower construction under the proposed project. Both are anticipated to be constructed with a combination of a mat foundation and deep foundation piers. In both cases, the tower columns and shear walls would be founded on a common pier cap. This pier cap would be supported by drilled piers extending below the BART ZOI, or up to approximately 80 feet below ground surface, but not to the depth of the underlying bedrock. The proposed variant, with one tower, would require fewer columns, shear walls, and piers compared to the proposed project, with two towers. As under the proposed project, the variant would not require pile driving.



Source: BMT (2018)

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FIGURE 2.24: VARIANT - WIND-REDUCING FEATURES

2.6 STRAIGHT-SHOT STREETSCAPE OPTION

The straight-shot streetscape plan option could be included with either the proposed project or variant (see **Figure 2.25: Straight-Shot Streetscape Option for the Proposed Project (12th Street Right-of-Way and Section)** and **Figure 2.26: Straight-Shot Streetscape Option for the Variant (12th Street Right-of-Way and Section)**).

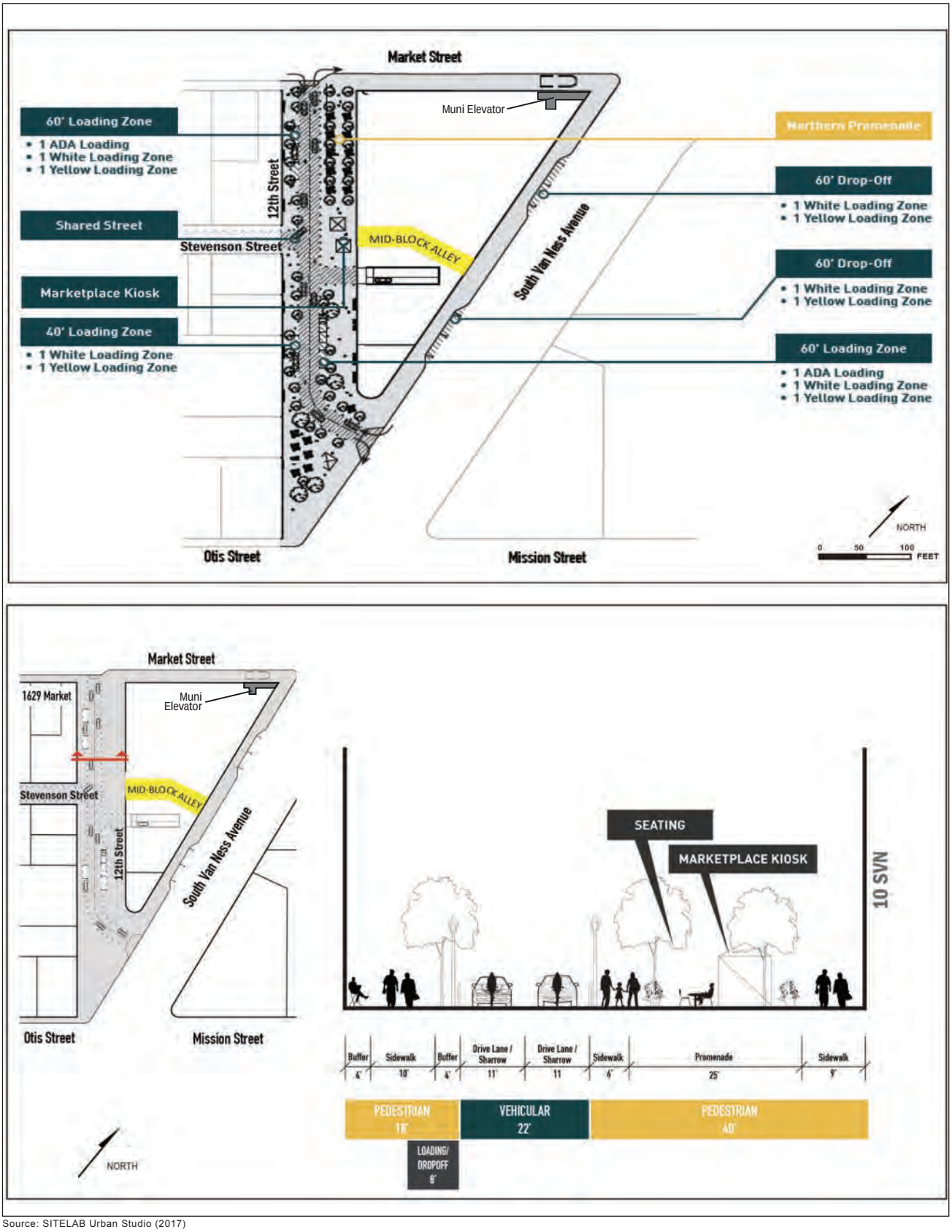
The straight-shot streetscape plan would create a pedestrian promenade on 12th Street. On 12th Street, the eastern sidewalk would be expanded to a width of 40 feet (9 feet of pedestrian throughway, 25 feet for a pedestrian plaza, and an additional 6 feet of pedestrian throughway), while the western sidewalk would be expanded to a width of 18 feet (4 feet of buffer, 10 feet of pedestrian throughway, and an additional 4 feet of buffer). There would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction.

On the west side of 12th Street, the straight-shot streetscape design would include one 60-foot-long loading zone with one ADA loading space, one passenger loading space, and one commercial loading space, and one 40-foot-long loading zone with one commercial loading space and one passenger loading space. One 60-foot-long loading zone with one ADA loading space, one passenger loading space, and one commercial loading space would be included on the east side of 12th Street. The two loading zones on the west side of South Van Ness Avenue, and the pedestrian plaza on the southwest corner of the project site would be included as proposed under the Market Octavia Streetscape Plan.

As under the Market Octavia Streetscape Plan, this option would include 61 class II bicycle spaces along the project frontage sidewalks, with 32 spaces on 12th Street, 21 spaces on Market Street, and 8 spaces on South Van Ness Avenue. Under both streetscape design options, the three existing curb cuts on South Van Ness Avenue and the three existing curb cuts on the east side of 12th Street would be removed, and a 20-foot-long curb cut would be created on the east side of 12th Street for access to and from the proposed underground parking garage.

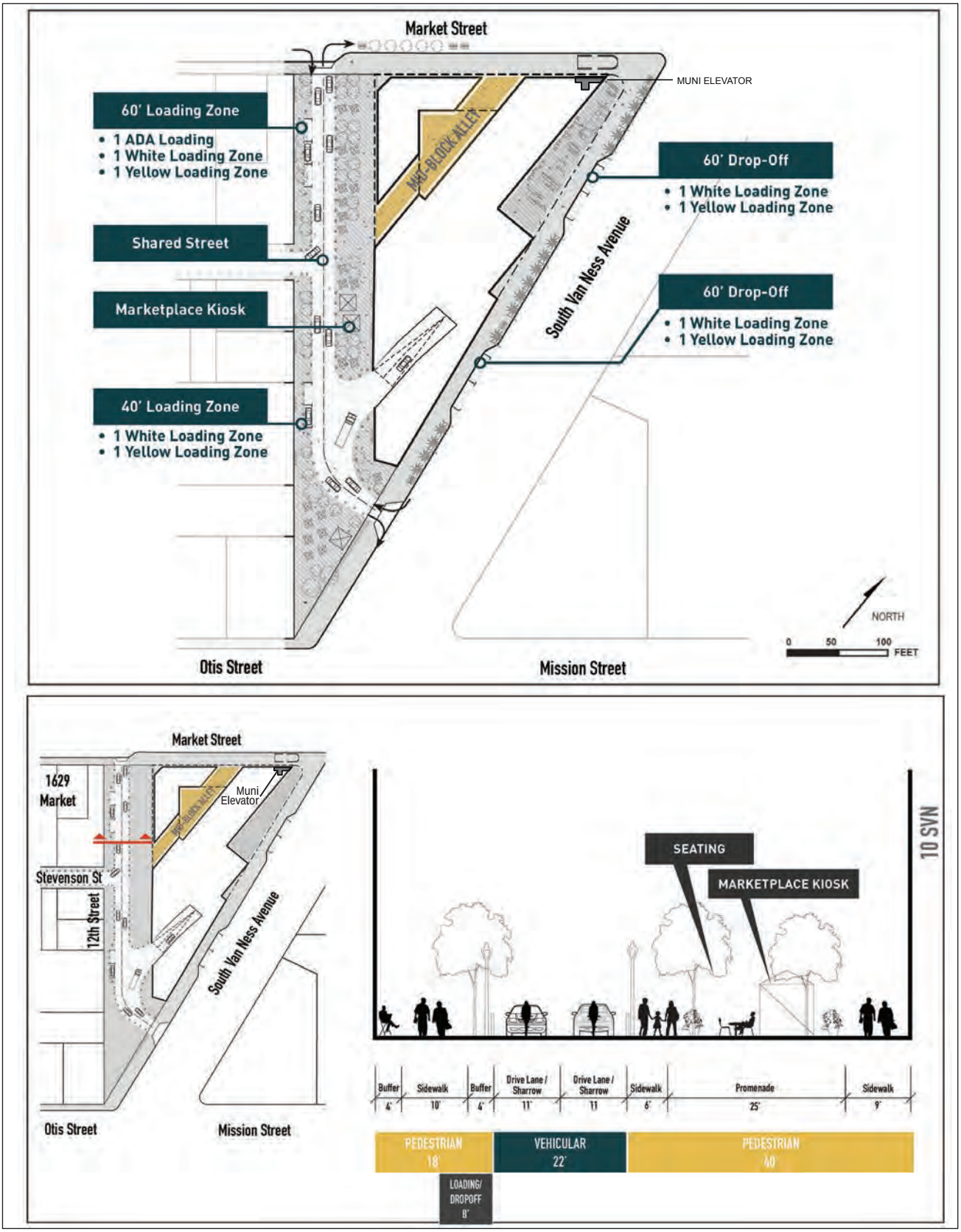
Under the proposed streetscape plan and straight-shot streetscape option, new streetscape features would be consistent with the Better Streets Plan within the sidewalk areas along Market Street and South Van Ness Avenue.

The design of the straight-shot streetscape option would be similar to the proposed streetscape design; the primary difference is that the straight-shot streetscape option would remove all 37 on-street parking spaces along 12th Street and instead include wider sidewalks, allowing more room for pedestrian amenities such as a promenade along the east side of 12th Street and additional street furniture for sitting and marketplace kiosk space. The straight-shot streetscape option does not include the raised intersection at Stevenson Street and the mid-block alley proposed by the project. This option would be based on a shared-street concept that would incorporate elements of a living street.



Source: SITELAB Urban Studio (2017)

FIGURE 2.25: STRAIGHT-SHOT STREETSCAPE OPTION FOR THE PROPOSED PROJECT (12TH STREET RIGHT-OF-WAY AND SECTION)



Source: SITELAB Urban Studio (2017)

FIGURE 2.26: VARIANT - STRAIGHT-SHOT STREETSCAPE OPTION AND 12TH STREET RIGHT-OF-WAY AND SECTION

The straight-shot streetscape option would only involve changes to traffic and circulation, and would not affect the proposed project or variant's development programs or the configuration of the buildings. Therefore, the option is analyzed only in Section 4.2, Transportation and Circulation, of this EIR.

2.7 DISCRETIONARY ACTIONS AND APPROVALS

The proposed project or variant would require approvals from several authorities, including those listed below.

Actions by the Planning Commission

- Approval of a Downtown Project Authorization pursuant to planning code section 309 for new construction or substantial alteration of structures in C-3 Districts, with exceptions to the requirements of Sunlight Access on Certain Streets (Section 146(a)); Reduction of Ground-Level Wind Currents in C-3 Districts (Section 148); and Reduction of Shadows on Certain Public or Publicly Accessible Open Spaces in C-3 Districts (Section 147).
- Approval of an in-kind improvements agreement under planning code section 424.3(c) for community improvements for the neighborhood infrastructure portion of the Van Ness and Market Downtown Residential SUD neighborhood infrastructure fee.

Actions by Other City Departments

- Planning Department and Department of Building Inspection (DBI) – Approval of the site permit and addenda thereto. Approval of demolition, grading, and building permits for the demolition of the existing buildings and construction of the new building. Permit for underpinning of adjacent structures. Night noise permit for nighttime construction.
- SFMTA Board of Directors – Approval of the proposed curb modifications, parking space removal, and bicycle corrals on South Van Ness Avenue, Market Street, and 12th Street.
- SFMTA Department of Parking and Traffic – Approval of a special traffic permit for use of a public street space during project construction; approval of foundation, shoring, and dewatering systems as they relate to the Muni ZOI.
- SFMTA Color Curb Program – Approval of a request for on-street loading spaces on South Van Ness Avenue and 12th Street.
- SFMTA Commission – Approval of the Muni elevator design.
- Bureau of Streets and Mapping, San Francisco Department of Public Works – Subdivision and condominium map approval and encroachment permits for sidewalk underground vaults. Permit for removal and planting of street trees; approval of a street space permit for use of a public street space during project construction (including construction of the proposed wind canopies); street and sidewalk permits for any modifications to public streets, sidewalks, or curb cuts.
- San Francisco Public Works – Street encroachment permit, to be approved by the director of public works, and by the San Francisco Board of Supervisors (board of supervisors) if required by the director, for a wind canopy to be located in the public right-of-way.

- San Francisco Public Works – Approval of Street Improvement Permits (engineering drawings). Approval of a Parcel Map if new parcels are created for the Muni elevator, which would occur if a portion of 12th Street is vacated. Approval of a Public Improvement Agreement for construction of the Muni elevator.
- San Francisco Public Utilities Commission – Approval of any changes to sewer laterals. Approval of an erosion and sediment control plan before commencing construction, and compliance with post-construction stormwater design guidelines, including a stormwater control plan.
- San Francisco Department of Public Health – Approval of a dust control plan because the site is in excess of 0.5 acre (article 22B). Approval of a ventilation plan, in compliance with San Francisco Health Code, article 38, because the proposed project site is located within an area that is identified in the Air Pollutant Exposure Zone Map. Approval of a site mitigation plan under the Maher Ordinance (article 22A), because the proposed project is located within the Maher Ordinance Area.
- San Francisco Board of Supervisors – Approval of sidewalk widening. Approval of a street vacation ordinance, if the land under 12th Street is transferred to the project sponsor.
- Recreation and Parks Commission – Joint determination with the San Francisco Planning Commission that the project complies with the requirements of planning code section 295.

Actions by Other Agencies

- Bay Area Air Quality Management District – Issuance of permits for the installation and operation of an emergency generator.
- BART – Plan review and approval of shoring and foundation work and elevator within the BART ZOI (engineering division), and issuance of a permit to work within or adjacent to the right-of-way.

Additional Approvals Required for the Variant

Actions by the Planning Commission

- Recommend to the board of supervisors approval of Planning Code Amendments for Height District Reclassification: The building height of the variant would exceed the height limit of the existing 120/400 R-2 and 400-R-2 Height and Bulk District. The board of supervisors would need to approve an amendment to the Zoning Map Height and Bulk Districts (Sheet HT07) pursuant to planning code section 302 to permit construction of a 590-foot-tall building.
- Recommend to the board of supervisors approval of planning code amendments to create the Market and 12th Street Special Use District, which would supersede the project site's current Van Ness & Market Downtown Residential Special Use District to create new building bulk requirements, permit off-street accessory parking in excess of 0.25 space per dwelling unit, permit the proposed mid-block passageway to extend between Market and 12th Street (rather than between South Van Ness and 12th Street), and to establish affordable housing requirements.

- Recommend to the board of supervisors approval of a General Plan Amendment: Approval of General Plan Amendment to Downtown Area Plan and the Market & Octavia Area Plan to permit construction of a building that is 590 feet tall.

Actions by the Board of Supervisors

- Planning code amendments for height district reclassification: The building height of the variant would exceed the height limit of the existing 120/400 R-2 and 400-R-2 Height and Bulk District. The board of supervisors would need to approve an amendment to the Zoning Map Height and Bulk Districts (Sheet HT07) pursuant to planning code section 302.
- Planning code amendments to create the Market and 12th Street Special Use District, which would supersede the project site's current Van Ness & Market Downtown Residential Special Use District to create new building bulk requirements, permit off-street accessory parking in excess of 0.25 space per dwelling unit, permit the proposed mid-block passageway to extend between Market and 12th Street (rather than between South Van Ness and 12th Street), and to establish affordable housing requirements.
- General Plan Amendment: Approval of General Plan Amendment to Downtown Area Plan and the Market & Octavia Area Plan to permit construction of a building that is 590 feet tall.

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3. PLANS AND POLICIES

3.1. OVERVIEW

Pursuant to section 15125(d) of the CEQA Guidelines, Chapter 3, Plans and Policies, provides a general description of land use plans applicable to the 10 South Van Ness Avenue Mixed-Use Project. Policy conflicts do not indicate a significant environmental effect within the context of CEQA environmental review. Instead, the intent of CEQA is to determine physical effects associated with a project. To the extent that physical environmental impacts of a proposed project may result in conflicts with one of the goals related to a specific resource topic, such impacts are analyzed in this EIR and initial study (Appendix B) under the appropriate environmental topic.

Land use plans typically contain numerous policies emphasizing differing legislative goals, and an interpretation of consistency requires the balancing of all relevant policies. In the case of this project, the San Francisco Planning Commission (planning commission) will evaluate the proposed project in accordance with provisions of the San Francisco General Plan (general plan), including the Downtown Area Plan, and the Market & Octavia Area Plan.

The staff reports and approval motions prepared for the decision-makers will include a comprehensive project analysis and findings regarding the consistency of the proposed project with applicable plans, policies, and regulations independent of the environmental review process. Plans and policies addressed in this chapter include the following:

- San Francisco General Plan including the Housing, Urban Design, and Recreation and Open Space elements, and the Downtown Area Plan, and the Market & Octavia Area Plan[1]
- San Francisco Planning Code (planning code), including the following provisions: Allowable Uses, Open Space, Height and Bulk, Vehicle and Bicycle Parking, Loading, and Priority Policies (Accountable Planning Initiative)
- San Francisco Transit First policy
- San Francisco Bicycle Plan
- San Francisco Better Streets Plan
- San Francisco Sustainability Plan
- San Francisco Climate Action Strategy

This chapter also addresses the following regional plans and policies:

- Plan Bay Area 2040, which includes the *sustainable communities strategy,* the Bay Area Air Quality Management District's 2010 Clean Air Plan, the Metropolitan Transportation Commission's *Regional Transportation Plan – Transportation 2040*, and the San Francisco Bay Plan

[1] The Market Street Hub Project is an area plan proposed within the Market & Octavia Area Plan.

- The San Francisco Regional Water Quality Control Board's Water Quality Control Plan for the San Francisco Bay Basin

3.2. SAN FRANCISCO PLANS AND POLICIES

San Francisco General Plan

The San Francisco General Plan provides the City's vision for the future of San Francisco. The general plan contains 10 elements that apply citywide: Housing, Commerce and Industry, Recreation and Open Space, Transportation, Urban Design, Environmental Protection, Community Facilities, Community Safety, Arts, and Air Quality. The general plan also includes area plans that identify objectives for specific geographic planning areas, such as the Downtown Area Plan and the Market & Octavia Area Plan. The project site is located within both of these geographic planning areas.

The San Francisco Planning Department (planning department), Zoning Administrator, planning commission, and other City decision-makers will evaluate the proposed project in the context of the general plan, and as part of the project review process will consider potential conflicts. The consideration of general plan objectives and policies will take place independent from the environmental review process. Any potential conflict not identified in this EIR will be considered in that context and will not alter the analysis of physical environmental impacts found in this EIR.

The San Francisco General Plan elements that are most applicable to planning considerations for the proposed project and variant are the Housing, Urban Design, and Open Space elements, as described below. In addition, the general plan's Transportation Element is applicable to technical aspects of the project. The proposed project's and variant's consistency with the individual policies in this more technical element is discussed in the appropriate topical sections of this EIR.

Housing Element

The 2014 Housing Element is a component of the San Francisco General Plan that establishes the City's overall housing policies. California housing element law (California Government Code section 65580 et seq.) requires local jurisdictions to adequately plan for and address the housing needs of all segments of their populations to attain the region's share of projected statewide housing goals. This law requires local governments to plan for their existing and projected housing needs by facilitating the improvement and development of housing and removing constraints on development opportunities.

San Francisco's 2014 Housing Element was required to plan for an existing and projected housing need of 28,869 new dwelling units. A particular focus of this element is on the creation and retention of affordable housing, which reflects intense demand for such housing, a growing economy (which itself puts increasing pressure on existing housing stock), and a constrained supply of land (necessitating infill development and increased density). In general, the housing element supports projects that increase the city's housing supply (both market-rate and affordable

housing), especially in areas that are close to job centers and are well-served by transit. The proposed project and variant are mixed-use projects that include new housing and would not remove existing housing. The proposed project or variant would add 984 new residential units and would comply with section 415 of the San Francisco Planning Code, the Inclusionary Affordable Housing Program, by providing the required percentage of below-market-rate units onsite or offsite, or by paying an *in-lieu fee*. The proposed project or variant would not conflict with any objectives or policies in the housing element.

Urban Design Element

The general plan's Urban Design Element addresses the physical character and order of San Francisco to maintain and, where needed, improve the relationship between people and their environment. Because of its width and unique orientation, Market Street is identified as a form element of San Francisco, giving identity to districts and order to the city structure. The urban design element notes that the scale of new development should be considered when determining the appropriateness of such development within its neighborhood and citywide context. The proposed project would fit within with the height and bulk requirements of the project site, as outlined below, which have been established to promote urban form compatible with existing and proposed uses in the project area. The variant would exceed the existing height requirements of the project site shown on map 4 of the urban design element.

The element specifically calls for centers of activity to be made more prominent through design of street features and other means (Policy 1.6). Recommended features include street landscaping, lighting, distinctive paving, furniture, and other elements that fit within the context and contribute to the identity of the area, suitable to the needs and desires of merchants, shoppers, and other people using the area. The proposed streetscape improvements would improve the pedestrian experience on the project site by widening the sidewalks along 12th Street, improving the 12th Street right-of-way to increase pedestrian access, and including a mid-block alley. The mid-block alley would connect 12th Street to either South Van Ness Avenue (proposed project) or Market Street (variant).

As discussed below, the proposed project and could be inconsistent with certain aspects of the general plan's urban design element related to conserving resources that provide a sense of continuity with the past. The proposed project and variant would include demolition of the existing building at 10 South Van Ness Avenue, which is considered a historic resource under the California Environmental Quality Act (CEQA). For these reasons, the proposed project and variant could conflict with policy 2.4 of the urban design element, which calls for the preservation of notable landmarks and areas of historic, architectural, or aesthetic value. The associated physical environmental impacts that could result from this conflict are discussed in Section 4.1, Cultural Resources (Historic Architectural), pp. 4.1.24-4.1.29, of this EIR.

Recreation and Open Space Element

The general plan's Recreation and Open Space Element, revised and updated in April 2014, addresses the character of the city's open spaces and calls for the preservation and enhancement of open spaces through community engagement. Specifically, this element calls for acquiring open space in high-needs areas (policy 2.1) and supporting the development of civic-serving open spaces (policy 2.6). The element identifies portions of the project site as a high-needs open space area. Because the project would include development of publicly accessible open space that would provide passive recreational opportunities in a high-needs open space area, the proposed project or variant would not obviously conflict with any objectives or policies in the recreation and open space element.

Market & Octavia Area Plan

The project site is located within the Market & Octavia Area Plan (area plan) boundaries.[2] The area plan, effective on May 30, 2008, after approval by the San Francisco Board of Supervisors (board of supervisors), promotes a mixed-use, urban neighborhood in which new and current residents enjoy a vibrant pedestrian realm and multiple transit connections.

The Market & Octavia Area Plan established the Van Ness and Market Downtown Residential *Special Use District* (SUD), which is described as a "transit-oriented, high-density, mixed-use neighborhood around the intersection of Van Ness Avenue and Market Street, adjacent to downtown." Residential and commercial uses are principally permitted uses in the Van Ness and Market Downtown Residential SUD.

The proposed project and variant would be inconsistent with the following policies from the Market & Octavia Area Plan:

- **Policy 3.2.6:** Encourage rehabilitation and adaptive reuse of historic buildings and resources.
- **Policy 3.2.11:** Ensure that changes in the built environment respect the historic character and cultural heritage of the area, and that resource sustainability is supported.
- **Policy 3.2.14:** Apply the "Secretary of the Interior's Standards for the Treatment of Historic Properties" for all projects that affect individually designated buildings at the local, state, or national level.
- **Policy 3.2.16:** Preserve the cultural and socio-economic diversity of the plan area through preservation of historic resources.

[2] San Francisco Planning Department, *Market & Octavia Area Plan*, adopted May 30, 2008, last amended 2010, http://208.121.200.84/ftp/files/Citywide/Market_Octavia/Market_and_Octavia_Area_Plan_2010.pdf, accessed May 26, 2016. This document (and all other documents cited in this report, unless otherwise noted) is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400 as part of Case File No. 2015-004568ENV.

The area plan acknowledges that the superior transit access in the vicinity of Market Street and Van Ness Avenue—with San Francisco Municipal Railway (Muni) light rail, Muni bus, and Bay Area Rapid Transit stations being easily accessible—should encourage the siting of high-density housing and housing-supporting uses in this area. The area plan indicates that if residential towers were to be constructed, they should be clustered around the intersection of Market Street and Van Ness Avenue, with heights ranging from 160 to 400 feet. Policies also call for improvements to the circulation network in the plan area, with a focus on redesigning 12th Street for public use.

The proposed project or variant would respond to the increased development density and building scale intensity contemplated for the project site in the area plan and what is permitted for the Downtown General Commercial (C-3-G) use district, described below. As described in chapter 2.0, Project Description, either the proposed project or the variant would construct 984 residential units above ground-floor retail uses and would implement improvements to 12th Street. The proposed improvements would allow for intensified pedestrian and bicycle use while permitting continued vehicular access. The proposed project or variant would add active retail frontages to Market Street, South Van Ness Avenue, and 12th Street and would provide streetscape improvements, including landscaping, along these frontages.

The Market & Octavia Area Plan requires that residential uses be provided at a 2:1 ratio with nonresidential uses. The proposed 984 dwelling units (935,745 gross square feet) would be approximately 87 percent of the total building square footage (1,071,095 gross square feet), which would satisfy this area plan requirement.

As described in more detail in initial study Section E, Evaluation of Environmental Effects, the proposed project or variant would demolish a building considered eligible for listing in the California Register of Historical Resources. Demolition of a building considered eligible for the California register may conflict with the historic preservation policies of the Market & Octavia Area Plan. However, with the exception of historic preservation policies, the proposed project or variant would not conflict with the area plan's policies.

Market Street Hub Project

The proposed Market Street Hub Plan would amend the 2008 Market and Octavia Area Plan, for the easternmost portions of the Market and Octavia Area Plan. The objectives of the Hub Plan are to encourage housing, including affordable housing; create safer and more walkable streets as well as welcoming and active public spaces; increase transportation options; and create a neighborhood with a range of uses and services to meet neighborhood needs. The Hub Plan would pursue changes to height and bulk districts for select parcels to allow more housing, including more affordable housing, and to allow development of a taller, larger, and more diverse array of buildings and heights within the Hub Plan area.

It is anticipated that if all 17 of the sites identified for upzoning in the Hub Plan were to be developed to the proposed maximum height and bulk limits, these changes would result in

approximately 8,100 new residential units (over 15,700 new residents) in addition to new commercial and institutional space. The planning department released a notice of preparation of an environmental impact report (EIR) for the Hub Plan in May 2018 and expects to publish the draft EIR in summer 2019.

Potential development under the Market Street Hub plans is included in the cumulative projects considered in the cumulative impact analysis, where relevant for the specific environmental topics addressed in this EIR (see pp. 4.0.13-4.0.14).

San Francisco Planning Code

The San Francisco Planning Code, which incorporates by reference the City's zoning maps, governs permitted uses, densities, and building configurations in San Francisco. A permit to construct a new building (or to alter or demolish an existing building) may not be issued unless the project complies with the planning code, or an exception or variance is granted pursuant to the planning code's provisions.

The project site is also within the Van Ness and Market Downtown Residential SUD. As noted in section 249.33 of the planning code, this special use district is intended to be a transit-oriented, high-density, mixed-use neighborhood with a significant residential presence. The Van Ness and Market Downtown Residential SUD is intended to serve as a transitional zone between larger scale commercial areas downtown and lower scale residential and neighborhood commercial areas to the west.

Allowable Uses

The project site is in the Downtown General Commercial zoning district. As stated in section 210.2 of the San Francisco Planning Code, the C-3-G district:

> …is composed of a variety of uses: retail, offices, hotels, entertainment, clubs and institutions, and high-density residential. Many of these uses have a citywide or regional function, although the intensity of development is lower here than in the downtown core area. As in the case of other downtown districts, no off-street parking is required for individual commercial buildings. In the vicinity of Market Street, the configuration of this district reflects easy accessibility by rapid transit.

Retail sales and service uses on the ground floor and residential uses above the ground floor, as included in the proposed project or variant, are principally permitted within this zoning district. Section 210.2, table 210.2, of the planning code defines the *floor area ratio* (FAR) in the C-3-G district as 6:1, meaning that the building area for a project cannot exceed six times its lot area. The Van Ness and Market Downtown Residential SUD allows an unlimited increase in this ratio through payment of the Van Ness inclusionary affordable housing fee and the Van Ness and Market Neighborhood infrastructure fee. The proposed project or variant would exceed the permitted 6:1 FAR. The project sponsor proposes to pay the fees required by the planning code to achieve the proposed ratio. The proposed project or variant would comply with San Francisco

Planning Code section 415, the Inclusionary Affordable Housing Program, by providing the required percentage of onsite or offsite below-market-rate units or paying the in-lieu fee.

Open Space

Section 135, table 135A, of the San Francisco Planning Code requires 36 square feet of open space per unit in the C-3 district if the space provided is private, or 48 square feet of open space per unit if the space provided is *common usable open space* or *publicly accessible open space*.[3] Section 249.33(b)(4) requires that open space be of one or more of the following types: an unenclosed park or garden at street grade; an unenclosed plaza at street grade; an unenclosed pedestrian pathway; a terrace or roof garden; or streetscape improvements with landscaping and pedestrian amenities.

To comply with the requirements of section 135, the proposed project or variant would be required to provide approximately 47,114 square feet of common usable open space. The proposed project would provide common usable open space as terraces at the podium levels and on the rooftop (48,150 square feet), and an unenclosed mid-block alley that would serve as a pedestrian pathway (2,975 square feet). The mid-block alley would also serve as a privately owned public open space as required by San Francisco Planning Code section 138.

The variant would provide usable open space in a combination of privately owned public open space (12,091 square feet), common usable open space for project residents (25,565 square feet), and *private open space* [4] (9,550 square feet) for a total of 47,206 square feet. Like the proposed project, the variant would provide common usable open space consisting of terraces on the podium levels and on the roof. The proposed project or variant would provide adequate open space.

Height and Bulk

The project site falls within two separate height and bulk districts. The northern portion is in the 120-R-2 height and bulk district; the southern portion is in the 120/400-R-2 district. The 120-R-2 district allows a 120-foot-tall building on the northern portion of the project site and a podium up to 120 feet in height. The 120/400-R-2 district allows a tower up to 400 feet tall. The R-2 bulk district does not set bulk restrictions for buildings less than 120 feet tall. For buildings more than 120 feet tall, all portions of structures above the podium height are subject to the bulk restrictions in planning code section 270(e)(2).

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[3] As defined in planning code section 135, common usable open space includes open space that is easily accessible from a dwelling unit or from a common area of a building or lot. Common usable open space is accessible to building occupants only, but, as opposed to private usable open space, is accessible to all building occupants rather than a select group of units. In C-3 districts, new buildings are required to provide privately owned public open spaces meeting the requirements of planning code section 138. These open spaces must be accessible to the general public.

[4] Private open space is open space that is accessible only to one unit or a certain group of units.

In accordance with San Francisco Planning Code section 270(e)(2)(D), buildings between 351 and 550 feet tall may not exceed a plan length of 115 feet, a diagonal dimension of 145 feet, and a maximum average floor area of 10,000 gross square feet. Planning code section 270(e)(2)(F) specifies that to encourage tower sculpting, the gross floor area of the top one-third of the tower shall be reduced by 10 percent from the maximum floor plate unless the overall tower floor plate is reduced by an equal or greater volume. A minimum distance of 115 feet must be preserved between all structures more than 120 feet tall at all levels above 120 feet in height, as required by the R-2 bulk district.

The proposed project would conform to the existing height and bulk requirements applicable to the project site. The variant would exceed the height limit of the existing 120/400-R-2 district. To permit the development of the variant, the board of supervisors would need to approve an amendment to the zoning map height and bulk districts (sheet HT07) pursuant to planning code section 302.

Vehicle and Bicycle Parking

San Francisco Planning Code section 151.1 does not require the provision of off-street parking in the C-3-G District or the Van Ness and Market Downtown Residential SUD. The planning code sets maximum limits for off-street parking in these districts. As shown in table 151.1, the maximum number of off-street parking spaces permitted for dwelling units in the Van Ness and Market Downtown Residential SUD is 0.25 space per dwelling unit, with 0.5 space per dwelling unit conditionally permitted.

However, on December 12, 2017, the San Francisco Board of Supervisors passed Resolution No. 448-17,[5] which established interim zoning controls for off-street parking in the Hub Project area, where the project is located, which limit off-street parking for new development projects to the principally permitted accessory parking ratios established under the planning code, except for projects that dedicate 25 percent or more of the total number of residential units as inclusionary units and provide those units on-site. The interim zoning controls are effective for a period of 18 months.[6]

If the proposed project or variant includes 25 percent or more on-site below-market-rate units, then the interim zoning controls will not apply. However, because the proposed project or variant may comply with the Inclusionary Affordable Housing Program by providing these below-market-rate units off site or paying an in-lieu fee, it has not yet been determined whether the interim zoning controls apply to the proposed project or variant.

Either the proposed project or the variant would include 984 residential dwelling units, which would principally permit up to 246 parking spaces for the residential uses. Up to 492 parking

[5] San Francisco Planning Department, *Interim Zoning Controls – Off-Street Parking in the "Hub" Area*, http://default.sfplanning.org/legislative_changes/new_code_summaries/171015.pdf.

[6] The interim zoning controls for off-street parking in the Hub Project area will expire on June 22, 2019.

spaces would be permitted with a conditional use authorization approved by the San Francisco Planning Commission if the interim zoning controls do not apply. In accordance with planning code section 167, the cost of residential parking would be unbundled from the cost of rent.

For retail uses, up to one parking space for every 1,500 square feet of occupied floor area is permitted, and nonresidential parking shall not exceed 7 percent of gross floor area for nonresidential uses. The proposed project or variant would include approximately 30,350 or 30,450 gross square feet of commercial space, respectively, and approximately 3,000 or 5,297 gross square feet of mechanical space, respectively. Consistent with the Van Ness and Market Downtown Residential SUD, the proposed project or variant would include up to 2,335 or 2,503 gross square feet of permitted parking space, respectively, or up to approximately 15 parking spaces (proposed project) or 16 parking spaces (variant). Thus, the proposed project or variant's 14 retail parking spaces would comply with the planning code.

San Francisco Planning Code section 155.2 requires the following for provision of bicycle parking spaces:

- One hundred class I spaces plus one class I space for every four dwelling units over 100 for buildings containing more than 100 dwelling units, located in a bicycle locker or secure room (321 spaces for the proposed project or variant).
- One class II space per 20 dwelling units (49 spaces for the proposed project or variant).
- One class I space for every 7,500 square feet of occupied floor area for retail and service uses (four spaces for the proposed project or variant).
- One class II space for every 2,500 square feet of occupied floor area for retail and service uses (12 spaces for the proposed project or variant).

The proposed project or variant would provide 336 class I bicycle parking spaces (332 for residential use, 4 for retail use) in a secured room in the proposed lobby, and 61 class II bicycle parking spaces (49 for residential use, 12 for retail use), which would be consistent with the requirements of planning code section 155.2.

Loading

San Francisco Planning Code section 152.1 requires two freight-loading spaces for retail spaces in the C-3-G District between 30,001 and 50,000 gross square feet. For residential uses over 500,000 gross square feet, three freight-loading spaces plus one space for each additional 400,000 gross square feet are required. Section 153(a)(6) allows the substitution of two service vehicle

spaces for each required off-street freight loading space in the C-3-G District, provided that a minimum of 50 percent of the required number of spaces are provided for freight loading.[7]

In compliance with planning code requirements, the proposed project includes seven freight-loading spaces (three of which would be standard freight-loading spaces and four of which would be service vehicle spaces). One loading space would accommodate up to a 45-foot-long vehicle in the below-grade parking garage. The four service vehicle loading spaces located at basement level would be 8 feet wide and 20 feet long with 8½ feet of vertical clearance, one truck loading berth would be 12 feet wide and 45 feet long with 14 feet of vertical clearance, and two truck loading berths would be 12 feet wide and 35 feet long with 14 feet of vertical clearance. The proposed project or variant would be consistent with the planning code's loading requirements.

Priority Policies

The Accountable Planning Initiative added section 101.1 to the San Francisco Planning Code and established eight priority policies. These policies are as follows (the sections of the EIR or initial study [Appendix B] that address the environmental issues associated with the policies, if any, are included in parenthesis):

(1) Preservation and enhancement of neighborhood-serving retail uses

(2) Protection of neighborhood character (see the initial study in Appendix B, Topic E.1[a-c], Land Use and Land Use Planning)

(3) Preservation and enhancement of affordable housing (see the initial study in Appendix B, Topic E.2[b], Population and Housing, with regard to housing supply and displacement issues)

(4) Discouragement of commuter automobiles (see Section 4.2, Transportation and Circulation)

(5) Protection of industrial and service land uses from commercial office development and enhancement of residents' employment and business ownership (see the initial study in Appendix B, Topic E.1[a–c], Land Use and Land Use Planning)

(6) Maximization of earthquake preparedness (see the initial study in Appendix B, Topic E.14[a–d], Geology, Soils, and Seismicity)

(7) Landmark and historic building preservation (see Section 4.1, Cultural Resources)

(8) Protection of open space (see Section 4.5, Wind; Section 4.6, Shadow; and the initial study in Appendix B, Topic E.10[a and c], Recreation)

Before issuing a permit for any project requiring an initial study under CEQA or for any demolition, conversion, or change of use, and before taking any action that requires a finding of

[7] As set forth in San Francisco Planning Code section 154(b), off-street freight loading spaces must have minimum dimensions of 12 feet × 35 feet (width × length) and a minimum vertical clearance (including entry and exit) of 14 feet, except for the first space, which may be smaller (minimum dimensions of 10 feet × 25 feet, with a minimum vertical clearance of 12 feet). Service vehicle spaces intended to serve as substitutes for off-street freight loading spaces as provided under planning code section 153(a)(6) must have minimum dimensions of 8 feet × 20 feet and a minimum vertical clearance of 7 feet.

consistency with the San Francisco General Plan, the City is required to find that the proposed project or variant or legislation would be consistent with the eight priority policies. As noted above, the consistency of the proposed project or variant with the environmental topics associated with the priority policies is discussed in this EIR and in the initial study (Appendix B).

San Francisco Transit First Policy

The City's *Transit First Policy* was adopted by the San Francisco Board of Supervisors in 1973 and amended in 1999, and is contained in section 8A.115 of the City Charter. This policy is a set of principles emphasizing the City's commitment to giving the use of public rights-of-way by pedestrians, bicyclists, and public transit priority over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the San Francisco General Plan. All City boards, commissions, and departments are required by law to implement Transit First Policy principles in conducting the City's affairs.

The proposed project or variant would construct a mixed-use residential project adjacent to major public transit routes in an effort to increase density near transit stations. The proposed project or variant would provide approximately 397 bicycle spaces and 518 off-street vehicle parking spaces, subject to approval by the San Francisco Planning Commission. The planning commission would determine whether this proposed increase to the principally permitted parking ratio would be consistent with the Transit First Policy. The streetscape design for either the proposed project or variant would make improvements to 12th Street to enhance the use of the street for pedestrians, bicyclists, and drivers. As such, the proposed project or variant would be consistent with the City's Transit First Policy.

San Francisco Bicycle Plan

In August 2009, the board of supervisors approved the San Francisco Bicycle Plan, which is intended to provide the safe and attractive environment needed to promote bicycling as a transportation mode. In addition to identifying the existing bicycle route network and proposing short-term and long-term improvements to this network, the plan identifies goals, objectives, and policies to support these proposed improvements.

Implementation of either the proposed streetscape design would increase the connectivity between bicycle routes on Market and Mission streets, which would help improve bicycle access in the vicinity of the project site. As such, the proposed project or variant would not conflict with the San Francisco Bicycle Plan.

San Francisco Better Streets Plan

In December 2010, the San Francisco Better Streets Plan was adopted in support of the City's efforts to enhance the streetscape and the pedestrian environment. This plan carries out the intent of San Francisco's Better Streets Plan, which was adopted by the board of supervisors on

February 6, 2006. The plan classifies the city's public streets and rights-of-way, and creates a unified set of standards, guidelines, and implementation strategies that guide how the City designs, builds, and maintains its public streets and rights-of-way.

The San Francisco Better Streets Plan consists of policies and guidelines for the city's pedestrian realm. Major concepts related to streetscape and pedestrian improvements include:

(1) Pedestrian safety and accessibility features, such as enhanced pedestrian crossings, corner or mid-block curb extensions, pedestrian countdown and priority signals, and other traffic calming features

(2) Universal pedestrian-oriented design, with incorporation of street trees, sidewalk plantings, furnishings, lighting, efficient location of utilities for unobstructed sidewalks, shared single surfaces for small streets/alleys, and sidewalk/median pocket parks

(3) Integrated pedestrian/transit functions using bus bulb-outs and boarding islands (bus stops in medians within the street)

(4) Opportunities for new outdoor seating areas

(5) Improved ecological performance with the incorporation of stormwater management techniques and urban forest maintenance

The requirements of the San Francisco Better Streets Plan are incorporated into the planning code as section 138.1.

The proposed project or variant would reconfigure the intersection of 12th Street and South Van Ness Avenue to increase pedestrian visibility and safety. Streetscape improvements along South Van Ness Avenue, Market Street, and 12th Street would include pedestrian-oriented streetlights and landscaping including street trees and sidewalk plantings. Street furniture would be provided along the project site's 12th Street frontage. These improvements would be implemented under either proposed streetscape design. The straight-shot streetscape option would extend the eastern sidewalk along 12th Street adjacent to the project site from 15 to 40 feet in width to create a pedestrian promenade. With incorporation of these streetscape improvements, the proposed project or variant would be consistent with the San Francisco Better Streets Plan.

San Francisco Sustainability Plan

In 1993, the San Francisco Board of Supervisors established the Commission on San Francisco's Environment, which is charged with, among other duties, drafting and implementing a plan for the city's long-term environmental sustainability. The goal of the sustainability plan is to enable San Francisco and its people to meet their current needs without sacrificing the ability of future generations to meet their own needs.

The San Francisco Sustainability Plan is divided into 15 topic areas. Ten of the sustainability plan's topic areas address specific environmental issues: air quality; biodiversity; energy, climate change, and ozone depletion; food and agriculture; hazardous materials; human health; parks, open spaces, and streetscapes; solid waste; transportation; and water and wastewater. The other

five topic areas are broader in scope and cover many issues: economy and economic development, environmental justice, municipal expenditures, public information and education, and risk management. Although the San Francisco Sustainability Plan became official City policy in July 1997, the board of supervisors has not committed the City to perform all of the actions addressed in the plan. The plan serves as a blueprint, with many of its individual proposals requiring further development and public comment.

The San Francisco Building Code was amended in 2008 to add chapter 13C, Green Building Requirements, which partially implements the energy provisions of the sustainability plan. The San Francisco Green Building Requirements establish either *Leadership in Energy and Environmental Design (LEED)*[8] certification levels or *Green Point Rated*[9] system points for types of residential and commercial buildings. The new requirements mandate that newly constructed private residential and commercial buildings include energy and water efficient features, to be implemented during both construction and operation. The California Building Standards Commission adopted a green building code as part of the California Building Standards Code (title 24 of the California Code of Regulations, paragraph 6). The provisions of the state code became effective on January 1, 2011. Local jurisdictions are allowed to adopt or continue to use their own green building ordinances as long as they are as stringent as or more stringent than those adopted by the state.

The proposed project and variant would conform with the San Francisco Sustainability Plan. The proposed project, the variant, and both streetscape design options would comply with applicable green building requirements, including those for construction and recycling; construction materials, including low-emitting materials; energy consumption; parking; and water and stormwater. The proposed project or variant would be required to be certified to at least LEED Silver in accordance with section 4.103.2.1 of the San Francisco Green Building Code. The proposed project or variant would seek LEED Gold certification in connection with its status as an environmental leadership development project pursuant to Assembly Bill 900, the Jobs and Economic Improvement through Environmental Leadership Act of 2011, and the California Environmental Quality Act (CEQA) section 21178 et seq., and would therefore be consistent with the San Francisco Sustainability Plan.

San Francisco Climate Action Strategy

In 2013, the City adopted the San Francisco Climate Action Strategy, which updates the climate action plan adopted by the City in 2004. The actions at the core of the strategy is to source 100

[8] LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council, which provides third-party verification that a building or community was designed and built using strategies aimed at improving performance across metrics that include energy savings, water efficiency, reduction of carbon dioxide emissions, improved indoor environmental quality, stewardship of resources, and sensitivity to impacts on resources.

[9] Green Point Rated is a program of Build it Green, established for evaluating residential building performance in the areas of resource conservation, indoor air quality, water conservation, energy efficiency, and livable communities (infill development, density, diversity).

percent of residential and 80 percent of commercial electricity from renewable sources, coupled with usage improvements to promote energy efficiency; make 50 percent of all trips by modes other than personal vehicles; and achieve San Francisco's zero waste goal, which targets reducing emissions from waste generation and disposal to zero.

Key strategies focus on energy use in buildings, transportation, waste, urban forest, and municipal operations. Although the board of supervisors has not formally committed the City to perform the actions addressed in the San Francisco Climate Action Strategy and many of the actions require further development and commitment of resources, the climate action strategy serves as a blueprint for reduction of greenhouse gas emissions.

Recommended actions in the San Francisco Climate Action Strategy related to energy use in buildings include implementation of the existing commercial building benchmarking ordinance and requiring energy-efficient designs in new development. Recommended transportation measures include the increased use of public transit as an alternative to driving and increased urban infill closer to transit service. The strategy also promotes mode shift from driving to bicycling and walking.

As discussed in Topic E.18, Mineral and Energy Resources, in the initial study (Appendix B), the proposed project or variant would implement energy-efficient design measures in buildings and features intended to reduce water usage. Either the proposed project or the variant would include a wastewater treatment system that would be sized to treat and use recycled water from the proposed building(s) for nonpotable uses in the building, including flushing toilets, irrigation, and cooling tower water for the heating, ventilation, and air conditioning system. The project sponsor has sought certification of the proposed project or variant as an environmental leadership development project pursuant to CEQA Guidelines section 21178, which would require the project to result in no additional greenhouse gas emissions over the lifetime of the project. Considering these project features, the proposed project or variant would not conflict with the climate action plan.

3.3. REGIONAL PLANS AND POLICIES

There are several regional planning agencies whose environmental, land use, and transportation plans and policies consider the growth and development of the nine-county San Francisco Bay Area. Some of these plans and policies are advisory, and some include specific goals and provisions that must be adhered to when evaluating a project under CEQA. The regional plans and policies that are relevant to the proposed project are discussed below.

Plan Bay Area 2040 and Regional Housing Needs Plan

In July 2017, the Metropolitan Transportation Commission and Association of Bay Area Governments (ABAG) adopted *Plan Bay Area 2040*, a long-range integrated transportation, land use, and housing strategy through 2040 for the San Francisco Bay Area that was an update from

the plan adopted in 2013.[10] The plan also serves as the sustainable community strategy mandated by Senate Bill 375. *Plan Bay Area* will continue to be updated every four years to analyze current regional growth patterns, develop strategies for addressing housing and transportation needs, and prioritize environmental and socioeconomic equity. The current p*lan* identifies a number of priority development areas where growth and development would be focused. These are existing neighborhoods that are well served by public transit and are considered to be appropriate locations for additional compact development.

The project site is located in the Market-Octavia/Upper Market Priority Development Area of *Plan Bay Area 2040.*[11]

In July 2013, ABAG projected regional housing needs in its *Regional Housing Need Plan for the San Francisco Bay Area*: *2014–2022*. According to this plan, San Francisco's projected housing need from 2014 to 2022 is 28,869 residential units, consisting of 6,234 within the very-low-income level (0–50 percent of area median income); 4,639 within the low-income level (51–80 percent of area median income); 5,460 within the moderate-income level (81–120 percent of area median income); and 12,536 within the above-moderate-income level (120 percent plus of area median income).[12] The jurisdictional allocation for San Francisco translates into an average annual need for approximately 4,124 net new residential units.

The proposed project or variant would add 984 new residential units and would comply with section 415 of the San Francisco Planning Code, the Inclusionary Affordable Housing Program. Therefore, the proposed project or variant would contribute to the city's housing stock, including affordable housing stock, thereby helping to meet the city's overall housing demands. The proposed project or variant would be required to pay an affordable housing in-lieu fee or to provide the required percentage of onsite or offsite below-market-rate units.

Neither the proposed project nor the variant would result in inconsistencies with the Metropolitan Transportation Commission and ABAG's Plan Bay Area 2040 *a*nd ABAG's *Regional Housing Need Plan for the San Francisco Bay Area: 2014–2022*. The physical impacts of the proposed project or variant related to population and housing are discussed in the initial study checklist, Topic E.2, Population and Housing (see Appendix B). Impacts of the proposed project and variant relating to transportation are discussed in the initial study checklist, Topic E.5, Transportation and Circulation, and are addressed further in Section 4.2 of this EIR.

[10] Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2040, Final, July 26, 2017, http://2040.planbayarea.org/sites/default/files/2017-07/Plan%20Bay%20Area%202040_Adopted_07.26.17.pdf, accessed August 4, 2017.
[11] Association of Bay Area Governments, *Priority Development Area Showcase*, http://gis.abag.ca.gov/website/PDAShowcase/, accessed August 4, 2017.
[12] Association of Bay Area Governments, *Projections 2013,* December 2013.

Bay Area Clean Air Plan

The Bay Area Air Quality Management District's Bay Area 2017 Clean Air Plan requires implementation of "all feasible measures" to reduce ozone and to provide a control strategy to reduce emissions of ozone, particulate matter, toxic air contaminants, and greenhouse gases. The 2017 Clean Air Plan describes the status of local air quality and identifies emission control measures to be implemented. Consistency with this plan is the basis for determining whether the proposed project or variant would conflict with or obstruct implementation of an applicable air quality plan. Their compliance with the Bay Area Clean Air Plan is analyzed in Section 4.4, Air Quality, of this EIR.

Water Quality Control Plan for the San Francisco Bay Basin

The San Francisco Bay Regional Water Quality Control Board's Water Quality Control Plan for the San Francisco Basin (basin plan) is a master water quality control planning document. The basin plan designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater, and includes implementation programs to achieve water quality objectives.

The proposed project is generally consistent with these plans. Implementation of high-density residential development at the site would result in a land use pattern that concentrates population in an area well-served by transit and infrastructure, in close proximity to jobs and services, and in an efficient manner that could reduce reliance on personal automobile trips.

4. ENVIRONMENTAL SETTING AND IMPACTS

4.0 CHAPTER INTRODUCTION

Overview

Chapter 4, Environmental Setting and Impacts, provides a project-level analysis of the physical environmental impacts of implementing the proposed project or variant as described in Chapter 2, Project Description. This chapter describes the environmental setting, assesses impacts (offsite, onsite, construction-related, operational, direct, indirect, and cumulative impacts), and identifies mitigation measures that would reduce or avoid identified significant environmental impacts.

Scope of Analysis

The environmental setting discussion describes the current physical conditions, or baseline conditions, in the project area. The baseline used for environmental impacts analysis under the California Environmental Quality Act (CEQA) reflects the conditions present at the time the notice of preparation for this EIR was published. As discussed in Chapter 1, Introduction, the project's notice of preparation was published on July 12, 2017, and an initial study was published on May 2, 2018. The initial study (Appendix B) concluded that many of the physical environmental impacts of the proposed project or variant would result in no impact or less-than-significant impacts, and that mitigation measures agreed to by the project sponsor and required as conditions of approval would reduce significant impacts to a less-than-significant level. CEQA does not require further assessment of a project or variant's less-than-significant impacts, which were identified in the initial study for the following environmental topics:

- Land use and land use planning (all topics)
- Population and housing (all topics)
- Cultural resources (archeological resources, human remains, tribal cultural resources)
- Greenhouse gas emissions (all topics)
- Recreation (all topics)
- Utilities and service systems (all topics)
- Public services (all topics)
- Biological resources (all topics)
- Geology and soils (all topics)
- Hydrology and water quality (all topics)
- Hazards and hazardous materials (all topics)
- Mineral and energy resources (all topics)
- Agriculture and forestry resources (all topics)

The initial study determined that the proposed project or variant could result in potentially significant impacts in the following topic areas, which are addressed in this EIR:

- Cultural resources (historic architectural resources)
- Transportation and circulation (all topics)
- Noise (all topics)
- Air quality (all topics)
- Wind (all topics)
- Shadow (all topics)

As described in Chapter 2, Project Description, as an addition to the proposed project or variant, the project would include a "straight-shot streetscape option." This option could be applied to either the proposed project or the variant. The design of the straight-shot streetscape option would be similar to the proposed streetscape design, with the primary difference being the width of the proposed sidewalks. Additionally, under this option, there would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction. The straight-shot streetscape option is not discussed for most topics in this EIR, because there would be no difference in impacts between the straight-shot streetscape option and the proposed streetscape design under either the proposed project or the variant. The straight-shot streetscape option is analyzed in Section 4.2, Transportation and Circulation, because it could have potential impacts on traffic flow and pedestrian access that would be different from those of the proposed project or variant.

Specific Approaches to the CEQA Analysis

Aesthetics and Parking Analysis (Senate Bill 743 and CEQA Section 21099)

CEQA section 21099(d) provides that "aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment."[1] Accordingly, aesthetics and parking are not considered when determining whether a project that meets all of the following three criteria has the potential to result in significant environmental impacts:

[1] See section 21099(d)(1) of the CEQA statute.

- The project is in a *transit priority area*.[2]
- The project is on an *infill site*.[3]
- The project is residential, mixed-use residential, or an *employment center*.[4]

The proposed project and variant meet the first, second, and third criteria; therefore, this EIR does not consider aesthetics or the adequacy of parking in determining the significance of project impacts under CEQA.

CEQA section 21099(e) states that a lead agency maintains the authority to consider aesthetics impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources. As such, the San Francisco Planning Department (planning department) does consider aesthetics for design review and to evaluate effects on historical or cultural resources.

The planning department recognizes that the public and decision-makers nonetheless may be interested in information pertaining to the aesthetic effects of a proposed project, and may desire that such information be provided as part of the environmental review process. Therefore, some of the information that otherwise would have been provided in an aesthetics section of this EIR (such as visual simulations of the proposed project) is included in Chapter 2, Project Description. However, this information is provided solely for informational purposes and is not used to determine the significance of the environmental impacts of the project pursuant to CEQA.

Similarly, the planning department acknowledges that parking conditions may be of interest to the public and the decision-makers. Therefore, this EIR presents parking demand information in Section 4.2, Transportation and Circulation, for informational purposes and considers any secondary physical impacts associated with constrained parking supply as applicable in the transportation, air quality, greenhouse gas emissions, noise, and pedestrian safety analyses.

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[2] CEQA section 21099(a)(7) defines a transit priority area as an area within 0.5 mile of an existing or planned *major transit stop*. A major transit stop is defined in CEQA section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[3] CEQA section 21099(a)(4) defines an infill site as a lot located in an urban area that has been previously developed, or a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses.

[4] CEQA section 21099(a)(1) defines an employment center as a project located on property zoned for commercial uses with a floor area ratio of no less than 0.75 and is located in a transit priority area.

Automobile Delay and Vehicle Miles Traveled Analysis

CEQA section 21099(b)(1) requires the Governor's Office of Planning and Research to develop revisions to the CEQA Guidelines that establish criteria for determining the significance of transportation impacts of projects that promote the "reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." CEQA section 21099(b)(2) states when the revised CEQA Guidelines for determining transportation impacts have been certified pursuant to CEQA section 21099(b)(1), automobile delay, as described solely by *level of service* or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment under CEQA.

In January 2016, the Governor's Office of Planning and Research published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*.[5] These proposed transportation impact guidelines recommended measuring the transportation impacts of projects using the metric of vehicle miles traveled. Vehicle miles traveled measures the amount and distance that a project might cause people to drive, accounting for the number of passengers in a vehicle.

The transportation impact guidelines proposed by the Governor's Office of Planning and Research provide substantial evidence that vehicle miles traveled is an appropriate standard to use in analyzing transportation impacts to protect environmental quality, and that vehicle miles traveled is better than automobile delay at indicating impacts related to greenhouse gas emissions, air quality, and energy. Acknowledging this, San Francisco Planning Commission Resolution 19579, adopted on March 3, 2016:

- Found that automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall no longer be considered a significant impact on the environment pursuant to CEQA, because it does not measure environmental impacts, and therefore, does not protect environmental quality.
- Directed the environmental review officer to remove automobile delay as a factor in determining significant impacts pursuant to CEQA for all guidelines, criteria, and lists of exemptions, and to update the *Transportation Impact Analysis Guidelines for Environmental Review and Categorical Exemptions from CEQA* to reflect this change.
- Directed the environmental planning division and environmental review officer to replace automobile delay with vehicle miles traveled criteria that promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses, and that are consistent with proposed and forthcoming changes to the CEQA Guidelines by the Governor's Office of Planning and Research.

[5] Governor's Office of Planning and Research, *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA: Implementing Senate Bill 743 (Steinberg, 2013),* January 20, 2016.

Resolution 19579 became effective immediately for all projects that have not received a CEQA determination, and for projects that have previously received CEQA determinations but require additional environmental analysis.

Accordingly, this EIR does not discuss automobile delay impacts. Instead, Section 4.2, Transportation and Circulation, presents an analysis of vehicle miles traveled and induced automobile travel impacts. Nonetheless, decision-makers may consider automobile delay, independent of the environmental review process, as part of their decisions to approve, modify, or disapprove the proposed project or variant.

Environmental Analysis Format

Each environmental topic analyzed in this chapter includes the following subsections.

Introduction

The Introduction subsection includes a brief description of the types of impacts analyzed and a summary of the impacts that were focused out in the initial study (that is, impacts that were determined to result in a less-than-significant impact).

Environmental Setting

The Environmental Setting subsection describes the existing, baseline physical conditions of the project site and surroundings (e.g., existing land uses, transportation conditions, noise environment) with respect to the environmental topic at the time the notice of preparation was issued. Conditions are described in sufficient detail and breadth to allow a general understanding of the environmental impacts of the proposed project and variant.

Regulatory Framework

The Regulatory Framework subsection describes the relevant federal, state, and regional and/or local regulatory requirements that are directly applicable to the environmental topic being analyzed.

Approach to Analysis

The Approach to Analysis subsection describes the methodology used to analyze potential environmental impacts for each environmental topic under the identified significance thresholds. Some evaluations (e.g., vehicle miles traveled and transit capacity in transportation and circulation) are quantitative, while those for other topics (e.g., cultural resources) are qualitative.

Impacts and Mitigation Measures

The Impacts and Mitigation Measures subsection evaluates the potential for the proposed project and variant to result in direct or indirect adverse impacts on the existing physical environment, with consideration of both short-term and long-term impacts. The analysis covers all project phases, including construction and operation. The significance thresholds for environmental impacts are defined at the beginning of this subsection, and the discussion of the approach to the analysis explains how the significance thresholds have been applied to evaluate the impacts of the proposed project and variant.

Both project-level and cumulative impacts are analyzed. Project-level impacts could result from actions related to implementation of the proposed project or the variant. Cumulative impacts could result from implementation of the proposed project or variant in combination with other cumulative projects in the study area (for a discussion of these projects, see "Cumulative Impacts" on pp. 4.0.8-4.0.14).

SIGNIFICANCE THRESHOLDS AND DETERMINATIONS

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the environment. The guidelines implementing CEQA direct that this determination be based on scientific and factual data, including the entire record for the project, and not on argument, speculation, or unsubstantiated evidence. The significance thresholds (or criteria) used in this EIR to determine the severity of impacts are those established by the San Francisco Planning Department's Environmental Planning Division. The Environmental Planning Division's guidance is based on CEQA Guidelines Appendix G, with procedures as set forth in chapter 31.10 of the San Francisco Administrative Code. The significance thresholds are presented in each environmental topic section of this chapter before the discussion of impacts.

The impacts of the proposed project or variant are organized into separate categories based on the significance thresholds for that topic. Project-specific impacts are discussed first, followed by the cumulative analysis. Impacts are numbered and shown in boldface type. Impacts are numbered consecutively within each topic and include an abbreviated reference to the impact section (e.g., "CR"). The following abbreviations are used for individual topics:

- CR: Cultural Resources
- TR: Transportation and Circulation
- NO: Noise
- AQ: Air Quality
- WI: Wind
- SH: Shadow

Each impact statement describes the impact that would occur without mitigation. The level of significance of the impact, indicated in parentheses at the end of the impact statement, is based on the following terms:

- **No Impact.** This determination applies if no potential exists for an impact or if the environmental resource does not occur in the project area or the area of potential impacts.
- **Less-than-Significant Impact.** This determination applies if the impact would not exceed the defined significance threshold or would be eliminated or reduced to a less-than-significant level through compliance with existing federal, state, and local laws and regulations. No mitigation is required for impacts determined to be less than significant.
- **Less-than-Significant Impact with Mitigation.** This determination applies if the project would result in a significant impact, exceeding the established significance threshold, but feasible mitigation is available that would reduce the impact to a less-than-significant level.
- **Significant and Unavoidable Impact.** This determination applies if the project would result in an adverse impact that exceeds the established significance threshold, and no feasible mitigation is available to reduce the impact to a less-than-significant level. Therefore, the residual impact would be significant and unavoidable.
- **Significant and Unavoidable Impact with Mitigation.** This determination applies if the project would result in an adverse impact that exceeds the established significance threshold, and although feasible mitigation would lessen the impact, the residual impact would be significant, rendering the impact unavoidable.

MITIGATION MEASURES

CEQA Guidelines section 15126.4 states that an EIR "shall describe feasible measures which could minimize significant adverse impacts." CEQA requires that mitigation measures have an essential nexus and be roughly proportional to the significant impact identified in the EIR. The project sponsor is required to implement mitigation measures identified in this chapter, and the lead agency (in this case, the City and County of San Francisco) is responsible for overseeing the project sponsor's implementation of such mitigation measures.

Pursuant to CEQA Guidelines section 15126.4, mitigation measures are not required for environmental impacts that are not found to be significant. Therefore, in cases where this EIR finds the physical environmental impact of the proposed project or variant to be less than significant, but the San Francisco Planning Department has identified one or more measures that would further lessen the project's already less-than-significant impact, these measures have been identified as "improvement measures." The project sponsor has indicated that if the project is approved, it would incorporate all improvement measures identified in this EIR as part of the project.

The mitigation measures, where identified, are numbered and indented, and follow the impact statements. Each mitigation measure is numbered according to its corresponding impact statement and has an "M" in front to signify it is a mitigation measure (e.g., Mitigation Measure M-TR-1 for a mitigation measure that corresponds to Impact TR-1). If there is more than one mitigation measure for the same impact statement, the mitigation measures are numbered with a lowercase letter suffix (e.g., Mitigation Measures M-TR-1a and M-TR-1b).

CUMULATIVE IMPACTS

Cumulative impacts, as defined in CEQA Guidelines Section 15355, refer to two or more individual effects that, when taken together, are "considerable" or that compound or increase other environmental impacts. Cumulative impacts can result from individually minor but collectively significant impacts taking place over time. If the analysis determines that the potential exists for the proposed project or variant, taken together with other past, present, and reasonably foreseeable future projects, to result in a significant or adverse cumulative impact, the analysis then determines whether the project's incremental contribution to any significant cumulative impact is itself significant (i.e., "cumulatively considerable").

- An EIR shall discuss cumulative impacts of a project when the project's incremental effect is "cumulatively considerable" (e.g., the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current, and probable future projects, including those outside the control of the agency, if necessary).
- An EIR should not discuss impacts that do not result in part from the project evaluated in the EIR.
- A project's contribution is less than cumulatively considerable, and thus not significant, if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact.
- The discussion of impact severity and likelihood of occurrence need not be as detailed as for effects attributable to the project alone.
- The focus of analysis should be on the cumulative impact to which the identified other projects contribute, rather than on attributes of the other projects that do not contribute to the cumulative impact.

Approach to Cumulative Impacts

Two approaches to a cumulative impact analysis are provided in CEQA Guidelines Section 15130(b)(1): the analysis can be based on a list of past, present, and reasonably foreseeable probable future projects producing closely related impacts that could combine with those of a proposed project; or a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts. The factors described below were used to determine the appropriate level for cumulative analysis in this EIR.

To determine whether the overall long-term impacts of all such projects would be cumulatively significant, the analysis generally considers the following:

- **Similar Environmental Impacts.** A relevant project contributes to effects on resources that are also affected by the proposed project or variant. A relevant future project is defined as one that is "reasonably foreseeable," such as a proposed project for which an application has been filed with the approving agency or has approved funding.
- **Geographic Scope and Location.** A relevant project is located within the geographic area within which effects could combine. The geographic scope varies on a resource-by-resource basis. For example, the geographic scope for evaluating cumulative effects to air quality consists of the affected air basin.
- **Timing and Duration of Implementation.** Effects associated with activities for a relevant project (e.g., short-term construction or demolition, or long-term operations) would likely coincide in timing with the related effects of the proposed project.

The discussion of cumulative impacts in this subsection analyzes the cumulative impacts of the proposed project and the variant, taken together with other past, present, and reasonably foreseeable future projects producing related impacts. The goal of this analysis is to determine whether the overall long-term impacts of all such projects would be cumulatively significant, and to determine whether the project itself would cause a cumulatively considerable incremental contribution to any such cumulatively significant impacts. The analyses in this EIR employ both the list-based approach and a projections approach, depending on which approach best suits the individual resource topic being analyzed. For instance, the cumulative analysis of cultural resources impacts (for historical architectural resources only) considers individual projects that are anticipated in the vicinity of the project site that may affect historical architectural resources also affected by the proposed project. By comparison, the cumulative transportation and circulation analysis relies on a projection of overall citywide growth and other reasonably foreseeable projects, which is the typical methodology the San Francisco Planning Department applies to analyses of transportation impacts.

The cumulative impact analysis for each individual resource topic is presented in each resource section of this chapter immediately after the description of the direct project impacts and identified mitigation measures.

Cumulative Setting

Table 4.0.1: Cumulative Projects lists the past, present, and reasonably foreseeable relevant projects within 1,500 feet of the project site that, in conjunction with the proposed project or variant, are considered in the analysis of cumulative environmental impacts. These projects are shown on **Figure 4.0.1: Cumulative Projects**, p. 4.0.11.

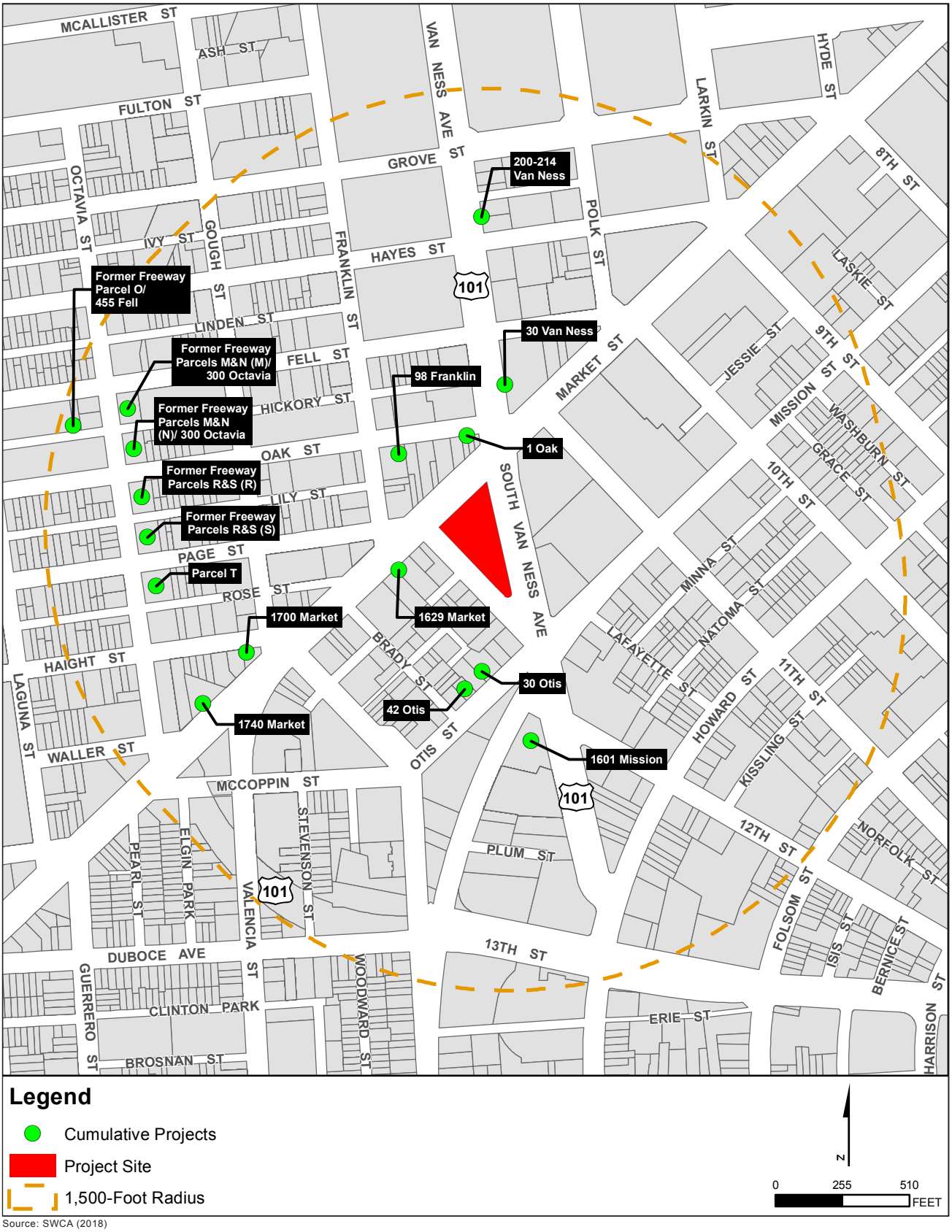
Table 4.0.1: Cumulative Projects[1]

Address	Case File No.	Dwelling Units	Uses (gross square feet)			
			Retail	Commercial	Office	Institutional
98 Franklin Street	2016-014802ENV	345	3,100			75,000
1629 Market Street (1601–1637 Market Street and 53 Colton Street)	2015.005848ENV	584	13,100		27,300	
1700 Market Street	2013.1179E	48		1,500		
1740 Market Street	2014.0409E	110	7,600			
1601 Mission Street	2014.1121ENV	220	7,336			
30 Otis Street	2015.010013ENV	416	2,199			15,947
42 Otis Street	2016-005406ENV	24[2]		2,000		
1 Oak Street	2009.0159E	320	1,300			
30 Van Ness Avenue[3]	2017-008571ENV	610	21,000		350,000	
200–214 Van Ness Avenue	2015.012994ENV	113	5,000			54,000
Parcels M and N— 300 Octavia Street	2014.002330ENV	12		800		
Parcel O— 455 Fell Street	2015.002837ENV	108	1,200		2,000	2,900[4]
Parcels R and S	2014.1322ENV	56	7,500			
Parcel T	2014.1509ENV	26				
Total		2992	69,335	4,300	379,300	147,847

Notes:
gsf = gross square feet; No. = number

1. The cumulative projects list was identified at the time of the publication of the Notice of Preparation of an Environmental Impact Report (July 12, 2017). This list was updated in April 2018, July 2018, and August 2018.
2. These dwelling units will be single-room occupancy units.
3. The existing building is expected to be replaced with a high-rise residential tower, with a proposed Hub height increase to 520/120 feet.
4. Community activities space.

Source: Compiled by AECOM in 2017, updated in April 2018, July 2018 and August 2018.



Source: SWCA (2018)

10 SOUTH VAN NESS MIXED-USE PROJECT

2015-004568ENV

FIGURE 4.0.1 CUMULATIVE PROJECTS

The cumulative projects list was initially compiled when the Notice of Preparation of an Environmental Impact Report was released in July 2017. The list was revised in April 2018, prior to the release of the initial study, to remove the projects at 22-24 Franklin Street, 1532 Howard Street, 1546-1564 Market Street, 1699 Market Street, and 1500 Mission Street[6], because construction had begun on each of them. The projects at 1563 Mission Street and parcels K and L were also removed, as all work had been completed. Those projects are considered part of the existing conditions.

The proposed projects at 98 Franklin Street and 30 Van Ness Avenue were added to the cumulative projects list based on environmental evaluation applications submitted after July 2017.

In July 2018, the cumulative project list was further revised to remove the projects at 33 Gough Street and 1390 Market Street, because those applications were withdrawn and are therefore no longer considered reasonably foreseeable. The proposed project at 42 Otis Street was added to the cumulative project list.

An explanation of why the changes to the cumulative project list do not affect the accuracy of the technical studies completed for the cumulative analysis of topics in this EIR is provided in the respective impact sections, where applicable.

In addition to the cumulative projects listed in Table 4.0.1, the following transportation improvement plans and areas plans are considered in the cumulative environmental analysis.

Van Ness Bus Rapid Transit—State Clearinghouse Number 2007092059. This project proposes operational and physical improvements to facilitate improved San Francisco Municipal Railway bus service along Van Ness Avenue between Mission and Lombard streets. Operational improvements include designating bus-only lanes to allow buses to travel with fewer impediments; adjusting traffic signals to give buses more green light time at intersections; and providing real-time bus arrival and departure information to passengers to allow them to manage their time more efficiently. Physical improvements include building high-quality, well-lit bus stations to improve passenger safety and comfort, and providing streetscape improvements and amenities to make the street safer and more comfortable for pedestrians and bicyclists who access the transit stations. Improvements to stations in the vicinity of the Van Ness Bus Rapid Transit project site include locating the bus rapid transit station in the northbound direction of South Van Ness Avenue at Market Street and discontinuing the existing curbside bus stop on South Van Ness Avenue north of Mission Street.

[6] The 1500 Mission Street project includes the buildings currently under construction at both 1500 Mission Street and 49 South Van Ness Avenue.

Better Market Street Project—Case Number 2014.0012E. The goal of this project is to make improvements to Market Street to reestablish the street as the premier cultural, civic, and economic center of San Francisco. The proposed Better Market Street Project is a coordinated multicity agency effort led by San Francisco Public Works, the San Francisco Planning Department, and the San Francisco Municipal Transportation Agency to redesign and implement transportation and streetscape improvements to Market Street. The project would make improvements to the 2.2-mile segment of Market Street between Octavia Boulevard and The Embarcadero, and potentially to Mission Street between Valencia Street and The Embarcadero. The project envisions a new Market Street that is more beautiful and green, has enlivened public plazas and sidewalks full of cafés, showcases public art and performances, provides dedicated bicycle facilities, and delivers efficient and reliable transit. The proposed Better Market Street Project would include transportation and streetscape improvements, including changes to the roadway configuration and private vehicle access; traffic signals; surface transit improvements, such as transit-only lanes and changes to stop spacing, service, stop locations, stop characteristics, and infrastructure; bicycle facilities; pedestrian facilities; streetscapes; commercial and passenger loading; vehicular parking; plazas; and utilities.

Market & Octavia Area Plan—Case Number 2003.0347. As part of the San Francisco General Plan, the Market & Octavia Area Plan serves to respond to the need for housing, to repair the fabric of the neighborhood, and to support transit-oriented development. The area plan includes zoning for residential and commercial uses, prescribes streetscape and open space improvements, and locates high-density land uses close to transit. The Market & Octavia Area Plan established the Van Ness & Market Downtown Residential Special Use District, in which the project site is located, which is intended to be a transit-oriented, high-density, mixed-use neighborhood with a significant residential presence.

Western South of Market (SoMa) Area Plan—Case Number 2008.0877. This area plan is an adopted element of the San Francisco General Plan. The plan area occupies approximately 298 acres in the western portion of the SoMa area, with its northwestern boundary approximately 0.5 mile southeast of the project site. The Western SoMa Area Plan establishes new height and bulk districts, changes to zoning districts, and new density restrictions for the area. The area plan also includes streetscape improvements along designated streets and intersections, including installation of signalized pedestrian crossings; sidewalk extensions and corner bulb-outs; gateway treatments such as signage and lighting; physical roadway features such as enhanced hardscape area, landscaped islands, and colored textured pavement; public realm greening amenities (street trees and planted medians); and other pedestrian enhancements (street furniture and public restrooms).

The Hub Plan, 30 Van Ness Avenue Project, 98 Franklin Street Project, and Hub Housing Sustainability District (Hub) Project—Case Numbers 2015-000940ENV, 2017-008051ENV, and 2016-014802ENV. The proposed Hub Plan would amend the easternmost portions of 2008

Market and Octavia Area Plan of the San Francisco General Plan. The overarching objectives of the Hub Plan are to encourage housing, including affordable housing; create safer and more walkable streets, as well as welcoming and active public spaces; increase transportation options; and create a neighborhood with a range of uses and services to meet neighborhood needs.[7] The Hub Plan would pursue this vision through changes to current zoning controls in the area to meet plan objectives. This would include changes to height and bulk districts for select parcels to allow more housing, including more affordable housing. Modifications to land use zoning controls would also allow more flexibility for development of nonresidential uses, specifically office, institutional, art, and public uses. The plan also calls for public-realm improvements to streets and alleys within and adjacent to the Hub Plan area.

In addition to analyzing the Hub Plan at a programmatic level, the Hub Plan EIR will evaluate two individual development projects within the Hub Plan area (i.e., the 30 Van Ness Avenue Project and 98 Franklin Street Project), and the designation of portions or all of the Hub Plan area as a housing sustainability district (HSD) at a project-specific level. A notice of preparation of an EIR for the Hub Plan EIR was released in May 2018 and a public scoping meeting was held in June 2018 to receive oral comments concerning the scope of the EIR. The draft EIR is expected to be published in summer 2019.

It is anticipated that if all 17 of the sites identified for upzoning in the Hub Plan were to be developed to the proposed maximum height and bulk limits, these changes would result in approximately 8,100 new residential units (over 15,700 new residents) in addition to new commercial and institutional space.

The Central SoMa Area Plan—Case Number 2011.1356E. The Central SoMa Area Plan is a comprehensive plan for the area surrounding much of the southern portion of the Central Subway transit line. The area encompassed by the plan includes roughly 230 acres that comprises 17 city blocks, as well as the streets and thoroughfares that connect SoMa to its adjacent neighborhoods: Downtown, Mission Bay, Rincon Hill, and the Mission District. The plan seeks to encourage and accommodate housing and employment growth within the Plan Area by: (1) removing land use restrictions (i.e., amending use districts) to support a greater mix of uses while also emphasizing office uses in portions of the Plan Area; (2) amending existing height and bulk districts; (3) modifying the system of streets and circulation within and adjacent to the Plan Area to meet the needs and goals of a dense, transit-oriented, mixed-use district; and (4) creating new, and improving existing, open spaces. The Plan also includes street network changes to Folsom, Howard, Harrison, Bryant, Brannan, Third, and Fourth streets, as well as new planning policies and controls for land use; urban form (bldg. height and design); street network/circulation changes; open space; historical preservation; and sustainability.

[7] A draft plan was released in March 2017. See http://sf-planning.org/market-street-hub-project. Accessed April 21, 2018.

4.1 CULTURAL RESOURCES (HISTORIC ARCHITECTURAL)

Section 4.1, Cultural Resources (Historic Architectural), assesses project impacts on "historical resources," as defined by CEQA Guidelines section 15064.5.[1] A project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment (CEQA Section 21084.1).

This section has three main subsections. The "Environmental Setting" subsection identifies the potential for the presence of historic architectural resources within the project site. The "Regulatory Framework" discussion identifies the pertinent federal, state, and local laws and regulations that pertain to the identification and regulation of historic architectural resources. The "Impacts and Mitigation Measures" discussion evaluates the direct, indirect, and cumulative impacts of the proposed project or project variant on the historical resources identified in the Environmental Setting discussion.

The information and analysis in this section are based on the *10 South Van Ness Avenue Mixed-Use Project Historic Resource Evaluation Part I* (HRE) prepared by SWCA Environmental Consultants.[2] The San Francisco Planning Department (planning department) has reviewed the HRE and concurs with its conclusions.[3]

Environmental Setting

The project site spans 10–50 South Van Ness Avenue and 1535–1599 Market Street (blocks/lots 3506/004 and 3506/003A) and is located at the southwest corner of Market Street and South Van Ness Avenue. The block's only building fronts Market Street, 12th Street, and South Van Ness Avenue, and its physical address is 10 South Van Ness Avenue. The existing building is used as a car dealership. The southern half of the building has a rooftop parking lot that is open to the sky.

The building was originally constructed between 1926 and 1927. See **Figure 4.1.1: 10 South Van Ness Avenue – 1933 Photograph Facing South**. Several months after the property's construction, a two-story concrete garage addition was added to the southern elevation. Since its construction, the storefronts, spaces, and offices on the project site have undergone a variety of alterations. See **Figure 4.1.2: 10 South Van Ness Avenue – 2016 Photograph Facing South.**

[1] The term "historic architectural resources" is used in this section to distinguish this type of historical resource from archeological resources, which are also historical resources under CEQA. Archeological resources are covered in the Initial Study (Appendix B to the EIR).

[2] SWCA Environmental Consultants, *10 South Van Ness Avenue Mixed-Use Project Historic Resource Evaluation Part I,* prepared by SWCA Environmental Consultants, September 2016. This document (and all other documents cited in this report, unless otherwise noted) is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400 as part of Case File No. 2015-004568ENV.

[3] City and County of San Francisco Planning Department, Preservation Review Team Form, November 16, 2016.

Source: San Francisco Architectural Heritage

Figure 4.1.1: 10 South Van Ness Avenue – 1933 Photograph Facing South

Source: SWCA Environmental Consultants

Figure 4.1.2: 10 South Van Ness Avenue – 2016 Photograph Facing South

Property Description

EXTERIOR

The stucco-clad, reinforced concrete building is primarily two stories tall, with a double-height second-floor ballroom volume. The subject building is built out to the property line, capped with a flat roof, and trimmed with a shallow cornice line and a low parapet. Remnants of Spanish Colonial Revival façade detailing are visible behind the large metal screens that were attached to the façade circa 1985.

The current main entrance to the auto showroom at the northeast corner of the site consists of paired, steel-framed glass doors, surrounded by single-pane sidelights and a transom window. Above the entrance, a large, curved screen mounted to the building's exterior is visible on the second story. This screen covers the original transom window openings on the first story and the original window openings on the second story. These original window openings appear to have been infilled. The recessed ballroom volume has a plain stucco wall, with a flat roof and a shallow coping along the eave line.

Although most of the façade detail has been removed, some is still visible. Along Market Street, a progression of piers spans the façade, with Spanish Colonial Revival-style ornamentation accenting the second story and cornice line. The piers divide this long elevation into 11 bays. All but four bays on the first story display large storefront windows. The third bay from the north corner of the elevation, the center bay, and the westernmost bay exhibit paired steel-framed doors with sidelights and transom windows. The fourth bay, the original main entry to the upper story, is infilled and covered with stucco. Above the bay, along the roofline, is a curvilinear Spanish Colonial Revival-style parapet that marks the former entrance of the El Patio Ballroom/Carousel Ballroom/Fillmore West.

The features and materials of the second story along Market Street are visually obscured by a series of large screens, one in each bay, which are attached to the building and cover the original transom windows on the first story and the original multiple-light casement windows and decorative railings on the second story.

The east elevation along Van Ness Avenue is almost identical to the Market Street elevation along the original two-story portion. The east elevation is composed of seven bays, all but one of which displays the same large, multiple-light windows. The one distinct bay toward the south has a large garage door opening to allow for customer parking for the auto showroom. To the south, the shorter, two-story garage section has simplified bays with various configurations of infilled windows, single personnel doors, multiple-light casement windows, and large garage door openings. In each bay, the large screens attached to the second story cover a set of three multiple-light casement windows.

The south elevation faces the corner of Van Ness Avenue and 12th Street. This elevation is divided into three bays by simple, attached piers. First-story bays are clad in smooth stucco. The upper floor displays two multiple-light casement windows in each bay. A single rectangular screen attached to the wall covers the upper story of all three bays.

On the west elevation, only the two northernmost bays have full-length piers; the rest extend from the second story to the roof cornice. The northernmost bay continues the use of large multiple-light windows on the first story. The other bays feature openings in a variety of configurations, including large garage door openings, a set of three infilled window openings, a metal personnel door, and two wood-framed double doors with transoms. The second story is covered by large screens, which cover original multiple-light casement windows (except in the southernmost bay, where the window has been replaced by a vent). The addition on the south continues the simplified pier pattern of the west elevation.

Through the building's history, the most visible changes have been the result of changes to signage and storefront elements. The installation of metal screens along the north, east, and south elevations was also significant, although a number of original features remain unaltered behind the screens. Although no permit specifically identifies the date when the metal screens were added, research and historic photographs suggest that they were added circa 1985.

INTERIOR

The first floor of the original portion of the building is currently a car showroom with an open plan and structural columns. See **Figure 4.1.3: Existing Ground-Floor Auto Showroom**. The space inside of the former main entrance to the El Patio Ballroom/Carousel Ballroom/Fillmore West space along Market Street has been converted into a staff room. The former ticket sales window in this room appears extant, although it has been glazed with fixed glass. Just beyond the former main entrance is a large arched opening leading to a wide staircase with a decorative metal banister. The stone steps are covered with a carpet runner.

At the top of the stairs is a large landing with two doors, one leading to offices and the other leading to the former service department (now closed). The offices have new finishes, including carpet, paint, and light fixtures. The automobile service department, formerly the El Patio Ballroom/Carousel Ballroom/Fillmore West dance and concert hall, consists of a large, open area with a concrete floor surrounded by decorative arched openings. Along three of the walls, there are decorative vents above the arches. The stage area appears to have been removed and the light fixtures have been replaced with fluorescent lights. Automobile service equipment, including two-post lifts and various jacks, have been installed throughout the space along with additional mechanical vents. **Figure 4.1.4: Existing Second-Floor Ballroom Space** provides a view of the second-floor ballroom space as it appears today, showing the decorative arches and grilles that were part of the ballroom setting.

Source: SWCA Environmental Consultants

Figure 4.1.3: Existing Ground-Floor Auto Showroom

Source: SWCA Environmental Consultants

Figure 4.1.4: Existing Second-Floor Ballroom Space

Historic Context

By the time the original owners of 10 South Van Ness Avenue developed the lot as an investment property in the 1920s, Market Street at Van Ness Avenue had become a viable location for the shops, automobile dealerships, and the ballroom dance venue at 10 South Van Ness Avenue.

10 SOUTH VAN NESS AVENUE BUILDING HISTORY

Developer and Architects

The original 1926-1927 building permit called for a two-story concrete building for "stores and a dancehall." As described below under "Historic Uses," the building housed a variety of retail uses, with the storefront spaces along Market Street used mainly for automobile-related businesses such as repair shops, parts distributors, and an automobile dealership on the first floor. The dance hall was on the second floor. The new property, commissioned by B. F. Schlesinger and Herbert and Mortimer Fleishhacker, was described as follows by the *San Francisco Chronicle* on November 20, 1926:

> Accommodations for eight stores are planned for the Market Street frontage, three others will face Van Ness and one will face Twelfth Street. A large additional area at the rear will be planned to accommodate a garage or some similar enterprise. Samuels has already closed a lease with out-of-town capital known as the Van Ness Amusement Company for a ten-year lease on the entire upper floor of the building, which will have a ceiling elevation of twenty-one feet and will contain approximately 30,000 square feet of floor space. Exceptional attention has been given to the design of this floor, which will have a dance area…surrounded by a wide promenade, lounging rooms and other conveniences of the modern dance hall type.

The original portion of the building was designed by local architect Clarence C. Tantau (1884–1943), a San Francisco native and a member of the American Institute of Architects. Tantau became known primarily for his residential work for the exclusive millionaire colony at Pebble Beach and the Del Monte Hotel, designed in tandem with Louis Hobart. Based in San Francisco, he was best known for his Spanish style residences and commercial buildings. During his career, Tantau completed numerous commissions throughout the extended Bay Area, including residences in Atherton, Berkeley, Burlingame, Hillsborough, Monterey, Moss Beach, Piedmont, and Santa Cruz. Other notable projects include 1675 California Street (Du Broy Motor Car Company, 1917), 2090 Vallejo Street (residence, 1919), the Monterey Peninsula Country Club (1925), and the San Francisco Building at the Golden Gate International Exposition (1939).

Approximately one month after the original building permit was issued for construction, Schlesinger and the Fleishhacker brothers commissioned Perseo Righetti to design an attached two-story garage addition south of the original building. Perseo Righetti was a local architect whose practice focused on work for members of San Francisco's Italian-American community.

Righetti partnered with H. P. Kuhl before 1909 and with A. Headman from 1909 to 1914. He is best known for his design of 414 Mason Street (Native Sons of the Golden West Building #2, 1911–1912) and 1239 Main Street, Angels Camp (Calaveras County Bank, 1900).

Historic Uses

First-Floor Retail

The ground floor of the 10 South Van Ness Avenue building has housed a wide variety of shops, automobile dealerships, and offices since its construction in the 1920s. The ground-floor tenants along Market Street evolved along with broader technological and economic shifts, and ranged from a furniture store to restaurant uses. As of 1929, Harry J. Lee sold Durant automobiles from the property. In 1930, El Patio Golf Greens advertised its grand opening. From 1931 until 1933, Gus and Edward Lachman used the ground floor for Lachman Bros. Home Furnishings. Additional tenants included the Fur Doctor in 1935, Lindy's Café in 1937, and Gilbert Finance Co. in 1939. For almost 90 years, a portion of the building has been used as an automobile showroom, including the current use. In 1935, Les Vogel Chevrolet Co. established a showroom that operated at the site until at least the mid-1960s. In the 1960s, Waters Buick also operated in the space.

Although numerous tenants have occupied 10 South Van Ness Avenue over the years, the building remained in the hands of Mortimer Fleishhacker's family foundation until 1970. Honda dealerships have occupied the building since the mid-1980s.

Second-Floor Ballroom

10 South Van Ness Avenue was built with a large, open-plan dance hall on the second story. Initially listed as the El Patio Dancing Academy, the El Patio Ballroom was open for business by 1930. Billing itself as "America's Finest Ballroom," El Patio was one of the better known clubs in San Francisco. Under the direction of John L. Wolohan, the house orchestra played both current music and the waltzes of prior years for patrons.

Although San Francisco had about four ballrooms at any one time during the 1930s, the number dipped to just one by 1941; El Patio appears to have been the only ballroom operating in San Francisco during World War II. After the war, dance halls and ballrooms saw a renaissance, reaching peak popularity in 1951, with a total of 11 in San Francisco through the decade. Dance hall and ballroom popularity began to decline in the 1960s. By 1963, El Patio had become the Carousel Ballroom, which operated under the Civic Center Ballrooms of California Inc. and City Center Ballroom. The Carousel Ballroom continued the ballroom tradition of music and dancing until 1968.

Fillmore West

By March 1968, the venue's ballroom days ended when a consortium of San Francisco musicians, including members of the Grateful Dead and Jefferson Airplane, took over the lease and began staging rock concerts in the hall. Within six months, however, the venue's new operators accumulated significant debt and went out of business. San Francisco music promoter and impresario Bill Graham was looking for an alternative site for his Fillmore Auditorium (located at Fillmore Street and Geary Boulevard in the Western Addition since 1966). In late 1968 Graham took over management of the Carousel Ballroom and rechristened it "Fillmore West" (although the name "Carousel Ballroom" remained on the building's exterior and continued to appear in concert posters for the Fillmore West)

Fillmore West occupied 10 South Van Ness Avenue for less than three years, closing in July 1971. During its tenure, the Fillmore West became as much a community center as it was a performance venue, hosting weekly games, audition nights, and recording sessions. By the time the Fillmore West closed, the venue had hosted, according to Graham, more than 1,200 shows attended by 4 million customers, and the *Los Angeles Times* called the venue "rock's most famous concert hall."

OWNERS AND OCCUPANTS OF 10 SOUTH VAN NESS AVENUE

B. F. Schlesinger and the Fleishhacker Brothers

As mentioned above, the building was commissioned by B. F. Schlesinger and Herbert and Mortimer Fleishhacker. Schlesinger, a native of the Midwest, hailed from a long line of department store owners; when he arrived in San Francisco, shortly after the 1906 earthquake, he became the assistant general manager of the Emporium department store. By 1923, Schlesinger became the store's general manager; subsequently, he established B. F. Schlesinger and Sons, Inc., based in Union Square.

The Fleishhacker brothers belonged to a prominent family of business and civic leaders in San Francisco, as well as a pioneering family of Jewish-American merchants. Mortimer Fleishhacker, Sr. (1866–1953) was a banker and entrepreneur who participated in many philanthropic institutions and activities throughout the Bay Area. He was a founder of Community Chest, the precursor of the United Way, and served as a University of California trustee. Herbert Fleishhacker, Sr. (1872–1957), the younger brother, was an entrepreneur and civic leader best known for his many philanthropic investments and projects throughout San Francisco. Among the most famous was the 1924–1925 establishment of Fleishhacker Pool, near the Pacific Ocean and the San Francisco Zoo (originally called Fleishhacker Zoo). When it opened, Fleishhacker Pool became the largest outdoor saltwater pool in the United States. Fleishhacker's endeavors included serving as president of the San Francisco Parks Commission and of Anglo California National Bank, which became Crocker First National Bank in 1955. As

of the late 1930s, Herbert was "generally regarded as the West Coast's No. 2 financier"; however, legal troubles were said to have damaged his career in banking. Until 1970, the building at 10 South Van Ness Avenue was owned by the Fleishhacker Foundation, which used rent revenues to invest in causes of interest to the foundation.

Bill Graham

Bill Graham was one of the most influential and controversial figures in the annals of American rock music. As *Rolling Stone* writer Ben Fong-Torres wrote (following Graham's 1991 death), "When in the mid-Sixties San Francisco came to represent nothing left to lose, there was a handful of identifiable pioneers that changed the face, the sound and the style of pop culture. The changers included…Bill Graham."

After attending City College of New York, where he studied business administration, Graham made a visit to San Francisco just as the flower child/hippie movement was emerging. During that visit, Graham saw a performance of the San Francisco Mime Troupe in Lafayette Park, which prompted him to move to San Francisco. Once in San Francisco, after holding a number of jobs, Graham worked as the regional office manager for Allis-Chalmers, a manufacturer of industrial machinery. Graham soon moved on to become the business manager for the San Francisco Mime Troupe. Although his time there was short, it paved the way for Graham to begin producing music and live events under the "Bill Graham Presents" label that remained his brand throughout his career.

Graham staged his first rock concert in December 1965 at the Fillmore Auditorium, the precursor to the Fillmore West located at 1805 Geary Boulevard; the venue quickly served as an important stage for the most influential and innovative bands of the late 1960s. Graham's Fillmore Auditorium and Fillmore West regularly staged performances by the Grateful Dead, Santana, Quicksilver Messenger Service, Boz Scaggs, and Hot Tuna and its predecessor, Jefferson Airplane. About three years after opening the original Fillmore, with the popularity of the shows growing and the venue limited in size, Graham moved the Fillmore West to the subject building.

The reputation of the Fillmore grew to the point that in late 1968, the *New York Times* noted that "the Fillmore (is) now what the Savoy, the Paramount and the Apollo used to be—great stages on which anyone who counts appears; to make it on them is to make it with the whole youth market. Graham's talent as a promoter had much to do with his interest in staging diverse groups, to expose new audiences to a range of performers. As Graham told San Francisco reporter Belva Davis, in a CBS interview in 1969:

> We don't just run a dancehall, I don't think we're in the ballroom business only. We're in the business of changing the taste of the public, introducing different types of acts, creating an environment… we don't just put an act on the stage. …we're very much concerned with what happens to Joe and Jane date when they come in here…what happens to them, not just in relation to the talent on the

> stage. But in relation to the place and the other people here…[s]ubconsciously you're dropping your inhibitions, which will make it more conducive for you to listen freely and be affected freely, and you to affect others.

In subsequent years, the 1971 closing of the Fillmore West coincided with the end to San Francisco's flower power era and heyday of the psychedelic music scene. Fillmore West occupied 10 South Van Ness Avenue for less than three years, closing in July 1971. Graham's Fillmore Auditorium (located at Fillmore Street and Geary Boulevard) continues to operate today.

Graham helped popularize an approach for staging music that remains the norm by dispensing with seating and providing a more participatory experience, similar to the atmosphere of outdoor venues. Through the Fillmore West, Graham exposed concertgoers not only to rock's new sound but also to its roots. He understood the appetite of young audiences for the new "San Francisco sound," and the relevance of a wide range of musicians. Graham-created lineups at the Fillmore West were masterful and eclectic, providing San Francisco and America a crash course in the history of American popular music.

In October 1991, 20 years after the closure of the Fillmore West, Graham died in a helicopter crash at the age of 60. More than 300,000 people attended Graham's memorial concert, held on the Golden Gate Park Polo Fields. Three months after his death, Graham was inducted into the Rock & Roll Hall of Fame.

Existing Status under Historical Resource Registers[4]

SAN FRANCISCO PLANNING CODE ARTICLE 10

The project site does not contain any San Francisco Planning Code (planning code) article 10 landmarks or structures of merit, nor is the project site located in an article 10 historic district.

A contributor to the discontiguous Market Street Masonry Historic District[5] is located approximately 115 feet from the northwest corner of 10 South Van Ness Avenue at 1580–1598 Market Street.

[4] The status codes listed here were retrieved from the San Francisco Planning Department's San Francisco Property Information Map database for block/lot 3506/004, http://propertymap.sfplanning.org, accessed January 30, 2018.

[5] The Market Street Masonry Historic District is a noncontiguous landmark district comprising seven buildings on Market Street between 12th and Valencia streets and an eighth structure at Franklin and Fell streets.

SAN FRANCISCO PLANNING CODE ARTICLE 11

The existing building at 10 South Van Ness Avenue is not within any conservation district as designated by article 11 of the San Francisco Planning Code.

SAN FRANCISCO DEPARTMENT OF CITY PLANNING ARCHITECTURAL QUALITY SURVEY, 1976

This 1976 survey was a citywide reconnaissance ("windshield") survey that identified and rated properties deemed to be architecturally significant. The survey did not include contextual or building-specific research. Given the limited scope and date of completion, the 1976 survey was not officially recognized by the San Francisco Planning Department as a valid local register of historical resources for the purposes of CEQA. The 1976 survey did not rate the 10 South Van Ness Avenue building as significant.

SAN FRANCISCO ARCHITECTURAL HERITAGE SURVEY, 1978

This survey, led by San Francisco Architectural Heritage in 1977–1978, considered properties throughout the downtown area, assigning status codes ranging from A (highest importance) to D (minor or no importance). In 1984, the survey area was expanded from downtown, to include the South of Market area. 10 South Van Ness Avenue was documented in the 1978 survey and assigned a status code of C (contextual importance).[6]

MARKET & OCTAVIA AREA PLAN HISTORIC RESOURCE SURVEY EVALUATION, 2006/2007

Following the adoption of the Market & Octavia Area Plan in 2007, the community, in partnership with the planning department, hired Page & Turnbull Associates to complete a historic survey of the plan area. In February 2009, the survey was adopted and the remainder of the year was dedicated to integrating the results of the survey into the area plan.

The survey found that the subject building does not appear eligible for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), but that it does appear eligible for local listing or designation due to its continuous use by businesses within the same industry and role as an anchor at the prominent intersection of Market Street and South Van Ness Avenue. The survey, accordingly, assigned the subject building a California Historical Resource Status Code of 5S3 (eligible for local listing or designation).

[6] Category C. Contextual Importance: Building which are distinguished by their scale, materials, compositional treatment, cornice and other features. They provide the setting for more important buildings and they add visual richness and character to the downtown area. Many C-group buildings may be eligible for the NRHP as part of historic districts. Cited from Foundation for San Francisco Architectural Heritage, *Splendid Survivors: San Francisco Downtown Architectural Heritage*, 1979, p. 13.

The survey did not reach any conclusion as to the property's significance with respect to its association with Bill Graham and Fillmore West. However, it acknowledged that with further future study, the building could potentially be found eligible for listing in the CRHR for its association with Bill Graham's Fillmore West.[7] Therefore the survey recommends that, "with the passage of time," the building be reevaluated for listing on the CRHR.[8]

The HRE for the current 10 South Van Ness Project undertakes the reevaluation of the property as recommended by the Market & Octavia Area Plan Historic Resource Survey.

AUTOMOTIVE SUPPORT STRUCTURES HISTORIC RESOURCE SURVEY, 2009/2010

This survey was completed to identify significant themes and properties related to Van Ness Avenue's remarkable concentration of automobile-related properties. As part of the survey, more than 100 properties were considered. The findings of this survey are presented in *Van Ness Auto Row Support Structures – A Survey of Automobile-Related Buildings along the Van Ness Avenue Corridor*, which was adopted by the San Francisco Planning Commission in 2010.

As part of the Van Ness Auto Row Support Structures historic context statement and survey, 10 South Van Ness Avenue was evaluated under CRHR criterion 3 (architecture) for its potential eligibility as a longtime automobile-related property. The building was found ineligible for national, state, or local listing, both individually and as part of a district (status code 6Z). The survey concluded that alterations to the 10 South Van Ness property had rendered it ineligible due to a lack of integrity resulting from the application of screens that obscured the façade and the removal of the building's original ornament.

Evaluation of the Property as an Historical Resource

UNDER CALIFORNIA REGISTER

According to Public Resources Code section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

[7] Page & Turnbull, Inc., *12 South Van Ness Avenue, Department of Parks and Recreation Primary Record*, Series 523A Form; August 11, 2006; Page & Turnbull, Inc., *12 South Van Ness Avenue, Department of Parks and Recreation Building, Structure, and Object Record*, Series 523B Form, March 2007. On file with the San Francisco Planning Department.

[8] Ibid.

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
- **Criterion 2**: It is associated with the lives of persons important in our past.
- **Criterion 3**: It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
- **Criterion 4**: It has yielded, or may be likely to yield, information important in history or prehistory.

Criterion 1 (Events)

The 2016 historic resources evaluation prepared for the proposed project concluded that the subject building appears eligible for the CRHR under criterion 1 (events), for its association with the internationally celebrated and iconic Fillmore West. This venue embodied the counterculture art and spirit of San Francisco in the 1960s and early 1970s. The legacy and importance of this venue continues to be reflected in the now-iconic, psychedelic Fillmore West concert posters. The Fillmore West's legacy also lives on in the many "Live at the Fillmore West" recordings, which have become highly significant in the annals of American music.

Criterion 2 (Persons)

The property also appears eligible under CRHR criterion 2 (persons) for its direct association with music promoter, and impresario Bill Graham. As discussed above, Bill Graham was one of the most influential and controversial figures in the annals of American rock music. The period of significance is 1968 to 1971.

Criterion 3 (Design/Construction)

The Historic Resource Evaluation for the proposed project did not revisit the conclusion of the earlier 2009/2010 Automotive Support Structures Historic Resource Survey. That survey concluded that the property did not appear to be eligible for inclusion in the CRHR under criterion 3 (Design/Construction) because the building was obscured by screens and most of its ornament had been obscured or removed. As such, the property lacks sufficient integrity of design to convey its significance under criterion 3.

Criterion 4 (Information Potential)

Criterion 4 is commonly understood to apply primarily to archeological resources. Information in the historical record about such resources may be unavailable or sparse. Such resources may lack physical integrity or physical accessibility (they may be buried or submerged) to describe their features and evaluate their significance. As such, the significance of archeological resources under CEQA is premised on their potential to yield important historical or scientific information.

Archeological research and physical investigative methods are necessary to realize the information potential of such resources.

The surface architectural resources within the project site are from a relatively recent historic era that is well documented in the historic record. These resources are therefore unlikely to yield important scientific or historical information under CRHR Criterion 4 that is not already documented and available in the historic record.

The potential for the presence of subsurface pre-historic and historic archeological resources within the project site that predate the existing development is addressed in the initial study, Topic E.3. Cultural Resources (see EIR Appendix B).

INTEGRITY

In addition to meeting these criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the ability of a property to convey the reasons for its significance. To assess integrity, the National Park Service recognizes seven aspects or qualities that, considered together, define historic integrity. Resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR. To retain integrity, a property must possess several, if not all, of these seven qualities:

1. Location: The place where the historic property was constructed or the place where the historic event occurred.
2. Design: The combination of elements that create the form, plan, space, structure, and style of a property.
3. Setting: The physical environment of a historic property.
4. Materials: The physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property.
5. Workmanship: The physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. Feeling: A property's expression of the aesthetic or historic sense of a particular period of time.
7. Association: The direct link between an important historic event or person and a historic property.

Overall, the property retains sufficient integrity of location, design, setting, and association to enable it to convey its significance under CRHR criterion 1 (Events) and criterion 2 (Persons). This finding is based on a consideration of the resource's rareness and sociocultural (rather than architectural) significance, as the location of the Fillmore West and in direct association with Bill Graham. The retention of integrity under CRHR criterion 1 (Events) and criterion 2 (Persons) is also based on the presence of extant (though currently covered) character-defining features on the exterior and interior, and the reversibility of a number of alterations (such as the auto-lifts in the

interior ballroom space), the removal of which would reinforce the property's association with historical events and persons. The significance of 10 South Van Ness is not premised on its possessing an intact and cohesive visual or functional relationship with nearby properties, or by the importance of the building's architectural features. Each of the seven qualities in relation to the 10 South Van Ness property is discussed below.

1. ***Location:*** **Fillmore West retains integrity of location**. The venue's prominent location at the corner of South Van Ness Avenue and Market Street is particularly critical in conveying its sociocultural significance.
2. ***Design:*** **Fillmore West retains integrity of design**. The property displays several visible changes in design that reflect its ongoing evolving uses over time. These include the removal of the original Fillmore West blade sign and marquee atop the Market Street entrance, as well as the removal of the marquee over the 10 South Van Ness Avenue entrance. In addition, the original deeply recessed theater entrance of the Fillmore West is currently covered by concrete slabs. Overall, however, the property retains sufficient integrity of design to convey its significance under CRHR criterion 1 (Events) and criterion 2 (Persons).

   Extant exterior character-defining features that express the building's design include the overall symmetrical design composition and decorative pilasters and ornament; the rhythmic bays and fenestration pattern; and the decorative Spanish Colonial Revival-style parapet. Some of these features are obscured by metal screens on the north, east, and south elevations; if the metal screens were removed, the essential form of the building and these character-defining features remain intact.

   Character-defining features on the interior include the open plan, with few walls or divisions, overall spatial relationships of the open plan to the arcaded spaces along the periphery, and the incorporation of decorative arches. On the interior, a number of steel automobile lifts were bolted to the concrete floor of the ballroom. If the automobile-lifts were removed, the essential form of the ballroom (its open-plan and relationship to the arcaded spaces and decorative arches) would remain intact. In this way, the interior space appears to retain its original dimensions, as designed in 1926 to serve as an open ballroom. The main design motif in the ballroom is a series of distinctive, elaborately curved arches that a concertgoer from 1970 would recognize.

   By the time Bill Graham opened the Fillmore West, the elements of the building that conveyed its overall design included not just the building's ornamental detailing and style, but also the distinctive triangular plan of the 1926-1927 building (which anticipated the eventual planned extension of South Van Ness through the lot in 1931).
3. ***Setting:*** **Fillmore West retains integrity of setting**. The significance of the property under CRHR criterion 1/A (Events) and criterion 2/B (Persons) is not premised on its possessing a cohesive visual, architectural, or functional relationship with surrounding properties. Its setting at the corner of South Van Ness Avenue and Market Street, in an area of the Market & Octavia Area Plan area known for its eclectic development history and uses, remains sufficiently intact to convey significance.
4. ***Materials:*** **Fillmore West does not retain integrity of materials**. There have been enough alterations to the ballroom exterior, entrance, and interior facilities (alterations that would have reflected its use as a concert hall) that the property does not retain integrity of materials.

5. ***Workmanship:*** **Fillmore West does not retain integrity of workmanship**. Similarly, there have been enough alterations to the ballroom facilities overall, as a concert hall, that the property does not retain integrity of workmanship.
6. ***Feeling:*** **Fillmore West does not currently retain integrity of feeling**, because of the extensive changes to the building's interior and exterior.
7. ***Association:*** **Fillmore West has integrity of association**. It was the home of the now-legendary music venue, Fillmore West, established by the nationally significant San Francisco music promoter and impresario, Bill Graham.

Based on these findings, the Fillmore West at 10 South Van Ness Avenue retains integrity such that it is able to convey its significance under CRHR criteria 1 and 2, and therefore qualifies as an historical resource under CEQA.

CHARACTER-DEFINING FEATURES

The character-defining features of 10 South Van Ness are as follows:

Exterior Features (Building Overall)

- Reinforced, concrete construction
- Corner siting and orientation, facing intersection of Market Street and Van Ness
- Set flush to the sidewalk
- Irregularly shaped building plan
- Spanish Colonial Revival-influenced ornament and detailing
- Decorative pilasters, dividing bays
- Symmetrical design composition
- Varied massing, primarily two stories, with a three-story pop-out on the west and a one-story block on the south
- Repeating, rhythmic bays, separated by attached piers with ornamental detailing
- Metal-framed, grouped, and multilight windows, casements, and transoms

Interior Features (Ballroom)

- Interior circulation from downstairs to ballroom entrance (original)
- Open plan of the ballroom
- Concrete floors
- Doubled-back stairway
- Decorative metal banister leading upstairs to the venue
- Elaborate, decorative arch motif encircling the ballroom
- Office spaces, accessed off stairwell via single wood doors

Nearby Historical Resources

One article 10 historic district (the Market Street Masonry Historic District, adopted in April 2013), three article 11 properties, and several other properties that are eligible for the CRHR and considered historical resources under CEQA are located within 500 feet of 10 South Van Ness Avenue, as discussed below.

ARTICLE 10

The following article 10 property is located in the vicinity of the project site. It is one of eight contributors to the Market Street Masonry Historic District, adopted in April 2013.

- 1580–1598 Market Street, approximately 120 feet to the northwest of 10 South Van Ness Avenue (also designated under article 11 as discussed below).

ARTICLE 11

The following article 11 properties located in the vicinity of the project site have been designated significant or contributory under article 11 of the planning code:

- 1580–1598 Market Street, approximately 120 feet to the northwest of 10 South Van Ness Avenue (also designated under article 10 as discussed above);
- 11 Van Ness Avenue, approximately 260 feet to the north of 10 South Van Ness Avenue;
- 50 Oak Street, approximately 325 feet to the northwest of 10 South Van Ness Avenue.

MARKET & OCTAVIA AREA PLAN HISTORIC RESOURCE SURVEY EVALUATION

The Market & Octavia Area Plan Historic Resource Survey identified the following properties as eligible for inclusion in the California Register of Historical Resources:

- 1601 Market Street, across 12th Street to the west of 10 South Van Ness Avenue
- 40 12th Street, across 12th Street to the west of 10 South Van Ness Avenue
- 42 12th Street, across 12th Street to the west of 10 South Van Ness Avenue
- 68 12th Street, across 12th Street to the west of 10 South Van Ness Avenue
- 30 Otis, Street, approximately 140 feet to the south of 10 South Van Ness Avenue
- 14–18 Otis Street, approximately 210 feet to the south of 10 South Van Ness Avenue
- 1629 Market Street, approximately 475 feet to the southwest of 10 South Van Ness Avenue

Regulatory Framework

Federal

NATIONAL REGISTER OF HISTORIC PLACES

The National Register of Historic Places is the nation's master inventory of cultural resources worthy of preservation. It is administered by the National Park Service, which is represented at the state level by the state historic preservation officer. The NRHP includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archeological, or cultural significance at the federal, state, or local level. The NRHP includes four evaluative criteria to determine eligibility of a historic property, as described below in Section 4.1.4,10 South Van Ness Avenue Significance Evaluation.

Although there are exceptions, certain kinds of resources are not usually considered for listing in the NRHP: religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties that are less than 50 years old. In addition to qualifying for listing under at least one of the evaluative criteria of the NRHP, a property must possess sufficient integrity to be considered eligible for inclusion. According to *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*, integrity is defined as "the ability of a property to convey its significance."[9] The National Register Bulletin defines seven characteristics of integrity as described below in Section 4.1.4, 10 South Van Ness Avenue Significance Evaluation. According to National Register Bulletin 15, "[t]o retain historic integrity a property will always possess several, and usually most, of the aspects."

State

CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The CRHR, established in Public Resources Code section 5024.1, is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The register helps government agencies identify and evaluate California's historical resources, and indicates which properties are to be protected, to the extent prudent and feasible, from substantial adverse change.[10] Any resource listed in, or eligible for listing in, the CRHR is to be considered during the CEQA process. A cultural resource is evaluated under four CRHR criteria to determine its historical significance. To be considered significant, a resource must meet one or more of the four criteria as described above on pp. 4.1.13–4.1.14.

[9] National Park Service, *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*, 1997, p. 44.
[10] Public Resources Code section 5024.1(a).

In addition, sufficient time must have passed to allow a "scholarly perspective on the events or individuals associated with the resource." Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource.[11] To protect potential resources, the California Office of Historic Preservation recommends documenting, and taking into consideration in the planning process, any cultural resource that is 45 years or older.[12]

The CRHR also requires that significant resources possess integrity, defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association."[13] These seven aspects of integrity are described above on p. 4.1.14.

Local

SAN FRANCISCO GENERAL PLAN

The following objectives and policies in the general plan's Urban Design Element are applicable to historic preservation:

- **Objective 2:** Conservation of resources which provide a sense of nature, continuity with the past, and freedom from overcrowding.
  - **Policy 2.4:** 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 2.5:** Use care in remodeling of older buildings, in order to enhance rather than weaken the original character of such buildings.
  - **Policy 2.6:** Respect the character of older development nearby in the design of new buildings.

The Market & Octavia Area Plan, an area plan within the San Francisco General Plan, contains the following objective and supporting policies that address historic preservation:

- **Objective 3.2:** Promote the preservation of notable historic landmarks, individual historic buildings, and features that help to provide continuity with the past.

[11] California Code of Regulations title 14, section 4852(d)(2).
[12] California Office of Historic Preservation, *Instructions for Recording Historical Resources*, March 1995, http://www.ohp.parks.ca.gov/pages/1054/files/manual95.pdf, accessed July 18, 2017. The 45-year criterion is in place to account for a projected 5-year interval between resource identification and planning decisions. The criterion ensures that resources that will reach the age requirement in the interim are fully considered during the environmental review and decision-making processes.
[13] California Office of Historic Preservation, *California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register)*, Technical Assistance Series #6, N.D., 2011, http://ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf, accessed July 18, 2017.

- **Policy 3.2.5:** Preserve landmark and other buildings of historic value as invaluable neighborhood assets.
- **Policy 3.2.6:** Encourage rehabilitation and adaptive reuse of historic buildings and resources.
- **Policy 3.2.8:** Protect and preserve groupings of cultural resources that have integrity, convey a period of significance, and are given recognition as groupings through the creation of historic or conservation districts.
- **Policy 3.2.9:** Preserve resources in identified historic districts.
- **Policy 3.2.11:** Ensure that changes in the built environment respect the historic character and cultural heritage of the area, and that resource sustainability is supported.
- **Policy 3.2.12:** Encourage new building design that respects the character of nearby older development.
- **Policy 3.2.14:** Apply the "Secretary of the Interior's Standards for the Treatment of Historic Properties" for all projects that affect individually designated buildings at the local, state, or national level.
- **Policy 3.2.16:** Preserve the cultural and socioeconomic diversity of the plan area through preservation of historic resources.
- **Policy 3.2.17:** To maintain the City's supply of affordable housing, historic rehabilitation projects may need to accommodate other considerations in determining the level of restoration.

As set forth in Chapter 3, Plans and Policies, of this draft EIR, the Accountable Planning Initiative (Proposition M of 1986) added eight priority policies to the planning code and to the preamble to the general plan that "shall be the basis upon which inconsistencies in the General Plan are resolved" (San Francisco Planning Code section 101.1). Priority policy 7 is "that landmarks and historic buildings be preserved." As noted in Chapter 3, demolition of the building on the project site could be inconsistent with this priority policy.

City decision-makers, in consideration of the proposed project's general plan consistency, will evaluate all relevant general plan objectives and policies, including, for example, those that address providing affordable housing and promoting neighborhood-serving retail uses, and that discourage the use of commuter automobiles. City decision-makers will evaluate whether, on balance, the project would be consistent with the general plan, including the eight priority policies added by the Accountable Planning Initiative. Inconsistency with a particular general plan policy does not indicate that a project is inconsistent with the general plan as a whole. Further, such a policy conflict, in and of itself, does not represent a significant adverse effect on the environment, although it may serve as an indicator that such an effect could arise.

SAN FRANCISCO PLANNING CODE

Article 10 Landmarks

San Francisco Planning Code Article 10, Preservation of Historical, Architectural and Aesthetic Landmarks, provides for official designation of landmarks and historic districts that have "a special character or special historical, architectural or aesthetic interest or value." Landmarks can be buildings, sites, or landscape features. Landmark status provides the greatest level of protection for historic resources in San Francisco; in general, alteration of a landmark requires approval by the Historic Preservation Commission in the form of a Certificate of Appropriateness.

Article 11, Buildings and Conservation Districts

San Francisco Planning Code Article 11, Preservation of Buildings and Districts of Architectural, Historical, and Aesthetic Importance in the C-3 Districts, governs downtown buildings. There are five ratings for buildings under article 11. Category I and II buildings ("Significant Buildings") are the most important. Contributory Buildings have a lesser level of significance and are classified as category III or category IV, depending on whether they are within an identified conservation district. Buildings in categories I through IV are considered historical resources under CEQA. Unrated or noncontributory buildings are assigned to category V.

An important provision of article 11 is the establishment of *conservation districts*, defined as "substantial concentrations of buildings that together create subareas of special architectural and aesthetic importance."

SAN FRANCISCO PLANNING DEPARTMENT CEQA REVIEW PROCEDURES FOR HISTORICAL RESOURCES

The San Francisco Planning Department's CEQA Review Procedures for Historic Resources provides guidance for the CEQA review process with regard to historic resources. As a certified local government and the lead agency in CEQA determinations, the City has instituted guidelines and a system for initiating CEQA review of historical resources. The planning department's CEQA review procedures for historical resources incorporate the CEQA guidelines into the City's existing regulatory framework. To facilitate the review process, the planning department has organized some 27 criteria into three major categories that classify properties based on their evaluation and inclusion in specified registers or surveys, as outlined in San Francisco Preservation Bulletin 1677 and summarized here (category A is divided into two subcategories):[14]

[14] San Francisco Planning Department, *Preservation Bulletin No. 16, CEQA Review Procedures for Historic Resources*, Draft, March 31, 2008.

- **Category A.1: Resources Listed on or Formally Determined to Be Eligible for the California Register of Historical Resources.** These properties are historical resources.
- **Category A.2: Adopted Local Registers, and Properties That Have Been Determined to Appear or May Become Eligible for the California Register.** These properties are presumed to be historical resources for purposes of CEQA, unless a preponderance of the evidence demonstrates that the resource is not historically or culturally significant.
- **Category B: Properties Requiring Further Consultation and Review.** Properties that do not meet the criteria for listing in categories A.1 or A.2, but for which the City has information indicating that further consultation and review will be required to evaluate whether a property is a historical resource for the purposes of CEQA.
- **Category C: Properties Determined Not to Be Historical Resources or Properties for Which the City Has No Information Indicating That the Property Is a Historical Resource.** Properties that have been affirmatively determined not to be historical resources, properties less than 50 years of age, and properties for which the City has no information indicating that the property qualifies as a historical resource.

The San Francisco Planning Department considers a listing of historical resources approved by ordinance or resolution of the San Francisco Board of Supervisors or the San Francisco Planning Commission to be a local register of historical resources for purposes of CEQA evaluation. These lists include articles 10 and 11 of the San Francisco Planning Code, as well as other adopted historical resource surveys, including the Here Today survey, the 1977–78 Downtown Survey (Splendid Survivors), the Dogpatch Survey, the Central Waterfront Survey, and the North Beach Survey. Other historical resource surveys, such as the Architectural Heritage surveys, and the 1990 Unreinforced Masonry Building survey, are not approved by ordinance or resolution, but contain useful initial information as the basis for further study.

Even if a property is not listed in any federal, state or local register of historical resources, a lead agency may still determine a property is an historical resource for the purposes of CEQA provided that the lead agency's determination is supported by substantial evidence in light of the whole record (see CEQA Guidelines, Section 15064.5(a)(3))

Impacts and Mitigation Measures

Significance Thresholds

The significance thresholds in this analysis are consistent with the environmental checklist in CEQA Guidelines Appendix G, which was adopted and modified by the San Francisco Planning Department. The project would have a significant effect on a historic architectural resource if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.

A "substantial adverse change" is defined by CEQA Guidelines section 15064.5 as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired." The significance of a historical resource is "materially impaired," according to CEQA Guidelines section 15064.5(b)(2), when a project "demolishes or materially alters in an adverse manner those physical characteristics" of the resource that do any of the following:

(A) Convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources

(B) Account for its inclusion in a local register of historical resources pursuant to Public Resources Code section 5020.1(k) or its identification in a historical resources survey meeting the requirements of Public Resources Code section 5024.1(g), 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

(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

CEQA Guidelines section 15126.4(b)(2) states, "In some circumstances, documentation of a historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur." In such cases, the impact on the environment from demolition or substantial alteration of a historical resource would be significant and unavoidable even after the historical documentation has been completed.

Approach to Analysis

This section identifies impacts on historical resources and considers direct and indirect impacts on historic architectural resources based on the definitions set forth in CEQA Guidelines section 15064.5. Either the proposed project or the variant would demolish the existing structure on the project site. Because the impacts would be similar, the proposed project and variant are discussed together.

Once a resource has been identified as significant, it must be determined whether the project would cause a "substantial adverse change" that would materially impair the significance of the resource. Material impairment occurs when there is demolition or alteration of the resource's physical characteristics such that it can no longer convey its historical significance and justify its inclusion in the CRHR or other applicable listing. Mitigation of effects on historical architectural resources may involve avoiding demolition of the resource, revising a proposed project to minimize the effect, or, where avoidance or minimization is not feasible, documenting the resource. As noted above, documentation may not reduce significant effects on a historical architectural resource to a less-than-significant level.

Project Features

Implementation of the proposed project or variant would include demolition of the existing buildings (consisting of the 1926-1927 building at the north portion of the project site and a concrete garage addition constructed shortly thereafter) on the project site (a historical resource for the purposes of CEQA) and construction of a mixed-use development that would include residential, commercial, parking, and open space uses. No existing building features would be incorporated into the proposed new structure(s) on the project site. A complete project description is included in Chapter 2.0, Project Description.

Impact Analysis

Impact CR-1: The proposed demolition of the building at 10 South Van Ness Avenue would cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5 of the CEQA Guidelines. *(Significant and Unavoidable with Mitigation*)

Implementing the proposed project or variant would require demolishing the existing building at 10 South Van Ness Avenue. As discussed previously, the building is individually eligible for listing in the CRHR under Criterion 1 (events) for its association with the Fillmore West concert venue and under Criterion 2 (persons) for its association with Bill Graham. Demolishing the existing 10 South Van Ness Avenue building would materially impair the significance of the historical resource and, as such, would cause a substantial adverse impact on a historical resource. This would be considered a significant impact under CEQA.

Implementing Mitigation Measures CR-1a, CR-1b, and CR-1c would lessen the impact of the proposed demolition of the existing historic building at 10 South Van Ness Avenue through documentation, salvage, and public outreach through interpretive display. The documentation and outreach would highlight the resource's individual importance and the building's historical context as the internationally celebrated and iconic Fillmore West founded by Bill Graham. However, these mitigation measures cannot reduce this impact to a less-than-significant level. As a result, this impact would be significant and unavoidable.

Mitigation Measure M-CR-1a: Documentation

Prior to demolition or the issuance of site permits for the 10 South Van Ness Avenue project, the project sponsor shall undertake Historic American Building Survey (HABS)–level documentation of the property. The documentation shall be funded by the project sponsor and undertaken by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth in the Secretary of the Interior's Professional Qualification Standards (Code of Federal Regulations title 36, part 61). Before beginning work on any aspect of the documentation, the professional overseeing the documentation shall meet with the preservation staff of the Planning Department for review and approval of a coordinated documentation plan. The documentation package created shall consist of the items listed below.

- **Measured Drawings:** A set of measured drawings that depict the existing size, scale, and dimensions of the property. The Planning Department's preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (e.g., plan, section, elevation). The preservation staff will assist the consultant in determining the appropriate level of measured drawings.
- **HABS-Level Photography:** Digital photographs of the interior and exterior of the property. Large-format negatives are not required. The scope of the digital photographs shall be reviewed by the Planning Department's preservation staff for concurrence, and all digital photography shall be conducted according to current National Park Service standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HABS photography.
- **HABS Historical Report:** A written historical narrative and report, per the HABS Historical Report Guidelines.
- **Video Recordation:** The project sponsor shall undertake a video documenting the affected historical resource and its setting. The documentation shall be conducted and narrated by a qualified professional who meets the standards for history, architectural history, or architecture (as appropriate) set forth in the Secretary of the Interior's Professional Qualification Standards (Code of Federal Regulations title 36, part 61). The documentation shall include as much information as possible—using visuals in combination with narration—about the materials, construction methods, current condition, historic use, and historic context of the historical resource.
- **Print-on-Demand Book:** The project sponsor shall make the content from the historical report, historical photographs, HABS photography, measured drawings, and field notes available to the public through a pre-existing print-on-demand book service. This service will print and mail softcover books containing the aforementioned materials to members of the public who have paid a nominal fee. The sponsor shall not be required to pay ongoing printing fees once the book has been made available through the service.

The professional(s) shall submit the completed documentation for review and approval by a member of the Planning Department's preservation staff before demolition or site permits are issued. Documentation may be used in the interpretive display or signage described in Mitigation Measure M-CR-1b. The final approved documentation shall be provided to the planning department and offered to repositories including but not limited to the History Room of the San Francisco Public Library; the Environmental Design Library at the University of California, Berkeley; the Northwest Information Center; San Francisco Architectural Heritage; and the California Historical Society. The Planning Department will make electronic versions of the documentation available to the public at no charge.

Mitigation Measure M-CR-1b: Interpretation

The project sponsor shall install and maintain a permanent interpretive display commemorating the historical significance of the Fillmore West and Bill Graham. Interpretive display(s) shall develop a connection between the general public and the subject building's history. These installations may include, for example, interactive sound or video installations showcasing historic performances at Fillmore West or booths designed to record or play oral histories (see below), and historically oriented

programming for a publicly accessible space. The interpretive program may also include more traditional interpretive materials such as commemorative markers and plaques, displays of photographs, and news articles. Emphasis shall be placed on the many posters advertising concerts that took place at the subject building during its period of significance. The high-quality interpretive displays shall be installed within the project site boundaries, made of durable, all-weather materials, and positioned to allow for high public visibility and interactivity.

To assist in the collection of information that will inform and direct the historical interpretation, the sponsor shall fund a historical study prepared by the qualified historic consultant preparing the interpretative program to identify significant trends and events associated with the music of the 1960s counterculture in San Francisco, as well as identify associated buildings and sites throughout San Francisco. The project sponsor, at his or her election, may also incorporate the art and culture of the 1960s counterculture in San Francisco into this study. The objective of this study is to provide background information that will enrich the historical contexts that have already been established for the subject building and to place the subject building within the wider context of 1960s counterculture, for the benefit of the general public.

Additionally, the sponsor shall retain the services of a qualified historian to undertake an oral history of the Fillmore West. This oral history project will consist of interviews and recollections of people present at the concerts performed during the period of significance, including performers, organizers, and concertgoers, to the extent feasible. The success of this effort will depend primarily on the ability of the project sponsor to locate such persons, and on their willingness/ability to participate. Therefore, the project sponsor shall make a good-faith effort to publicize the oral history project, conduct public outreach, and identify a wide range of potential interviewees. To accomplish this, the sponsor shall employ a range of measures that may include hosting a commemorative concert or event, installing booths that allow participants to record their recollections, and/or hosting a website that allows interviewees to contribute remotely. Prior to undertaking this effort, the scope and methodology of the oral history project shall be reviewed and approved by the Environmental Review Officer, in consultation with preservation staff.

In addition to potentially being utilized for the on-site interpretive program, the recordings made as part of the oral history project shall be transcribed, indexed, and made available to the public at no charge through the Planning Department and other archives and repositories in order to allow for remote, off-site historical interpretation of the subject building.

A general plan that will lay out the various components of the interpretive program shall be developed in consultation with an architectural historian who meets the Secretary of the Interior's Professional Qualification Standards, and approved by Planning Department staff prior to issuance of a site permit or demolition permit. This plan shall include the historical study and the oral history program described above.

The substance, media, and other characteristics of the interpretive display shall be developed by a consultant experienced in urban architectural interpretive displays. Prior to finalizing the display, the sponsor and consultant shall attempt to convene a community group consisting of local preservation organizations and other interested parties to receive feedback on the adequacy of the interpretive display.

A detailed final design showing the substance and appearance of the interpretive displays, as well as maintenance plans, shall be approved by Planning Department preservation staff before the final certificate of occupancy can be issued.

Mitigation Measure M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse

Prior to demolition of the subject building, the project sponsor shall either use salvaged architectural materials on the site as part of the interpretive program or make such architectural materials from the site available to museums, archives, curation facilities, the public, and nonprofit organizations to preserve, interpret, and display the history of the historical resource. The project sponsor shall provide representatives of these groups the opportunity to salvage materials for public information or reuse in other locations. No materials shall be salvaged or removed until HABS recordation and documentation are completed and an inventory of key exterior and interior features and materials is completed by Secretary of the Interior–qualified professionals.

Impact CR-2: Demolition and new construction on the project site or variant would not have a substantial adverse effect on any offsite historical resource, as defined in section 15064.5 of the CEQA Guidelines. *(Less than Significant*)

Construction Vibration Impacts on Offsite Historic Resources

Offsite historical resources are physically separated from the project site. Groundborne vibration generated during construction of the proposed project would not result in a direct physical impact on offsite historic resources. As stated in Section 4.3, Noise, of this draft EIR, construction activities under the proposed project or variant would not result in physical damage to adjacent offsite historical resources. None of the predicted project construction-related vibration levels listed in Table 4.3.15 in Section 4.3, Noise, p. 4.3.36, would exceed the building damage risk threshold of 0.12 in/sec for the most sensitive of buildings, based on Federal Transit Administration guidance. Based on these estimates, construction vibration impacts on offsite historic resources would be less than significant. Additionally, project operation under either the proposed project or the variant would be unlikely to create sources of enduring vibration that would result in damage to offsite historic structures (Section 4.3, Noise), and this impact would be less than significant.

Impact of Demolition on Offsite Historic Resources

The project site is not located within any identified or potential historic district and is physically separated from any offsite historical resources. As such demolition and new construction under the proposed project or variant would have no direct physical impact on nearby historic architectural resources.

The proposed project or variant could have an indirect visual impact on offsite resources by altering their immediate visual setting. However, the integrity and historic significance of nearby offsite historic architectural resources is not premised on their possessing an intact and cohesive

visual for functional relationship with the project site. The proposed project would not destroy historic features and materials that characterize nearby historic architectural resources. New construction within the project site would be contemporary in design and materials and would not convey a false sense of historic development. The character-defining features and form of nearby historic architectural resources would continue to be clearly evident.

For these reasons, the indirect visual impacts of the Proposed Project are not those of a project that "demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by the lead agency for purposes of CEQA." (CEQA Guidelines Section 15064.5(b)(2)(C)). No mitigation measures are necessary.

Cumulative Impacts

Impact-C-CR-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the project vicinity, would not substantially contribute to cumulative impacts related to historical resources. (*Less than Significant)*

As described above, the Fillmore West building at 10 South Van Ness Avenue is individually eligible for listing in the CRHR under Criterion 1 (events) and Criterion 2 (persons).

Cumulative projects are identified in Table 4.0.1: Cumulative Projects, on EIR p. 4.0.10, and in Figure 4.0.1: Cumulative Projects, on EIR p. 4.0.11. The impacts of foreseeable projects on identified historical resources in the vicinity of the project site (like 30 Otis Street and 1500 Mission Street) would not combine with impacts of the proposed project. The significance of 10 South Van Ness is not premised on its possessing an intact and cohesive visual or functional relationship with nearby properties. Likewise, and reciprocally, the significance of nearby offsite historical resources is not premised on their having an intact and cohesive visual or functional relationship with the project site. As such, the proposed project's or variant's impact on the significance of the 10 South Van Ness historical resource is independent of the impacts of nearby foreseeable projects on the significance of nearby historical resources. Such impacts would not combine to result in a significant cumulative impact.

There is no substantial evidence in the record that the proposed project or variant would make a cumulatively considerable contribution to a significant impact resulting from a broader collective loss of historical resources associated with Bill Graham or the counterculture of 1960's San Francisco. Unlike contributors to a contiguous historic district, the integrity and collective historical significance of such related, but discontiguous, resources throughout San Francisco is not premised on their possessing an intact and cohesive visual or functional relationship with each other or with the existing building on the project site. With demolition of the existing historical resource at 10 South Van Ness Avenue, the proposed project or variant would not contribute to a material impairment of the ability of remaining sites to continue to convey their individual and

collective significance and their association with the 1960's counterculture music scene in San Francisco.

For these reasons, the impact of the proposed project or project variant on historical resources would not combine with those of past, present, and reasonably foreseeable future projects to result in a significant cumulative impact on historical resources. No mitigation measures are required. Note however, that implementation of Mitigation Measure M-CR-1b: Interpretation, presented above as mitigation for the significant impact resulting from the demolition of the 10 South Van Ness historical resource, would increase public awareness of the significance of the project site as an iconic 1960's countercultural music venue. It would thereby enhance the association of the site with other sites throughout San Francisco associated with the countercultural music scene of the 1960's.

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4.2 TRANSPORTATION AND CIRCULATION

Section 4.2, Transportation and Circulation, describes the existing environmental and regulatory setting related to transportation and circulation, and addresses the potential transportation and circulation–related impacts of the proposed project, the variant, and the straight-shot streetscape option when its operation could be different from the proposed project and might result in impacts related to traffic hazards, truck and passenger loading, bicycle travel, emergency access, and on-street parking. The initial study (EIR Appendix B) found that implementation of the proposed project or variant could have potentially significant impacts related to transportation and circulation thresholds. As such, the transportation analysis in this EIR considers impacts related to vehicle miles traveled (VMT),[1] traffic hazards, transit, pedestrians, bicycles, loading, emergency vehicle access, and automobile parking, as well as the transportation-related impacts of construction activities. All of these transportation topics are addressed in the discussions of existing conditions, existing plus project conditions, and cumulative (year 2040) conditions.

The impact discussion in this section is supported primarily by the *10 South Van Ness Avenue Final Transportation Impact Study* prepared for the proposed project and the straight-shot streetscape option, and a supplemental technical memorandum that analyzes, the variant.[2]

Summary of Market and Octavia Neighborhood Plan Final EIR Transportation and Circulation Section

Market and Octavia Neighborhood Plan Final EIR Setting

The Market and Octavia Neighborhood Plan Final EIR described existing transportation conditions in the vicinity of the project site including the existing roadway network, intersection operating conditions, the transit network, parking supply and occupancy, pedestrian conditions, and bicycle conditions. The assessment of cumulative impacts was based on a comparison of the 2025 with Central Freeway Parcels/Near-Term Transportation Improvements and 2025 with Plan conditions against the 2025 Without Plan conditions. Significance criteria included level of service, increases in transit demand, potential secondary effects of parking (such as cars circling), substantial overcrowding on public sidewalks, the creation of hazardous conditions for bicyclists, increase in loading demand during the peak hour of loading activities, and construction-related impacts.

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[1] VMT measures the amount and distance that a project might cause people to drive, accounting for the number of passengers in a vehicle.

[2] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV; and CHS Consulting Group, *10 South Van Ness Avenue Single-Tower Project Variant – Final Memorandum,* December 21, 201.

Market and Octavia Neighborhood Plan Final EIR Impacts and Mitigation Measures

Under the 2025 with Plan conditions, 12 of the 32 study intersections were anticipated to operate at an unsatisfactory level of service E or F, 3 more than in 2025 without implementation of the plan. Under the project-level conditions for 2025 with Central Freeway Parcels/Near Term Transportation Improvements, 11 of the study intersections would operate at unsatisfactory levels. Several mitigation measures were identified to lessen impacts at these intersections in 2025 under both the with Plan and the Project-Level with Central Freeway Parcels/Near Term Transportation scenarios:

- Mitigation Measure 5.7A, Traffic Mitigation Measure for Hayes and Gough Streets Intersection, to re-establish the westbound travel lane on Hayes Street, eliminating the Plan's proposal to provide an eastbound lane between Gough Street and Van Ness Avenue.
- Mitigation Measure 5.7B, Traffic Mitigation Measure for Hayes and Franklin Street Intersection, to re-establish the westbound travel lane, as for Measure 5.7A.
- Mitigation Measure 5.7C, Traffic Mitigation Measure for Laguna / Market / Hermann / Guerrero Streets Intersection, to adjust signal timing to provide protected left turns for northbound Guerrero and southwest bound Market streets.
- Mitigation Measure 5.7D, Traffic Mitigation Measure for Market/Sanchez/Fifteenth Streets Intersection, to make minor changes in signal timing and add a right-turn pocket on the westbound approach on Fifteenth Street.
- Mitigation Measure 5.7E, Traffic Mitigation Measure for Market/Church/Fourteenth Streets Intersection, to make minor changes in signal timing.
- Mitigation Measure 5.7F, Traffic Mitigation Measure for Mission Street/Otis Street/South Van Ness Avenue Intersection, to make minor changes in signal timing and add right-turn pockets on the southbound approach on Mission Street and the northbound approach on South Van Ness Avenue.
- Mitigation Measure 5.7G, Traffic Mitigation Measure for Hayes Street/Van Ness Avenue Intersection, to either re-establish the westbound travel lane on Hayes and provide no eastbound lane, or retain the proposed two-way Hayes Street configuration and redistribute westbound traffic to Fell Street via southbound Van Ness Avenue.

However, the Market and Octavia Neighborhood Plan Final EIR concluded that there would still be potential for significant and unavoidable impacts with mitigation, based mainly on the fact that to maintain acceptable levels of service along Hayes Street, the Plan could not be implemented in that location and that the feasibility of signal timing changes could not be fully assessed.

Implementation of the Market and Octavia Plan was not found to result in a significant impact on transit capacity. However, implementation of the proposed change from one-way to two-way travel on Hayes Street was found to cause delays to San Francisco Municipal Railway (Muni)

service on the 21 Hayes route that were identified as a significant impact. Implementing Mitigation Measures 5.7A and 5.7B would eliminate that impact. Mitigation Measure 5.7H, Transit Mitigation Measure, was also identified to address the impact related to degradation of transit service from the increase in delays at the intersections of Hayes Street with Van Ness Avenue, Franklin Street, and Gough Street during the p.m. peak hour. This mitigation measure would reroute the 21 Hayes bus line to avoid the intersections of Hayes/Franklin streets and Hayes/Gough streets. This measure was determined to be infeasible, as it would require adding new overhead wires along the new portions of the route and the rerouting could result in other delays on this transit route.

Environmental Setting

The transportation study area generally encompasses a two-block radius around the project site, and is bounded by Fell Street to the north, 13th Street to the south, 10th Street and Howard Street to the east, and the Central Freeway and Octavia Boulevard to the west. Data was collected at the following intersections within the study area:

1. Market Street/Van Ness Avenue (U.S. Highway 101)
2. Market Street/Franklin Street/Page Street/12th Street
3. Mission Street/South Van Ness Avenue/Otis Street/12th Street
4. Mission Street/11th Street
5. Gough Street/Market Street/Haight Street
6. Gough Street/Otis Street/McCoppin Street
7. Market Street/Octavia Boulevard/U.S. 101 on- and off-ramps
8. 11th Street/Howard Street
9. Van Ness Avenue/Fell Street
10. South Van Ness Avenue/13th Street/U.S. 101 on-ramp
11. Mission Street/Otis Street/Duboce Avenue/U.S.101 off-ramp.

The study area and intersections counted are shown in **Figure 4.2.1: Transportation Study Area**.

Source: SWCA (2018), CHS Consulting Group (2017)

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FIGURE 4.2.1: TRANSPORTATION STUDY AREA

Roadway Network

REGIONAL ACCESS

The study area is served by three regional roadways:

- **U.S. Highway 101 (U.S. 101)** connects San Francisco with the Peninsula/South Bay and the North Bay. South of the project site, U.S. 101 follows the Central Freeway east to an interchange with Interstate 80 (I-80) approximately 0.75 mile southeast of the project site, then continues south through the southeastern neighborhoods of San Francisco to the Peninsula/South Bay as the Bayshore Freeway. Between the study area and the Presidio in the northwestern part of San Francisco, U.S. 101 leaves the Central Freeway (which terminates at Market Street/Octavia Boulevard) and follows major local streets including Mission Street/South Van Ness Avenue and Van Ness Avenue.

  Access to and from the Peninsula/South Bay is provided by the northbound off-ramp at Mission Street/13th Street/Duboce Avenue/Otis Street (or, alternatively, the northbound off-ramp from the Central Freeway at Market Street/Octavia Boulevard) and by the southbound on-ramp at South Van Ness Avenue/13th Street. Access to and from the North Bay is provided by the major local streets described above and by other connecting local streets.
- **Interstate 80 (I-80)** connects San Francisco with the East Bay via the San Francisco–Oakland Bay Bridge and provides additional access to portions of the North Bay in Solano, Napa, and Sonoma counties via the Carquinez Bridge. Access to and from I-80 is provided by U.S. 101 and the U.S. 101/I-80 interchange approximately 0.75 mile southeast of the project site. Alternative access is provided by the westbound off-ramp at Eighth Street/Harrison Street and the eastbound on-ramp at Eighth Street/Bryant Street.
- **Interstate 280 (I-280)** provides regional access between San Francisco and the Peninsula/South Bay. I-280 terminates at Sixth Street/Brannan Street in the Central South of Market (SoMa) area, with additional ramps at Fifth Street/King Street in China Basin and 18th Street/Mariposa Street in Potrero Hill/Dogpatch/Mission Bay. However, the closest access to and from the project site is provided by U.S. 101, which connects with I-280 at the Alemany Maze interchange in southeastern San Francisco.

LOCAL ACCESS

Local roadway access to the project site is provided by the local street network, which includes the key roadways described below.[3]

[3] The descriptions include a general characterization of the function and cross-section of each street, as well as relevant classifications under the Better Streets Plan and the San Francisco General Plan. The latter specifically defines several different types of functions and hierarchies for streets and other components of the transportation network serving San Francisco, including the regional freeway network; vehicular streets, including Congestion Management Program (CMP) streets and other streets; the Metropolitan Transportation System (MTS); transit preferential streets, including primary transit streets (transit-oriented streets and transit-important streets), secondary transit streets, and transit centers; rail transit; the citywide pedestrian network; neighborhood pedestrian streets, including neighborhood commercial streets and neighborhood network connection streets; the bicycle route network; and freight traffic routes.

Market Street

Market Street is downtown's primary multimodal thoroughfare and is oriented in a northeast-southwest direction at the confluence of the finer-grained, roughly cardinal (north, south, east, west) street grid to the north and the diagonal, larger-spaced street grid in the SoMa area.[4] Designated as a *Ceremonial* street in the Better Streets Plan,[5] Market Street serves only a minor function for vehicular traffic, but is a major corridor for transit, bicycle, and pedestrian circulation, both locally and at a citywide level.[6] Market Street is downtown's most important transit corridor, with multiple bus and streetcar lines at street level and local and regional rail service provided underground in the Market Street Subway.

Through downtown, Market Street generally features two travel lanes in each direction, with the center lanes designated as transit-only lanes at all times (eastbound from 12th Street to Third Street and westbound from Third Street to Van Ness Avenue/South Van Ness Avenue). The curbside lanes operate as general-purpose lanes, shared by private vehicle traffic, transit vehicles, and bicycles.

In the vicinity of the project site, Market Street features *class II* bikeways (bicycle lanes) from west of Eighth Street to Valencia Street (westbound) or Gough Street (eastbound). Market Street also features an enhanced pedestrian realm, with widened sidewalks and *curb cut* restrictions east of 12th Street to accommodate high-volume pedestrian activity, streetscape and landscape features, subway station entrances, and public open spaces. On-street parking is generally prohibited along Market Street east of Octavia Boulevard, but on-street passenger and commercial loading bays are provided in multiple locations. Various traffic restrictions are also in effect along Market Street, including left-turn restrictions at multiple intersections and forced eastbound right-turn movements at 10th Street and Sixth Street.

[4] The SoMa street grid consists of streets that are parallel and perpendicular to Market Street, but the street grid is usually defined in the east-west direction for simplicity, with Market Street and parallel streets defined as east-west streets and numbered streets (e.g., 10th Street, 11th Street, 12th Street) and other perpendicular streets defined as north-south streets.

[5] The Better Streets Plan states that Ceremonial (or Civic) streets are "grand civic places which serve as major gathering spots for marches, parades, and rallies, and serve as world renowned public spaces and attractions. Ceremonial streets should be uniquely designed in each case; they should exhibit a high degree of design consistency, formality, and care."

[6] The San Francisco General Plan defines Market Street in the vicinity of the project site as a CMP transit conflict street (east of 12th Street/Franklin Street/Page Street) and CMP major arterial and MTS street (west of 12th Street/Franklin Street/Page Street); a transit-oriented street (east of Gough Street/Haight Street) and transit-important street (west of Gough Street/Haight Street); a citywide pedestrian network street; a neighborhood commercial street; a part of the bicycle route network; and a major arterial for freight traffic (west of 12th Street/Franklin Street/Page Street).

Mission Street

Mission Street is a major multimodal thoroughfare that parallels Market Street through downtown, before turning south and continuing through the Mission and southern San Francisco neighborhoods into Daly City and beyond. At its intersection with South Van Ness Avenue adjacent to the project site, the westbound/southbound lanes of Mission Street become Otis Street, a one-way southbound four-lane street, for two blocks. The southbound Otis Street travel lanes become the southbound lanes of Mission Street at Duboce Avenue/13th Street under the elevated Central Freeway (see Figure 4.2.1). Between Duboce Avenue/13th Street and the intersection of South Van Ness Avenue/12th Street, Mission Street is one way northbound/eastbound and provides four travel lanes. Mission Street both east of and south of the South Van Ness Avenue/12th Street/Mission Street intersection generally has two travel lanes in each direction in the vicinity of the project site, with curbside lanes generally designated as transit-only lanes.[7] In the study area, Mission Street is designated as a *Downtown Commercial* street under the Better Streets Plan, and Otis Street is designated as a *Neighborhood Commercial* street. Mission Street in the vicinity of the project site is a major transit corridor and accommodates some key functions for vehicular traffic (serving as a portion of northbound U.S. 101) and other modes.[8] On-street parking is generally provided on both sides of the street.

Van Ness Avenue and South Van Ness Avenue

Van Ness Avenue is a major north-south arterial roadway that runs along the western edge of downtown. This roadway generally has three travel lanes in each direction, with left-turn pockets at intersections, although ongoing construction related to the Van Ness Bus Rapid Transit (BRT) project has reduced vehicular traffic to two travel lanes in each direction and eliminated most left-turn movements between Market Street and Bay Street except northbound at Lombard Street and southbound at Broadway, plus northbound at Hayes Street on a temporary basis. South of Market Street, Van Ness Avenue becomes South Van Ness Avenue, which continues south (parallel to Mission Street) through the Mission District and is also defined as a major arterial, ending at Cesar Chavez Street and its connection to the U.S. 101 freeway.

Together, Van Ness Avenue and South Van Ness Avenue serve an important role for vehicular circulation (accommodating a key portion of the U.S. 101 route between the Central Freeway and

[7] In the project vicinity, transit-only lanes in the westbound/southbound direction are in effect Monday through Friday from 4 p.m. to 6 p.m., east of 11th Street and at all times west/south of 11th Street. In the eastbound direction, transit-only lanes are provided east of 11th Street, in effect Monday through Friday from 4 p.m. to 6 p.m.

[8] The San Francisco General Plan defines Mission Street in the vicinity of the project site as a CMP transit conflict street; a transit-oriented street (including Otis Street); a citywide pedestrian network street; a neighborhood commercial street (including Otis Street); and a part of the bicycle route network (including Otis Street from 11th Street westbound to Gough Street, continuing along McCoppin Street).

the Golden Gate Bridge for most of its length) and is also a major transit corridor.[9] In the immediate vicinity of the project site, the Better Streets Plan designates Van Ness Avenue and South Van Ness Avenue as *Downtown Commercial* streets.

12th Street

12th Street is a minor north-south collector roadway through The Hub Plan Area and the Western SoMa neighborhood, but is discontinuous at the intersection with South Van Ness Avenue. Northbound vehicular traffic must turn right onto northbound South Van Ness Avenue (no access is provided onto 12th Street toward Market Street), while southbound vehicular traffic must merge onto South Van Ness Avenue, then turn left onto the continuing segment of 12th Street after crossing Otis Street and Mission Street. The Better Streets Plan designates the segment of 12th Street adjacent to the project site between Market Street and South Van Ness Avenue as a *Downtown Residential* street. This street segment features one travel lane in each direction, with on-street parking (in a combination of parallel and perpendicular spaces) on both sides of the street.

There are no existing transit services or bikeways on 12th Street. The street primarily provides local access for motorists, bicyclists, and pedestrians.

Other Key Streets in the Project Vicinity

Other key streets near the project site include Octavia Boulevard, Duboce Avenue/13th Street; the Fell Street/Oak Street, Franklin Street/Gough Street, Ninth Street/10th Street, and Howard Street/Folsom Street couplets for vehicular traffic;[10] and Hayes, Haight, and 11th streets for transit service.

VEHICLE MILES TRAVELED

Table 4.2.1: Average Daily Vehicle Miles Traveled per Capita—Existing Conditions summarizes average daily VMT per capita by land use for the Bay Area and for the *transportation analysis zone* (TAZ)[11] that contains the project site (TAZ 578), which is bounded

[9] The San Francisco General Plan defines Van Ness Avenue and South Van Ness Avenue in the vicinity of the project site as CMP major arterials; MTS streets; transit important streets (for South Van Ness Avenue only to Mission Street); citywide pedestrian network streets (for South Van Ness Avenue only to Mission Street); neighborhood commercial streets (for South Van Ness Avenue only to Mission Street); and together as a major arterial for freight traffic.

[10] A roadway couplet is a pair of one-way streets – two parallel streets that provide for one-way vehicular travel in opposite directions.

[11] TAZs represent geographical areas of the city in transportation planning models and can be used for transportation analysis and other planning purposes. The zones vary in size from single city blocks in the downtown core to multiple blocks in outer neighborhoods, to even larger zones in historically industrial areas like the Hunters Point Shipyard.

by Market Street to the north, Otis and McCoppin streets to the south, South Van Ness Avenue to the east, and Valencia Street to the west.

As shown in Table 4.2.1, average daily VMT per capita in TAZ 578 is substantially lower than the corresponding regional average for residential and retail uses. Residential uses in TAZ 578 generate an average daily VMT per resident of 3.7, compared to 17.2 for the Bay Area as a whole. Retail uses in TAZ 578 generate an average daily VMT per employee of 8.9, compared to 14.9 for the Bay Area as a whole.

Table 4.2.1: Average Daily Vehicle Miles Traveled per Capita—Existing Conditions

	Average Daily VMT per Capita	
Land Use	**San Francisco Bay Area (regional average)**	**TAZ 578**
Residential (per resident)	17.2	3.7
Retail (per employee)	14.9	8.9

Notes: TAZ = transportation analysis zone; VMT = vehicle miles traveled

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV.

Transit Network

The project site is located at the southwestern edge of downtown San Francisco, and is well served by both local and regional public transit.

REGIONAL TRANSIT

Regional Transit Providers

Major regional transit providers serving San Francisco include the Bay Area Rapid Transit District (BART); Caltrain; the Alameda–Contra Costa Transit District (AC Transit); the San Mateo County Transit District (SamTrans); the Golden Gate Bridge Highway and Transportation District (Golden Gate Transit); and ferry services.

Bay Area Rapid Transit

BART provides regional light rail service between the East Bay (outer terminals at Pittsburg/Bay Point, Richmond, Dublin/Pleasanton, and Warm Springs/South Fremont), San Mateo County (outer terminals at San Francisco International Airport and Millbrae), and San Francisco. BART's Civic Center/United Nations Plaza Station is located approximately 0.4 mile to the northeast along Market Street between Seventh Street/Charles J. Brenham Place and Eighth Street/Hyde

Street/Grove Street. The BART 16th Street Station is located approximately 0.7 mile south of the project site, at the intersection of 16th and Mission streets.

Caltrain

Caltrain provides passenger rail service on the Peninsula corridor between San Francisco and San Jose, connecting San Francisco, San Mateo, and Santa Clara counties.[12] Caltrain's northern terminus at San Francisco Station, along Fourth Street between Townsend Street and King Street, approximately 1.5 miles east of the project site, is accessible via Muni service including the 47 Van Ness, N Judah, and T Third Street lines/routes.

Alameda–Contra Costa County Transit District

AC Transit operates bus service in western Alameda and Contra Costa counties, including a network of "Transbay" routes connecting the East Bay with San Francisco and San Mateo counties. AC Transit operates 27 Transbay routes between the East Bay and downtown San Francisco's Transbay Temporary Terminal.[13] The terminal is just under 2 miles northeast of the project site in the Transbay neighborhood and is accessible by multiple Muni routes, including five Muni Metro lines in the Market Street Subway and two Muni surface lines – the 9/9R San Bruno/San Bruno Rapid along Market Street and the 14/14R Mission/Mission Rapid along Mission Street – that are adjacent to and serve the project site.

San Mateo County Transit District

SamTrans operates bus and rail service in San Mateo County. In addition to funding Caltrain service, SamTrans operates a network of local buses in the county and additional routes into adjacent portions of San Francisco and Santa Clara counties. SamTrans Routes KX and 292 serve downtown San Francisco and provide connections to and from various locations in San Mateo County. In the vicinity of the project site, these routes generally operate along Mission Street to and from the Transbay Temporary Terminal before turning south along Ninth Street/10th Street. The closest stops to the project site are at Ninth Street/Folsom Street and Mission Street/Ninth

[12] Limited additional service is available south of San Jose, serving Gilroy and other communities in southern Santa Clara County.

[13] The Transbay Temporary Terminal is a temporary facility replacing the former Transbay Terminal and is located in the Transbay area of East SoMa, occupying the entire block bounded by Howard Street to the north, Folsom Street to the south, Main Street to the east, and Beale Street to the west. Construction is y complete on the future Transbay Transit Center, the permanent replacement for the Transbay Terminal, which extends from Main Street to just east of Second Street, between Minna Street and Natoma Street. The first phase of the Transbay Transit Center opened for bus service in August 2018; the Transbay Temporary Terminal will be decommissioned in the relatively near future, following repairs to portions of the new facility ongoing in October 2018.

Street in the inbound direction and at Mission Street/Ninth Street and 10th Street/Howard Street in the outbound direction.

Golden Gate Bridge Highway and Transportation District

The Golden Gate Bridge Highway and Transportation District operates bus and ferry service between the North Bay (Marin and Sonoma counties) and San Francisco under the Golden Gate Transit and Golden Gate Ferry brands. Golden Gate Transit operates 18 "commute" routes and four "regional" routes into and out of San Francisco across the Golden Gate Bridge.[14] The closest Golden Gate Transit stops to the project site are at Hyde Street/Grove Street (inbound) and McAllister Street/Polk Street (outbound), served by regional routes and some commute routes via Van Ness Avenue or Geary Boulevard. Passengers connecting with other commute route services along Beach Street/North Point Street and Battery Street/Sansome Street transfer at the Golden Gate Bridge toll plaza, which is served by all of Golden Gate Transit's routes in San Francisco.

Golden Gate Ferry operates ferry service connecting Larkspur, Sausalito, and Tiburon with San Francisco's Ferry Building, accessible via multiple Muni routes including Muni Metro lines in the Market Street Subway and Muni surface lines along Market and Mission streets.

Water Emergency Transportation Authority

The Water Emergency Transportation Authority operates regional ferry service to/from nine terminals on San Francisco Bay.[15] The nearest regular-service terminal to the project site is the San Francisco Ferry Building, accessible by connecting Muni service including Muni Metro lines in the Market Street Subway and Muni surface lines along Market Street and Mission Street.

Regional Transit Capacity

Regional transit service into and out of San Francisco are evaluated using *screenlines* defined by the San Francisco Planning Department in the *Transportation Impact Analysis Guidelines for Environmental Review,* known as the SF Guidelines.[16] **Table 4.2.2: Regional Transit Screenlines—Existing Conditions** summarizes existing ridership and capacity utilization at the

[14] An additional route, Route 93, connects the Civic Center area with the Golden Gate Bridge toll plaza.

[15] Terminals are located in Alameda (Main Street and Harbor Bay), Oakland (Jack London Square), San Francisco (Ferry Building, Pier 41, and AT&T Park), South San Francisco (Oyster Point), and Vallejo (Georgia Street and Mare Island).

[16] San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review*, October 2002. Screenlines represent a grouping of transit services, usually by a common direction or origin/destination served, reflecting the fact that multiple transit options or alternatives are generally available to transit passengers on their journeys. For downtown, for example, the planning department typically describes transit ridership and capacity in terms of three screenlines for regional transit (East Bay, North Bay, and South Bay) and four screenlines for local transit (northeast, northwest, southeast, and southwest).

maximum load point for regional transit providers on the downtown screenlines.[17] For regional operators, the maximum load point is typically at the San Francisco city limit (e.g., the East Bay maximum load point would occur at the Transbay Tube and on the Bay Bridge). Data are shown for the inbound direction during the weekday a.m. peak hour and for the outbound direction during the weekday p.m. peak hour, because these are the dominant travel patterns during the respective time periods. For regional transit providers, the established *capacity utilization threshold*[18] is 100 percent and equals the number of available seats, except for BART, for which the capacity utilization threshold also includes standing capacity.

Table 4.2.2: Regional Transit Screenlines—Existing Conditions

	Weekday A.M. Peak Hour[1]			Weekday P.M. Peak Hour[1]		
Screenline	**Ridership**	**Capacity**	**Capacity Utilization (Inbound)**	**Ridership**	**Capacity**	**Capacity Utilization (Outbound)**
East Bay Screenline						
BART	25,399	23,256	**109%**	24,488	22,784	**107%**
AC Transit	2,256	3,926	57%	2,256	3,926	57%
Ferries	805	1,615	50%	805	1,615	50%
Subtotal	*28,460*	*28,797*	*99%*	*27,549*	*28,325*	*97%*
North Bay Screenline						
Golden Gate Transit Buses	1,384	2,817	49%	1,384	2,817	49%
Ferries	968	1,959	49%	968	1,959	49%
Subtotal	*2,352*	*4,776*	*49%*	*2,352*	*4,776*	*49%*
South Bay Screenline						
BART	14,150	19,367	73%	13,500	12,561	**107%**
Caltrain	2,377	3,100	77%	2,377	3,100	77%
SamTrans	141	320	44%	141	320	44%
Subtotal	*16,668*	*22,787*	73%	*16,018*	*15,981*	**100%**
Total	*47,480*	*56,360*	84%	*45,919*	*49,082*	*94%*

Notes:
AC Transit = Alameda–Contra Costa County Transit District; BART = Bay Area Rapid Transit; SamTrans = San Mateo County Transit District
Bold indicates capacity utilization of 100 percent or greater.
[1] Shows the a.m. peak hour as inbound (i.e., toward downtown) only and the p.m. peak hour as outbound (i.e., away from downtown) only.

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV.

As shown in Table 4.2.2, BART currently exceeds the established capacity utilization standard on the East Bay screenline during the weekday a.m. peak hour and on the East Bay and South Bay screenlines during the weekday p.m. peak hour. Because of crowding on BART, the South Bay

[17] The maximum load point for each transit route is the point along the route where the maximum number of passengers is on board.
[18] The capacity utilization threshold represents the ideal maximum level of crowding, as measured by the ratio of ridership to capacity.

screenline as a whole also exceeds the established capacity utilization threshold. All other regional operators are currently within established utilization standards.

LOCAL TRANSIT

Local Transit Corridors and Routes

Primary local public transit access to and from the project site is provided by Muni, which operates bus, cable car, and light rail lines in San Francisco. On Market Street, the project site is served by surface routes (F Market & Wharves, 6 Haight/Parnassus, 7 Haight/Noriega, 9 San Bruno, 9R San Bruno Rapid) and underground light rail (Muni Metro) lines (J Church, K Ingleside, L Taraval, M Ocean View, N Judah, and T Third Street) operating in the Market Street Subway. Van Ness Avenue, South Van Ness Avenue and Mission Street are also major corridors for Muni service, carrying the 47 Van Ness and 49 Van Ness/Mission on Van Ness Avenue and South Van Ness Avenue; and the 14 Mission, 14R Mission Rapid, and 49 Van Ness/Mission on Mission Street in the project vicinity. Other Muni corridors in the vicinity of the project site include Hayes Street, Haight Street, and 11th Street.

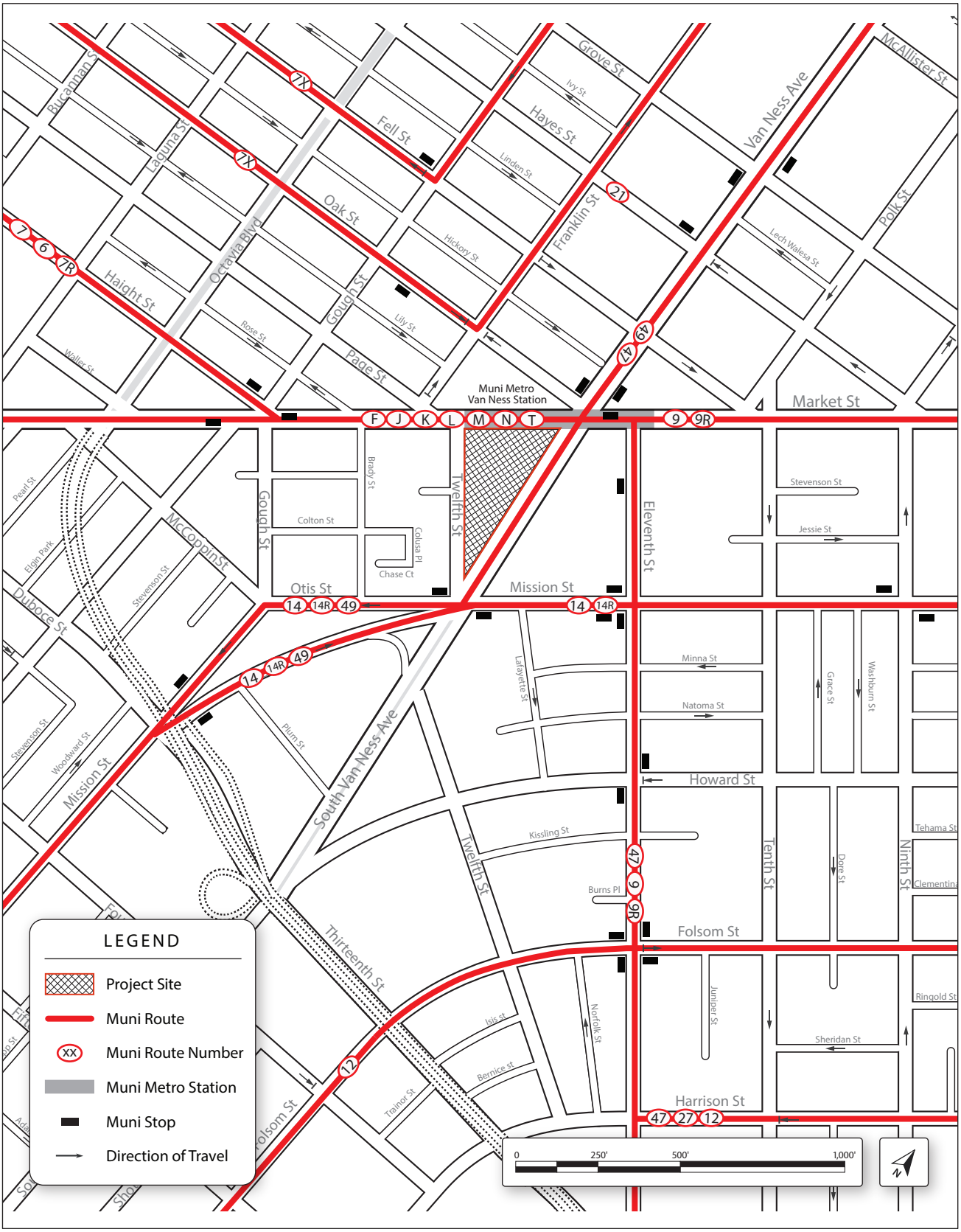
Figure 4.2.2: Existing Transit Network shows transit routes near the project site. **Table 4.2.3: Muni Service in the Project Vicinity** summarizes Muni service in the project vicinity.

Local Transit Capacity

Ridership and capacity for local transit service between the project site and downtown San Francisco are evaluated using screenlines, similar to the screenlines for regional transit. Because most of San Francisco's local transit system is arranged to carry passengers into and out of downtown, Muni service can be grouped into four screenlines that surround downtown San Francisco, as defined in the SF Guidelines.[19] **Table 4.2.4: Muni Downtown Screenlines—Existing Conditions** summarizes existing ridership and capacity utilization at the maximum load point for the routes crossing the four downtown screenlines.[20] Data are shown for the inbound direction during the weekday a.m. peak hour and for the outbound direction during the weekday p.m. peak hour, because they are the dominant travel patterns during the respective time periods.

[19] San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review,* October 2002.

[20] Ridership data are from the automated passenger-count data collected by the San Francisco Municipal Transportation Agency (SFMTA) in September and October 2013. Data regarding capacity (headways and vehicle types) from the same period, the most recent data available, were also obtained from SFMTA.



Source: SWCA (2018), CHS Consulting Group (2017)

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FIGURE 4.2.2: EXISTING TRANSIT NETWORK

Table 4.2.3: Muni Service in the Project Vicinity

Route	Weekday Headways[1] (minutes)				Nearest Stop to the Project Site	
	A.M. Peak		P.M. Peak			
	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
F Market & Wharves	8	8	7	7	Market at Van Ness/South Van Ness	
J Church	9	9	9	9	Van Ness Station	
K Ingleside	8	8	8	8		
L Taraval	8	8	8	8		
M Ocean View	9	9	9	9		
N Judah	7	7	7	7		
T Third Street	8	8	8	8		
6 Haight/Parnassus	10	10	10	10	Market at Van Ness/South Van Ness	
7 Haight/Parnassus	10	10	10	10		
7X Noriega Express	9			10	Oak between Franklin and Gough	Fell at Gough
9 San Bruno	12	12	12	12	11th at Market	
9R San Bruno Rapid	9	9	9	9		
12 Folsom/Pacific	15	15	15	15	Folsom at 11th	
14 Mission	8	8	8	8	Mission at South Van Ness	
14R Mission Rapid	8	8	8	8	Mission at 11th	
21 Hayes	6	7	9	9	Grove at Van Ness	Hayes at Van Ness
27 Bryant	15	15	15	15	11th at Harrison	Bryant at Division/13th/11th
47 Van Ness	8	8	8	8	South Van Ness at Mission Van Ness at Market/South Van Ness	Van Ness at Market/ Oak/South Van Ness
49 Van Ness/Mission	8	8	8	8	South Van Ness at Mission Van Ness at Market/South Van Ness	Van Ness at Market/ Oak/South Van Ness Mission at South Van Ness/12th

Notes:
Muni = San Francisco Municipal Railway
[1] Time period definitions (approximate): a.m. peak = 6 a.m.–10 a.m.; p.m. peak = 3 p.m.–7 p.m.
[2] Muni vehicles are typically defined as either traveling "inbound" (i.e., toward downtown) or "outbound" (i.e., leaving downtown).
Sources: Data compiled by AECOM in 2018.

Table 4.2.4: Muni Downtown Screenlines—Existing Conditions

Screenline	Weekday A.M. Peak Hour[1]			Weekday P.M. Peak Hour[1]		
	Ridership[2]	Capacity[2]	Capacity Utilization	Ridership	Capacity	Capacity Utilization
Northeast Screenline						
Kearny/Stockton	2,211	3,050	72%	2,245	3,327	68%
Other lines	538	1,141	47%	683	1,078	63%
Subtotal	*2,749*	*4,191*	*66%*	*2,928*	*4,405*	*67%*
Northwest Screenline						
Geary	1,821	2,490	73%	1,964	2,623	75%
California	1,610	2,010	80%	1,322	1,752	75%
Sutter/Clement	480	630	76%	425	630	68%
Fulton/Hayes	1,277	1,680	76%	1,184	1,323	**90%**
Balboa	758	1,019	74%	625	974	64%
Subtotal	*5,946*	*7,829*	*76%*	*5,519*	*7,302*	*76%*
Southeast Screenline						
Third Street	350	793	44%	782	793	**99%**
Mission	1,643	2,509	65%	1,407	2,601	54%
San Bruno/Bayshore	1,689	2,134	79%	1,536	2,134	72%
Other lines	1,466	1,756	83%	1,084	1,675	65%
Subtotal	*5,147*	*7,193*	*72%*	*4,810*	*7,203*	*67%*
Southwest Screenline						
Subway lines	6,330	6,205	**102%**	4,904	6,164	80%
Haight/Noriega	1,121	1,554	72%	977	1,554	63%
Other lines	465	700	66%	555	700	79%
Subtotal	*7,916*	*8,459*	***94%***	*6,435*	*8,418*	*77%*
Total	*21,758*	*27,671*	*79%*	*19,693*	*27,328*	*72%*

Notes:
Muni = San Francisco Municipal Railway

Bold indicates capacity utilization of 85 percent or greater.

[1] Shows the a.m. peak hour as inbound (i.e., toward downtown) only and the p.m. peak hour as outbound (i.e., away from downtown) only.

[2] Columns may not add to subtotals or totals due to rounding.

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV.

The San Francisco Municipal Transportation Agency (SFMTA) Board has adopted an 85 percent performance standard for capacity utilization and has determined that this performance standard most appropriately reflects actual operations and the likelihood of "pass-ups" (vehicles not stopping to pick up more passengers).[21] The capacity is measured as a full seated and standing load of passengers.

As shown in Table 4.2.4, most directional screenlines and corridors within the screenlines currently operate below the 85 percent performance standard, but some exceed the standard. Corridors exceeding 85 percent capacity utilization include the Subway lines during the weekday a.m. peak hour (102 percent) and the Fulton/Hayes and Third Street corridors during the weekday p.m. peak hour (90 percent and 99 percent, respectively). The Southwest screenline also exceeds 85 percent capacity utilization during the weekday a.m. peak hour (94 percent).

Bikeway Network

BIKEWAYS AND BICYCLE FACILITIES

Bikeways can typically be classified into four general categories based on the separation from motorized traffic:

- Class I bikeways provide a completely separated right-of-way for the exclusive use of bicyclists and pedestrians, with cross-flow minimized. These facilities typically consist of off-street bicycle paths or trails and are generally shared with pedestrians.
- Class II bikeways provide a striped lane for one-way bicycle travel on a street or highway. These facilities typically consist of striped bicycle lanes on roadways, providing a minimum of 4–5 feet of space for bicyclists.
- Class III bikeways provide a shared travel lane with automobile traffic. These facilities consist of designated and signed bicycle routes where bicyclists share the roadway with other vehicles, and may include other features such as pavement markings (e.g., sharrows[22]) to reinforce their shared nature.
- Class IV bikeways are typically referred to as "separated bikeways" or "cycle tracks," and provide enhanced facilities for the exclusive use of bicyclists, generally falling between class I and class II bikeways in terms of protection for bicyclists, with physical separation between the bikeway and adjacent automobile traffic.[23]

[21] San Francisco Municipal Transportation Agency, *Short Range Transit Plan Fiscal Year 2017 – Fiscal Year 2030*. 2017, p. 40, https://www.sfmta.com/sites/default/files/agendaitems/2017/6-6-17%20Item%2011%20%20Short%20Range%20Transit%20Plan.pdf, accessed August 8, 2017.

[22] A sharrow is a pavement marking showing a bike and chevron within the travel lane to indicate that bicyclists and vehicles share the travel lane. Sharrows are used on class III bicycle facilities, and are intended to help bicyclists position themselves better within the lane (outside the door zone) and to alert motorists that bicyclists may be present.

[23] The physical separation may be achieved through grade separation, flexible posts, inflexible physical barriers, on-street parking, or raised islands.

Figure 4.2.3: Existing Bikeway Network illustrates existing bikeways in the vicinity of the project site. Key bikeways in the project vicinity include facilities along Market Street (class II/III), Valencia Street (class II), Polk Street (class II), 11th Street (class II), Howard Street/Folsom Street (class II), and McCoppin Street and Otis Street (class I/II) connecting to the class I bike route on Mission Street between South Van Ness Avenue and 11th Street. Other nearby bikeways include facilities along 14th Street (class II/III), Harrison Street (class II), Octavia Boulevard (class III), Page Street (class III), Grove Street (class II/III), and 10th Street (class III).

Market Street and Van Ness Avenue in the vicinity of the project site are identified in the *Vision Zero High Injury Network*[24] as *high injury corridors* for bicyclists.

The closest Ford GoBike bikeshare station is at South Van Ness Avenue and Market Street on the east side of South Van Ness Avenue, immediately south of Market Street.

BICYCLE ACTIVITY

Bicycle turning movement counts collected at the study intersections in the p.m. peak period (4 p.m. to 6 p.m.) for various proposed projects in 2015 and 2016, as well counts collected in 2017 in the a.m. peak period (7 a.m. to 9 a.m.) show that at most locations, bicycle activity is on the order of 50–100 bicycles or fewer per intersection approach per hour.[25] However, activity concentrations are higher at intersections along Market Street, with as many as 500–600 bicycles per hour in the eastbound direction during the weekday a.m. peak hour and in the westbound direction during the weekday p.m. peak hour. Field observations during the weekday midmorning (10 a.m. to 11 a.m.), midday/midafternoon (12 p.m. to 2 p.m.), and p.m. peak periods (4 p.m. to 5:30 p.m.) generally corroborated these conditions.

Pedestrian Network

PEDESTRIAN FACILITIES

The project site is located within an established pedestrian network with: continuous sidewalks, curb ramps, and painted, high-visibility crosswalks at intersections. Signalized intersections in the project area generally include Americans with Disabilities Act–compliant curb ramps, marked crosswalks, and pedestrian signal heads with countdown timers in all directions, although some

[24] The City's adopted Vision Zero policy aims to eliminate all traffic-related fatalities by 2024. Additional information on Vision Zero is provided under the "Regulatory Framework."

[25] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV, p. 40.

Source: SWCA (2018), CHS Consulting Group (2017)

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FIGURE 4.2.3: EXISTING BIKEWAY NETWORK

intersection corners or legs may lack one or more of these features. In the immediate vicinity of the project site, the Mission Street/South Van Ness Avenue/Otis Street intersection and all intersections on Market Street have pedestrian countdown timers.

The project site is currently accessed via three curb cuts on South Van Ness Avenue and four curb cuts on 12th Street. Sidewalks in the project vicinity are generally 15–25 feet wide along main streets and 5–8 feet wide along alleys. The South Van Ness and Market Street sidewalks adjacent to the project site are each 20 feet wide, and the 12th Street sidewalk is 15 feet wide. Both Market Street and South Van Ness Avenue are identified in the Vision Zero High Injury Network as high injury corridors for pedestrians, indicating that pedestrian safety is a concern in the study area.

The confluence of various distinct street grids at intersections along Market Street and in the surrounding area results in several large, irregularly shaped intersections. Field observations conducted during the weekday morning, midday/midafternoon, and evening periods noted several instances of pedestrians having difficulty completing crossings at the Mission Street/South Van Ness Avenue/Otis Street intersection during the allocated pedestrian signal phase. To avoid being stranded in the middle of the street, pedestrians must cross up to six to seven traffic lanes on South Van Ness Avenue in a single phase.

Observations at the intersection of Mission Street/South Van Ness Avenue/Otis Street/12th Street also found a notable number of pedestrians crossing Otis Street outside of the designated pedestrian signal phase. Pedestrians often do not wait for the designated crossing phase because of the long signal cycle length and generally low volumes of conflicting vehicular traffic.

There are also several stop-controlled, channelized turn movements[26] in the vicinity of the project site, including the right-turn movements merging from southbound 12th Street and northbound/eastbound Mission Street onto southbound South Van Ness Avenue. Although marked crosswalks are provided at these locations, field observations identified frequent violations of pedestrian right-of-way by vehicles. A lack of adequate gaps in traffic flow along South Van Ness Avenue also resulted in occasional instances of vehicle queuing within crosswalks, requiring crossing pedestrians to weave through traffic.

PEDESTRIAN ACTIVITY

Crosswalk counts conducted for several nearby projects in 2015 and 2016 during the weekday a.m. and p.m. peak periods, in addition to a.m. and p.m. peak period counts in March 2016 collected for the 10 South Van Ness project, show that the highest-activity crossings in the

[26] Channelized turn movements are created with painted lines or physical barriers (often concrete triangular shaped) placed in the street that separate turning vehicles from the rest of the intersection's traffic and guide drivers through the turn.

immediate vicinity of the project site are at the Market Street/Van Ness Avenue/South Van Ness Avenue intersection, with 200–450 pedestrians per hour during the weekday a.m. peak hour and 300–800 pedestrians per hour during the weekday p.m. peak hour crossing each intersection leg.[27] Activity was lower at the Mission Street/South Van Ness Avenue/Otis Street/12th Street intersection, with approximately 100–250 pedestrians per hour crossing each intersection leg during each of the weekday a.m. and p.m. peak hours.

Field observations conducted during the weekday late morning, midday/midafternoon, and evening periods in February 2016 corroborated these conditions, and found the highest concentrations of pedestrian activity along South Van Ness Avenue between Market Street and Mission Street and along Market Street between 10th Street and South Van Ness Avenue. Despite some concentrated pedestrian activity at some locations, sidewalks and other pedestrian facilities were observed to operate at free-flow conditions and without substantial overcrowding.

Loading Conditions

Field observations of loading activities conducted during the weekday midday/midafternoon and evening periods (1 p.m. to 5:30 p.m.) found that the four on-street commercial loading spaces along 12th Street, three on the west side and one on the east side of the street, were generally underused. No freight/delivery vehicles were observed to be double-parked in the vicinity of the project site during these periods. The two on-street loading spaces about a block away on the north side of Otis street west of South Van Ness Avenue also were generally underused by commercial vehicles. Vehicular traffic associated with the existing automobile dealership and service center on the site is also occasionally staged on adjacent sidewalks.

Passenger loading activities in the immediate vicinity of the project site included commuter shuttles using the designated commuter shuttle stop along southbound South Van Ness Avenue at Market Street adjacent to the project site.[28] The main passenger loading activities observed were transit riders at bus stops on Market, Mission and Otis streets.

Emergency Vehicle Access

Emergency vehicle access to the project site is currently provided along most main streets in the vicinity of the project site, including Market Street, South Van Ness Avenue, and Mission Street. Access is also provided from 12th Street southbound via Market Street and northbound via a left-turn from southbound South Van Ness Avenue. The nearest San Francisco Fire Department

[27] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV, p. 36.

[28] These commuter shuttle stops were subsequently discontinued and removed in May 2016.

station is Station 36 at 109 Oak Street at Franklin Street, approximately 0.1 mile to the northwest of the project site.[29]

The closest hospital to the project site is California Pacific Medical Center's Davies Campus (Duboce Avenue at Noe Street), approximately 0.8 mile southwest of the project site. The California Pacific Medical Center Van Ness Campus (Van Ness Avenue at Geary Street, on Cathedral Hill) is currently under construction, approximately 0.8 mile north of the project site.

Automobile Parking Conditions

Field surveys of on-street parking in the study area were conducted on a typical weekday evening period between 8 p.m. and 10 p.m. The surveys were conducted in the area generally bounded by Oak Street and Market Street to the north, Mission Street/Otis Street to the south, 10th Street to the east, and Gough Street to the west.[30] As of March 2016, there were a total of 469 on-street parking spaces in this study area, generally consisting of time-limited (2-hour-limit) unmetered parking, with some areas subject to residential parking permit restrictions.[31] Some unrestricted parking, however, is permitted on Colton Street. Overall, on-street parking occupancy during the survey period was approximately 71 percent, although some concentrated areas north of Market Street were at practical capacity (85 percent occupancy or greater).

Regulatory Framework

Federal

No federal statutes or regulations related to transportation and circulation are applicable to the proposed project, the variant, or the straight-shot streetscape option.

State

Senate Bill (SB) 743 (CEQA section 21099), effective September 2013, directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Natural Resources Agency for certification and adoption, proposed revisions to the CEQA Guidelines to establish criteria for determining the significance of transportation impacts that "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." SB 743 recommended vehicle miles

[29] Other nearby San Francisco Fire Department stations include Station 5 (1301 Turk Street at Webster Street), 0.7 mile to the northwest; Station 6 (135 Sanchez Street at Henry Street), 0.8 mile to the southwest; and Station 7 (2300 Folsom Street at 19th Street), 0.8 mile to the southwest.

[30] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV, pp. 41-42.

[31] Portions of the on-street parking survey area are within Residential Parking Permit Area S. Motorists without a valid residential parking permit are restricted to a 2-hour time limit when using designated parking spaces.

traveled (measured as the amount and distance that a project might cause people to drive, including the number of passengers in a vehicle) as an appropriate metric for establishing those criteria. In addition, SB 743 stated that upon certification of the CEQA Guidelines by the California Natural Resources Agency, "automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment" pursuant to CEQA.

In January 2016, OPR published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, recommending that transportation impacts for projects be measured using a VMT metric.[32] On March 3, 2016, the San Francisco Planning Commission, by Resolution No. 19579, removed automobile delay as described by level of service or similar measure of vehicular capacity or traffic congestion and adopted VMT as the principal criterion for determining significant transportation impacts based on the evidence in the January 2016 technical advisory document from OPR, and on the City's independent review of the literature on level of service and VMT.[33, 34]

Regional

No regional regulations related to transportation and circulation are applicable to the proposed project, the variant, or the straight-shot streetscape option.

Local

The following City plans and policies are relevant in evaluating the potential transportation and circulation impacts of the proposed project, the variant, and the straight-shot streetscape option.

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[32] Governor's Office of Planning and Research, *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, Implementing Senate Bill 743 (Steinberg, 2013),* January 20, 2016, available online at http://www.opr.ca.gov/docs/Revised_VMT_CEQA_Guidelines_Proposal_January_20_2016.pdf, accessed June 26, 2018.

[33] San Francisco Planning Department, *Executive Summary: Resolution Modifying Transportation Impact Analysis*. Hearing date: March 3, 2016.

[34] On January 28, 2018, the California Natural Resources Agency published a Notice of Proposed Rulemaking to amend the CEQA Guidelines, including among other changes an amendment to add section 15064.3 determining the significance of transportation impacts using, in most cases, vehicle miles traveled. The public comment period for the proposed amendments extended through March 15, 2018. The proposed amendments to the Guidelines have not yet been adopted. See California Natural Resources Agency, Title 14, Notice of Proposed Rulemaking, Amendments and Additions to the State CEQA Guidelines, January 26, 2018, available online at http://resources.ca.gov/ceqa/docs/update2018/notice-of-proposed-rulemaking.pdf. accessed June 25, 2018.

SAN FRANCISCO TRANSIT FIRST POLICY

In 1998, San Francisco voters amended the City Charter (article 8A, section 8A.115) to include the *Transit First Policy*, which was first articulated as a City priority policy by the San Francisco Board of Supervisors in 1973. The Transit First Policy is a set of principles underscoring the City's commitment that travel by transit, by bicycle, and on foot be given priority over the private automobile. These principles are embodied in the policies and objectives of the general plan's *Transportation Element*. All City boards, commissions, and departments are legally required to implement transit first principles in conducting City affairs.

SAN FRANCISCO GENERAL PLAN TRANSPORTATION ELEMENT

The Transportation Element of the general plan includes objectives and policies that relate to the eight aspects of the citywide transportation system: General Regional Transportation, Congestion Management, Vehicle Circulation, Transit, Pedestrian, Bicycles, Citywide Parking, and Goods Management.[35] The element references San Francisco's Transit First Policy in its introduction, and contains objectives and policies that are directly pertinent to consideration of the project. Relevant objectives relate to locating development near transit investments; encouraging transit use; and timing traffic signals to emphasize transit, pedestrian, and bicycle traffic as part of a balanced multimodal transportation system. The general plan also emphasizes alternative transportation through positioning building entrances, improving the pedestrian environment, and providing safe bicycle parking facilities.

SAN FRANCISCO BICYCLE PLAN

The San Francisco Bicycle Plan,[36] approved by the board of supervisors in 1999 and updated in 2009, describes a City program to provide the safe and attractive environment needed to promote bicycling as a transportation mode. The bicycle plan identifies the citywide bicycle route network and establishes the level of treatment (i.e., class I, class II, class III, or class IV facility) for each route. The plan also identifies near-term improvements to be implemented within the 5 years of adoption of the bicycle plan, as well as policy goals, objectives, and actions to support these improvements. Most near-term improvement projects have been implemented. The bicycle plan also includes minor improvements and long-term improvements that would be implemented to facilitate bicycling in San Francisco.

[35] City and County of San Francisco, *San Francisco General Plan*, Transportation Element, amendments by Board of Supervisors Ordinance 101193 adopted on December 7, 2010.
[36] San Francisco Municipal Transportation Agency, *San Francisco Bicycle Plan,* June 26, 2009.

SAN FRANCISCO BETTER STREETS PLAN

The San Francisco Better Streets Plan[37] focuses on creating a positive pedestrian environment through measures such as careful streetscape design and *traffic calming* measures to increase pedestrian safety. The plan includes guidelines for the *pedestrian environment*, which it defines as the areas of the street where people walk, sit, shop, play, or interact. Generally speaking, the guidelines are for design of sidewalks and crosswalks; however, in some cases, the better streets plan includes guidelines for certain areas of the roadway, such as intersections.

VISION ZERO

Vision Zero is a policy adopted by both the San Francisco Board of Supervisors and SFMTA in 2014 to eliminate traffic deaths in the city by 2024. The goal of Vision Zero is also to reduce inequities in severe injuries across neighborhoods, transportation modes, and populations. Implementation of this policy has particularly focused on pedestrians and bicyclists, who are generally the most vulnerable roadway users. Example improvements include pavement markings (e.g., crosswalk striping, intersection "*daylighting*" using red zones); signal timing/phasing changes; sidewalk/curb extensions (e.g., *corner bulbs*); *road diets* (reducing the number of vehicular travel lanes or the amount of road space devoted to vehicular traffic); street conversions from one-way to two-way traffic; and bikeway facilities (e.g., bicycle lanes, cycle tracks).

CLIMATE ACTION PLAN

In response to scientific evidence suggesting that human behavior is accelerating climate change, the City adopted a *climate action plan* addressing actions it could take to reduce San Francisco's contribution to climate change. The Climate Action Plan for San Francisco[38] describes the potential effects of climate change on San Francisco based on scientific research and presents an inventory of San Francisco's contribution to greenhouse gas emissions, the leading human contributor toward accelerating climate change. The plan also recommends a greenhouse gas emissions reduction target and describes specific measures that the City could take to reach its target, including recommendations for reducing trips by automobile.

TRANSPORTATION SUSTAINABILITY PROGRAM

The Transportation Sustainability Program is an initiative aimed at improving and expanding the transportation system to help accommodate new growth. The program seeks to create a policy framework in which private development contributes to minimizing its impacts on the transportation system, including by helping to pay for the system's enhancement and expansion.

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[37] San Francisco Planning Department, *San Francisco Better Streets Plan,* adopted by the Mayor and Board of Supervisors in December 2010.

[38] San Francisco Department of the Environment and San Francisco Public Utilities Commission, *Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Gas Emissions,* September 2004.

The Transportation Sustainability Program is a joint effort by the Mayor's Office, the San Francisco Planning Department, SFMTA, and the San Francisco County Transportation Authority, and consists of the following three objectives:

- **Fund Transportation Improvements to Support Growth.** The transportation sustainability fee is assessed on new development, including residential development, to help fund improvements to transit capacity and reliability as well as bicycle and pedestrian improvements. This fee was passed by the board of supervisors and signed into law by the mayor on November 25, 2015 (Board of Supervisors File No. 150790).[39]
- **Modernize Environmental Review.** The planning department prepared proposed revisions to its guidelines for transportation-related environmental review in accordance with SB 743 and CEQA section 21099. These revisions followed OPR's recommendations in its *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*, and proposed replacing automobile delay and level of service with the VMT metric[40] when evaluating the transportation impacts of projects. On March 3, 2016, in anticipation of future certification by the California Natural Resources Agency of OPR's revised CEQA Guidelines, the San Francisco Planning Commission adopted the proposed revisions as part of Resolution 19579.
- **Encourage Sustainable Travel.** This component of the Transportation Sustainability Program would help manage demand on the transportation network through a transportation demand management program, reducing VMT from new development and making it easier for new residents, tenants, employees, and visitors of these developments to get around by sustainable travel modes such as transit, walking, and biking. Amendments to the San Francisco Planning Code (planning code) to implement the transportation demand management program, along with program standards, were approved by the San Francisco Planning Commission on August 4, 2016 (Resolutions 19715 and 19716). The Transportation Demand Management Program Standards were updated on January 17, 2017 (Resolution 19838), and the planning code amendments were adopted by the board of supervisors on February 7, 2017 (Ordinance 34-17).

MARKET & OCTAVIA AREA PLAN

The Market & Octavia Area Plan is an area plan within the San Francisco General Plan that covers portions of Hayes Valley, the Western Addition, Duboce Triangle, Upper Market/Castro, and surrounding blocks. The area plan's primary objectives are to enhance the neighborhood as a mixed-use urban neighborhood, strengthen its physical fabric and character, provide for development of infill construction throughout the plan area, preserve existing housing stock, and promote the preservation of historic buildings. The plan's transportation-related objectives include improving public transit's reliability, attractiveness, convenience, and responsiveness to increasing demand; developing and implementing parking policies that encourage public transit

[39] Two additional files were created at the board of supervisors regarding the transportation sustainability fee and considerations for hospitals and health services, grandfathering, and additional fees for large projects: File No. 151121 and File No. 151257.

[40] The VMT metric does not apply to the analysis of impacts on nonautomobile modes of travel such as riding transit, walking, and bicycling.

and other alternatives to private automobiles and reduce traffic congestion; eliminating or reducing the effects of parking on neighborhood character and quality; managing parking resources to maximize service and accessibility to all; establishing a safe and attractive bikeway network for local and citywide travel; and improving vehicular circulation.

Impacts and Mitigation Measures

Significance Thresholds

The significance thresholds listed below are organized by mode to facilitate the transportation impact analysis; however, the transportation significance thresholds are essentially the same as the ones in the environmental checklist in Appendix G of the CEQA Guidelines, modified to address the changes being implemented as a result of SB 743 and San Francisco Planning Commission Resolution 19579. The applicable thresholds used to determine whether implementing the proposed project, the variant, or the straight-shot streetscape option would result in a significant impact on transportation and circulation are described below.

For the purpose of this analysis, the following significance criteria were used to determine whether implementing the project would result in a significant impact on transportation and circulation. Implementation of the project would have a significant effect on transportation and circulation if the project would:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- 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 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, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

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

following criteria were used to determine whether implementing the proposed project or variant would result in a significant impact on transportation and circulation:

- **Vehicle Miles Traveled**
  - The project would have a significant effect on the environment if it would cause substantial additional VMT
  - The project would have a significant effect on the environment if it would substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow travel lanes) or by adding new roadways to the network
- **Traffic Hazards –** The project would have a significant adverse impact on the environment if it would cause major traffic hazards.
- **Transit**
  - The project would have a significant effect on the environment if it would cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity, resulting in unacceptable levels of transit service
  - The project would have a significant effect on the environment if it would cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels could result
- **Pedestrians –** The project would have a significant effect on the environment if it would result in substantial overcrowding on public sidewalks, create potentially hazardous conditions for pedestrians, or otherwise interfere with pedestrian accessibility to the site and adjoining areas.
- **Bicycles** – The project would have a significant effect on the environment if it would create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site and adjoining areas.
- **Loading**
  - The project would have a significant effect on the environment if it would result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed onsite loading facilities or convenient on-street loading zones
  - The project would have a significant effect on the environment if it would create potentially hazardous conditions affecting traffic, transit, bicycles, or pedestrians or significant delays affecting transit
- **Emergency Access –** The project would have a significant effect on the environment if it would result in inadequate emergency access.
- **Construction –** The project would have a significant effect on the environment if, in consideration of the project site location and other relevant project characteristics, the duration and magnitude of temporary construction activities would result in substantial

interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in potentially hazardous conditions.

- **Automobile Parking –** As explained in the "Approach to Analysis" section below, the EIR does not consider the adequacy of the parking supply in determining the significance of impacts of the proposed project. Because parking conditions may be of interest to some members of the public and decision-makers, a parking demand analysis is presented for informational purposes.

Approach to Analysis

This section presents the methodology for analyzing transportation impacts and the approach to developing travel demand forecasts for the proposed project. The analysis of the project was conducted for existing plus project conditions and 2040 cumulative conditions. The "existing plus project" conditions assess the near-term impacts of the proposed project or variant, while the "2040 cumulative" conditions assess the long-term impacts of the proposed project or variant in combination with growth forecast to occur by the year 2040 using the San Francisco Chained Activity Model Process (SF-CHAMP) that accounts for reasonably foreseeable future development. Additionally, for the cumulative analysis, some street and transit improvements near or adjacent to the project site, were also accounted for, as discussed further below under "Cumulative Impacts," pp. 4.3.53–4.3.56. The year 2040 was selected because it is the latest year that travel demand forecasts are available from the San Francisco Transportation Authority's SF-CHAMP model.

The straight-shot streetscape options for both the proposed project and the variant are discussed only where the differences in loading, passenger drop-off, and pedestrian facilities would affect the analysis. The options retain essentially the same vehicular access with one 11-foot-wide travel lane in each direction but a different driveway location for the proposed project and the variant. Therefore, the two options are discussed in the topics of induced automobile travel from transportation improvements (in the discussion of VMT impacts), traffic hazards, bicycles, pedestrians, loading, and emergency access.

ANALYSIS METHODOLOGY

The project's impacts on the surrounding roadways were analyzed using the guidelines set forth in the SF Guidelines and in San Francisco Planning Commission Resolution 19579 and supporting materials, which provide direction for analyzing transportation conditions and identifying the transportation impacts of a proposed project in San Francisco.

As discussed in Section 4, Chapter Introduction, pp. 4.0.2-4.0.3, and above in the "Regulatory Framework" subsection, pp. 4.2.22–4.2.23, Senate Bill 743 amended CEQA by adding Public Resources Code section 21099(d) eliminating the analysis of parking impacts for certain urban infill projects in transit priority areas. Accordingly, parking is no longer to be considered in

determining if a project has the potential to result in significant environmental effects for projects that meet all three criteria established in the statute. The proposed project and variant meet all of the criteria, and thus the transportation impact analysis does not consider the adequacy of parking in determining the significance of project impacts under CEQA. However, the planning department acknowledges that parking conditions may be of interest to the public and the decision-makers. Therefore, this EIR presents a parking demand analysis for informational purposes at the end of this section and considers any secondary physical impacts associated with constrained supply if the project results in a substantial parking deficit (e.g., queuing by drivers waiting for on-site parking spaces that affects the public right-of-way) as applicable in the following transportation impact analysis.

Vehicle Miles Traveled

The following identifies thresholds of significance and screening criteria used to determine whether a land use project would result in significant impacts under the VMT metric:

- For residential projects, a project would generate substantial additional VMT if it would exceed the average daily regional household VMT per capita minus 15 percent.[41,42]
- For retail projects, the San Francisco Planning Department uses a VMT efficiency metric approach. A retail project would generate substantial additional VMT if it would exceed the average daily regional VMT per retail employee minus 15 percent. This approach is consistent with CEQA section 21099 and the thresholds of significance for other land uses recommended in OPR's proposed transportation impact guidelines.
- For mixed-use projects, each proposed land use is evaluated independently, in accordance with the significance thresholds described above.

OPR's proposed transportation impact guidelines provide screening criteria to identify the types, characteristics, or locations of land use projects that would not exceed these VMT thresholds of significance. OPR states that if a project or land use proposed as part of the project meets either of the screening criteria listed below, then VMT impacts are presumed to be less than significant for that land use and a detailed VMT analysis is not required:

- **Map-Based Screening for Residential, Office, and Retail Projects.** OPR recommends mapping areas where VMT is less than the applicable threshold for that land use. Accordingly, the San Francisco County Transportation Authority has developed maps depicting existing VMT levels in San Francisco for residential, office, and retail land uses

[41] OPR's proposed transportation impact guidelines state that a project would cause substantial additional VMT if it would exceed both the existing city household VMT per capita minus 15 percent and the existing regional household VMT per capita minus 15 percent. In San Francisco, the city's average VMT per capita is lower (8.4) than the regional average (17.2). Therefore, the city average is irrelevant for the purposes of the analysis.

[42] As documented in OPR's proposed transportation impact guidelines, a 15 percent threshold below existing development is "both reasonably ambitious and generally achievable."

based on the SF-CHAMP 2012 base-year model run. The San Francisco Planning Department uses these maps and associated data to determine whether a proposed project is located in an area of the city that is below the VMT threshold.

- **Proximity to Transit Stations.** OPR recommends that residential, retail, and office projects, as well as projects that are a mix of these uses, proposed within ½ mile of an existing major transit stop (as defined by CEQA section 21064.3) or an existing stop along a high-quality transit corridor (as defined by CEQA section 21155) would not result in a substantial increase in VMT.[43]

Induced Automobile Travel

The following identifies the thresholds of significance and screening criteria used to determine whether transportation projects would result in significant impacts by inducing substantial additional automobile travel.

According to OPR's proposed transportation impact guidelines, a transportation project would substantially induce automobile travel if it would generate more than 2,075,220 VMT per year. This threshold is based on the fair-share VMT allocated to transportation projects required to achieve California's long-term greenhouse gas emissions reduction goal of 40 percent below 1990 levels by 2030.

OPR's proposed transportation impact guidelines (and the planning department's most recent guidelines) list the types of transportation projects that would not likely lead to a substantial or measurable increase in VMT. If a project fits within the general types of projects (including combinations of types) described below, then it is presumed that VMT impacts would be less than significant and a detailed VMT analysis is not required:

- Active Transportation, Rightsizing (aka Road Diet), and Transit Projects:
  - Infrastructure projects, including safety and accessibility improvements, for people walking or bicycling
  - Creation of new or addition of roadway capacity on local or collector streets, provided the project also substantially improves conditions for people walking, bicycling, and, if applicable, riding transit (e.g., by improving neighborhood connectivity or improving safety)

[43] The presumption of less-than-significant VMT impacts under the Proximity to Transit Stations screening criterion would not apply if the project would have a floor area ratio of less than 0.75; provide more parking available for use by residents, customers, or employees of the project than required or allowed, without a conditional use authorization; or be inconsistent with the applicable sustainable communities strategy (i.e., would be located outside of areas that the strategy contemplates for development).

- Other Minor Transportation Projects:
  - Rehabilitation, maintenance, replacement, and repair projects that are designed to improve the condition of existing transportation assets[44] and do not add additional motor vehicle capacity
  - Installation, removal, or reconfiguration of traffic lanes that are not for through traffic[45]
  - Installation, removal, or reconfiguration of traffic control devices, including transit signal priority features
  - Removal of off- or on-street parking spaces
  - Adoption, removal, or modification of on-street parking or loading restrictions[46]

Transit

For the transit capacity analysis, the impact on local and regional transit providers from additional transit ridership generated by the proposed project or the variant during the weekday a.m. and p.m. peak hours was assessed by comparing projected ridership to available transit capacity. The analysis considered both Muni's downtown screenlines, and the regional transit screenlines.

A qualitative analysis of transit operations was also conducted to assess the impacts of the proposed project, variant, or straight-shot streetscape option on delays to and operating costs for transit service.

Bicycles

Similar to the existing conditions discussion under "Bikeway Network" on pp. 4.2.17–4.2.18 in Environmental Setting, the effect of the proposed project or variant on bicycle conditions in the project vicinity, including bicycle routes, safety and right-of-way issues, and conflicts with traffic, was assessed qualitatively.

Pedestrians

Similar to the existing conditions discussion under "Pedestrian Network" on pp. 4.2.18–4.2.20 in Environmental Setting, the effect of the proposed project, variant, or straight-shot streetscape options on pedestrian safety and hazards (e.g., potential conflicts with traffic) and on crowding in pedestrian facilities (e.g., the adjacent sidewalks) was evaluated qualitatively.

[44] Examples include highways, roadways, bridges, culverts, tunnels, transit systems, and bicycle and pedestrian facilities.
[45] Examples include left-, right-, and U-turn pockets, or emergency breakdown lanes that are not used as through lanes.
[46] Examples include parking meters, time limits, accessible spaces, and preferential/reserved parking permit programs.

Loading

Loading was analyzed by comparing the supply of on- and off-street loading accommodations to the projected loading demand and qualitatively evaluating whether the proposed project, variant, or straight-shot streetscape option could create hazardous conditions affecting traffic, transit, bicycles, or pedestrians or significant delays affecting transit if the projected loading demand is not met by the loading supply.

Emergency Vehicle Access

Potential effects on emergency vehicle access were assessed qualitatively.

Construction

Construction impacts were assessed qualitatively, based on the staging and duration of construction activity, estimated daily numbers of trucks and workers, and temporary street lane and/or sidewalk closures that may be required..

PROJECT TRAVEL DEMAND

Project travel demand refers to the new vehicular (including service and delivery vehicle), transit, bicycle, and pedestrian traffic that would be generated by the project. The project's estimated travel demand and freight loading/service vehicle demand are based primarily on the methodology and information presented in the SF Guidelines, supplemented by trip rates and other information published by the Institute of Transportation Engineers in *Trip Generation* (9th edition).

Although there is an existing, active use at the project site (an automobile dealership that formerly included a service center) that would be demolished with the project, trip credits for these uses were not taken, and the travel demand calculations should be considered conservative.

Trip Generation

Table 4.2.5: Trip Generation by Mode and Land Use (Proposed Project) summarizes the estimated trip generation of the proposed project. Overall, the proposed project would generate approximately 12,300 person-trips on an average weekday, including approximately 1,300 person-trips during the weekday a.m. peak hour and 1,750 person-trips during the weekday p.m. peak hour.

Table 4.2.5: Trip Generation by Mode and Land Use (Proposed Project)

Land Use	Week-day Daily Person-Trips	Weekday A.M. Peak Hour						Weekday P.M. Peak Hour					
		Person-Trips					Vehicle-Trips	Person-Trips					Vehicle-Trips
		Auto	Transit	Walk	Other	Total		Auto	Transit	Walk	Other	Total	
Residential	7,750	339	458	178	218	1,193	336	380	515	201	245	1,341	378
Retail	4,553	31	19	48	13	111	18	117	70	177	47	410	67
Total	**12,303**	**370**	**477**	**226**	**231**	**1,304**	**354**	**497**	**585**	**377**	**292**	**1,750**	**445**

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study*, December 2017, Case No. 2015-004568ENV.

The variant's land uses would be the same as those in the proposed project, but with approximately 100 additional gross square feet of retail use and a slightly different mix of studio, one-bedroom, two-bedroom and three-bedroom dwelling units (the total number of units would remain the same). These differences, however, would result in a negligible increase in the overall travel demand for the variant, which would be similar to that of the proposed project. During the weekday p.m. peak hour, for example, the variant would result in five more vehicle-trips, six more transit person-trips, three more walk person-trips, and three more bicycle person-trips than the proposed project.[47]

Freight Loading/Service Vehicle Demand

Table 4.2.6: Freight Loading/Service Vehicle Demand (Proposed Project) summarizes the estimated freight loading/service vehicle demand of the proposed project. Overall, the proposed project would generate approximately 35 truck trips on an average weekday, including one to two trips during the average loading hour and two trips during the peak loading hour.[48]

Table 4.2.6: Freight Loading/Service Vehicle Demand (Proposed Project)

Land Use	Daily Truck Trips	Freight Loading/Service Vehicle Demand (spaces)	
		Average Hour	Peak Hour
Residential	28.1	1.3	1.6
Retail	6.7	0.3	0.4
Total	*34.8*	*1.6*	*2.0*

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV.

[47] CHS Consulting Group, *10 South Van Ness Avenue Single-Tower Project Variant - Final Memorandum,* December 21, 2017, Case No. 2015-004568ENV.

[48] The peak loading hour is the hour with the greatest number of freight and service vehicles typically during the period between 10 a.m. and 1 p.m. The average hour is the total daily freight/service vehicle demand based on a 9-hour delivery day assuming a 25-minute stay per delivery.

As discussed previously, the variant would be similar to the proposed project with the same number of residential units and 100 gross square feet more commercial retail space. The minor differences from the proposed project would not change the estimated freight loading/service vehicle demand.[49]

Project Features

The proposed project or variant would demolish the existing building on the project site and construct a mixed-use development that would include residential, commercial, parking, and open space uses. A complete project description is included in Chapter 2, Project Description. This section includes a description of project features that are pertinent to transportation and circulation. Proposed project and variant common features are described in tandem while other features are discussed separately. The differences between the proposed project and the variant and their straight-shot streetscape options are discussed in relation to induced automobile traffic, potential traffic hazards, pedestrian travel and passenger and freight loading, as only on-street loading and passenger drop-off/pickup areas, the presence or absence of on-street parking, and the width of sidewalks along 12th Street would change with these options.

PROPOSED PROJECT

Under the proposed project, the existing building on the project site would be demolished and two podiums would be constructed, with one tower above each podium. The buildings would have a maximum height of approximately 400 feet above the ground (420 feet total, including roof screens and the stair/elevator penthouse on each tower) and would have 20-foot-tall parapets. The podium portion would be approximately 120 feet tall. A pedestrian passageway/bridge would connect the two podiums at Level 2.

The project site currently has seven curb cuts, three of which are along South Van Ness Avenue and four of which are on 12th Street. The proposed project would remove all of the existing curb cuts on South Van Ness Avenue, and 12th Street. A new curb cut would be installed along 12th Street to provide vehicle access to the two-level, below-grade parking garage and loading dock for both retail and residential users.

In addition to stairs, two elevators would provide access to the residential lobbies from the parking garage/basement. From the residential lobbies, another pair of elevators would provide access to each tower. Elevator access may also be available between the below-grade parking garage/basement and the ground-floor retail space. Two street-level residential entrances, one for each tower, would be located along South Van Ness Avenue. Access to the retail spaces would be from South Van Ness Avenue, Market Street, 12th Street, and a proposed mid-block alley

[49] CHS Consulting Group, *10 South Van Ness Avenue Single-Tower Project Variant – Final Memorandum,* December 21, 2017, p. 6.

between the two podiums. The proposed mid-block alley would also provide public access through the project site between South Van Ness Avenue and 12th Street.

PROPOSED VARIANT

Under the variant, the existing building would be demolished and a single podium would be constructed, with a single tower above. The tower would be 590 feet tall. Like the proposed project, the variant would include a stair/elevator penthouse that would extend up to 20 feet above the roof height. The podium portion of the building would be approximately 164 feet tall at its tallest point.

The variant would include the same general circulation and access as the proposed project, with the exception of the location of lobby entrances and the configuration of the mid-block alley. For the variant, there would be two entrances to the single residential lobby provided, one from the mid-block alley and one from South Van Ness Avenue. The proposed mid-block alley would provide public access through the project site between Market Street and 12th Street.

PROPOSED PROJECT AND VARIANT COMMON ELEMENTS

Land Uses

Both the proposed project and variant would have the same total of 984 residential units, although the mix of studio, 1-bedroom, 2-bedroom and 3-bedroom units would be slightly different. There would be approximately the same amount of ground floor commercial retail space, with the variant having about 100 additional total square feet compared to the proposed project. Both the proposed project and variant would provide vehicular access to the basement parking and loading areas on 12th Street south of the intersection with Stevenson Street, although the access for the variant would be closer to the 12th Street/South Van Ness Avenue intersection. A mid-block alley would be provided, in different locations: the proposed project's mid-block alley would extend between South Van Ness Avenue and 12th Street at approximately the intersection of Steven Street and would relate to the separate podiums and towers; the variant's mid-block alley would connect Market Street to 12th Street just north of the intersection with Stevenson Street.

Vehicle and Bicycle Parking, TDM Plan

The proposed project and the variant would each include 518 vehicle parking spaces, in two basement levels. Ingress and egress to the secured garage/basement would be provided through a single curb cut on 12th Street. In addition, a total of seven off-street freight-loading spaces would be located in the two basement levels, three of which would be standard freight-loading spaces, and four of which would be service vehicle spaces. One freight-loading space would accommodate up to one 45-foot-long vehicle. On the ground floor of the podium, 336 class I bicycle parking spaces would be provided: 332 for residential use and 4 for retail use. On-street

bicycle parking would include 61 class II bicycle parking spaces: 49 for residential use and 12 for retail use located in the public rights of way surrounding the project site.

The proposed project's Transportation Demand Management Plan, described on pp. 2.22-2.25 in Chapter 2, Project Description, would be the same for the variant.

Streetscape Improvements

The proposed project and variant would each include the following improvements, shown in Figure 2.14: Proposed Project-Market Octavia Streetscape Plan and 12th Street Section on p. 2.26 in Chapter 2, Project Description:

- The eastern and western sidewalks along 12th Street would be expanded from 15 feet to a width of 21 feet (4 feet of frontage, 8 feet of pedestrian throughway, and 9 feet of pedestrian furnishing space).
- Eight-foot-wide bulb-outs would be installed at the intersection of 12th and Market streets.
- A raised crosswalk would be installed at the intersection of 12th and Stevenson streets.
- The "pedestrian island" at the intersection of 12th Street and South Van Ness Avenue would be removed and replaced by bulb-outs on both sides of 12th Street and a pedestrian plaza on the southwest side of the intersection.
- Two 60-foot-long white and yellow loading zones are proposed along the South Van Ness Avenue frontage, near the entrances to the residential lobbies, to provide an area for passenger drop-off and pick up, and commercial loading activities.
- Four passenger and commercial loading zones are proposed on 12th Street, one 100-foot-long loading zone and one 40-foot-long loading zone on each side of 12th Street. Each 100-foot loading zone would include one ADA passenger loading space, one ADA parking space, one passenger loading space, one commercial loading space, and one regular parking space. Each 40-foot loading zone would include one passenger loading space and one commercial loading space.
- 33 net new street trees and class II bicycle racks with capacity for 61 bicycles along South Van Ness Avenue, Market Street, and 12th Street, in compliance with the City's Better Streets Plan would be installed.

PROPOSED PROJECT AND VARIANT MAIN DIFFERENCES

The proposed project towers would be shorter than the single tower proposed with the variant, and the overall tower design would be different (see Chapter 2, Project Description, Figure 2.10: Proposed Project – Building Elevation South Van Ness Avenue (East) Façade and Figure 2.11: Proposed Project – Building Elevation Market Street (North) Façade, pp. 2.19 and 2.20, showing elevations of the proposed project, and Figure 2.20: Variant – Building Elevations Along 12th Street, Market Street, and South Van Ness Avenue, p. 2.39, showing elevations of the variant).

Lobby entrances for the proposed project would be from South Van Ness Avenue for each residential tower. The variant would have two entrances to the single residential tower, from South Van Ness Avenue and from the mid-block alley that would extend between Market and 12th streets. The proposed project and variant would have a similar amount of total open space, but the variant would have larger total amount of publicly accessible open space and the proposed project would have a larger amount of common open space accessible to residents.

Straight-Shot Streetscape Options

- The straight-shot streetscape options could be implemented with either the proposed project or the variant in lieu of the base streetscape design, which is based on the Market & Octavia Area Plan and general design standards from the San Francisco Planning Department. The straight-shot streetscape options involve differences in design from the proposed streetscape changes, but no changes in land use.
- The straight-shot streetscape options both involve creating a 40-foot-wide sidewalk on the east side of 12th Street, and providing for a shared street with two 11-foot travel lanes with sharrows indicating sharing with bicyclists. The proposed project's option is shown in Figure 2.25: Straight-Shot Streetscape Option for the Proposed Project (12th Street Right-of-Way and Section in Chapter 2, p. 2.47. It would have three yellow loading zones, one less than the four yellow zones in the proposed project's 12th Street improvements; three white passenger loading zones, also one less than the proposed project; no on-street parking spaces, unlike the two regular and two ADA-compliant on-street parking spaces in the proposed project's street improvements; and the same number of ADA passenger loading areas (two). The straight-shot streetscape option for the variant is shown in Figure 2.26: Straight-Shot Streetscape Option for the Variant (12th Street Right-of-Way and Section, p. 2.48; it would have one less yellow loading zone, one less white passenger loading zone, and one less ADA-compliant passenger loading zone than the proposed project's option, a further reduction from the proposed project and variant's streetscape improvements planned for 12th Street.

Impact Analysis

As described previously under "Travel Demand," the differences in travel demand between the proposed project and the variant would be negligible. Therefore, most of the impacts of the variant would be similar to those of the proposed project.

VEHICLE MILES TRAVELED IMPACTS

Impact TR-1: The proposed project, the variant, or the straight-shot streetscape option would not cause substantial additional VMT or substantially induce automobile travel. (*Less than Significant*)

Additional Vehicle Miles Traveled

As discussed above in "Analysis Methodology," Vehicle Miles Traveled, on pp. 4.2.30–4.2.31, for development projects in San Francisco a project would result in a significant impact related to additional VMT if it would exceed the regional VMT per capita or per employee for a particular land use minus 15 percent. **Table 4.2.7: Average Daily Vehicle Miles Traveled per Capita – Existing Conditions** summarizes the average daily VMT per capita for residential and retail uses for the TAZ containing the project site (TAZ 578) and the Bay Area (regional average) obtained from the SF CHAMP model under existing conditions.

Table 4.2.7: Average Daily Vehicle Miles Traveled per Capita—Existing Conditions

	Average Daily VMT per Capita		
	San Francisco Bay Area		
Land Use	Regional Average	Regional Average minus 15%	TAZ 578
Residential (per resident)	17.2	14.6	3.7
Retail (per employee)	14.9	12.6	8.9

Notes: TAZ = transportation analysis zone; VMT = vehicle miles traveled

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No 2015-004568ENV.

As shown, for both residential and retail land uses, the existing average daily VMT per capita for TAZ 578 is less than the corresponding Bay Area regional averages minus 15 percent:

- **Residential uses:** Existing average daily household VMT per capita for TAZ 578 is 3.7, which is 78 percent less than the existing regional average daily household VMT per capita of 17.2.[50]

- **Retail uses:** Existing average daily work-related VMT per employee for TAZ 578 is 8.9, which is 40 percent less than the existing regional average daily work-related VMT per employee of 14.9.

The project or variant would generate substantial additional VMT (thus resulting in a significant VMT impact) if it would exceed the corresponding average daily regional VMT per capita minus 15 percent. The data in Table 4.2.7 show that the project site is in an area (TAZ 578) where existing VMT per capita for the proposed uses is less than the corresponding existing regional

[50] Includes the VMT generated by the households in the development.

average per capita minus 15 percent. In addition, the project would meet the screening criterion for proximity to transit stations, further indicating that the project would not cause substantial additional VMT.[51]

For these reasons, the project or variant would not result in substantial additional VMT, and this impact would be less than significant. No mitigation is necessary.

Induced Automobile Travel

A project would have a significant effect on the environment if it would substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network. OPR's proposed transportation impact guidelines list the types of transportation projects that would not likely lead to a substantial or measurable increase in VMT. If a project fits within those general project types (including combinations of types), then it is presumed that VMT impacts would be less than significant, and a detailed VMT analysis is not required.

The proposed project or variant is not a transportation project but would include features that would alter the transportation network either with the streetscape improvements in the proposed project or variant or with the straight-shot streetscape options for 12th Street. These features would include improvements to active transportation modes, such as sidewalk widening and class II bicycle parking. They would also include other minor transportation changes, such as removal and reconfiguration of on-street parking; establishment of new on-street commercial and passenger loading zones; removal of multiple existing curb cuts and installation of one new curb cut for vehicular and freight loading access; and installation, removal, or reconfiguration of traffic lanes not used as through lanes. These changes to the transportation network fit within the general types of projects that would not substantially induce automobile travel. Further, the project would not increase the physical roadway capacity of the surrounding street network or construct new roadways. Therefore, impacts related to induced automobile travel would be less than significant. No mitigation is necessary

TRAFFIC HAZARD IMPACTS

Impact TR-2: The proposed project, the variant, or the straight-shot streetscape option would not cause major traffic hazards. (*Less than Significant*)

Vehicular access to existing uses at the project site is provided via three curb cuts on South Van Ness Avenue and four curb cuts on 12th Street. The project or variant would remove all seven existing curb cuts and replace them with one 24-foot-wide curb cut on 12th Street that would provide access to a single driveway. This change would substantially reduce the number of

[51] San Francisco Planning Department, *Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis, 10 South Van Ness Avenue,* Case No. 2015-004568ENV, 2017.

locations where conflicts between vehicles accessing driveways and vehicles (including transit vehicles) on local roadways; bicyclists; and pedestrians along the frontages of the project site.

In addition, both the proposed streetscape design and the straight-shot streetscape options would include streetscape treatments to reduce vehicle speeds and provide adequate lines of sight at the proposed driveway and curb cut. These changes would be designed according to applicable engineering and roadway safety standards established by the City and other recognized organizations (e.g., National Association of City Transportation Officials). Therefore, project impacts related to traffic hazards would be less than significant.

The San Francisco Planning Department's standard conditions of approval regarding queue abatement would also apply to the project. Implementing these conditions of approval (Improvement Measure I-TR-2a) together with active garage driveway controls and curbside management (Improvement Measure I-TR-2b) would further reduce the less-than-significant traffic safety impacts of vehicle queuing at the project driveway and curb cut and other project impacts related to traffic safety.

Improvement Measure I-TR-2a: Monitoring and Abatement of Queues

The owner/operator of any off-street parking facility with more than 20 parking spaces (excluding loading and car-share spaces) will be responsible for ensuring that recurring vehicle queues do not occur on the public right-of-way. A recurring vehicle queue is defined as one or more vehicles (destined for the parking facility) blocking any portion of any public street, alley, or sidewalk for 3 consecutive minutes or longer on a daily or weekly basis.

If a recurring vehicle queue occurs, the owner/operator of the parking facility will employ methods as needed to abate the queue. Appropriate abatement methods will vary depending on the characteristics and causes of the recurring queue, and the characteristics of the parking facility, the street(s) to which the facility connects, and the associated land uses (if applicable).

Suggested abatement methods include but are not limited to the following:

- Redesigning the facility to improve vehicular circulation and/or onsite queue capacity
- Employing parking attendants
- Installing "LOT FULL" signs with active management by parking attendants
- Using valet parking or other space-efficient parking techniques
- Using offsite parking facilities or shared parking with nearby uses
- Using parking occupancy sensors and signage to direct drivers to available spaces
- Employing travel demand management strategies such as additional bicycle parking, customer shuttles, or delivery services

- Implementing parking demand management strategies such as parking time limits, paid parking, time-of-day parking surcharge, or validated parking

If the planning director, or his or her designee, suspects that a recurring queue is present, the planning department will notify the property owner in writing. Upon request, the owner/operator will hire a qualified transportation consultant to evaluate site conditions for no less than seven days. The consultant will prepare a monitoring report to be submitted to the planning department for review. If the planning department determines that a recurring queue does exist, the facility owner/operator will have 90 days from the date of the written determination to abate the queue.

Improvement Measure I-TR-2b: Active Garage Driveway Controls and Curbside Management

The project sponsor/property owner will install active parking management controls at the project site at the driveway of the off-street parking garage, within the off-street garage area, and at the curbside loading zones on the east side of 12th Street. The goals of this measure will be to reduce the potential for queuing of project-related vehicular traffic along 12th Street; reduce and/or eliminate potential conflicts between vehicles entering and exiting the site driveway and other roadway users along 12th Street (e.g., motorists, cyclists, pedestrians); and reduce potential conflicts between large delivery vehicles using the curbside loading zones on the east side of 12th Street and other roadway users.

Sensors will be installed at the gated parking garage's ramp and at the driveway entrance/exit lane at 12th Street to detect any outbound vehicles on the driveway and in the ramp area. Vehicles traveling up the garage ramp and approaching the exit gate would then trigger a sensor that would activate an electronic sign, signal, or audible devices at the driveway entrance to warn any vehicles, pedestrians, or bicyclists of the presence of the exiting vehicle.

Large delivery and move-in/move-out vehicles will be required to coordinate and schedule use of the curbside loading spaces on the east side of 12th Street through building management and SFMTA's 311 reservation system.

Additional traffic calming and safety treatments will be installed in the parking driveway area. Specifically, signage will be installed to advise drivers exiting the parking driveway to slow, stop, and yield to any pedestrians in the sidewalk on 12th Street (e.g., "Caution: Pedestrians Crossing," "Watch for Pedestrians," "Exit Slowly," "STOP"). Diagonal mirrors will be installed so that motorists exiting the parking garage and pedestrians in the sidewalk can see each other. The project sponsor will also install rumble strips or similar devices to maintain slow speeds for vehicles exiting the parking garage.

TRANSIT IMPACTS

Impact TR-3: The proposed project or variant would not cause a substantial increase in transit demand that could not be accommodated by adjacent transit capacity such that unacceptable levels of transit service could result, nor would they cause a substantial increase in delays or operating costs such that significant adverse impacts in transit service levels would result. (*Less than Significant*)

TRANSIT CAPACITY

Local Transit

As reported in Table 4.2.5 above, the project would generate approximately 477 transit person-trips during the weekday a.m. peak hour and 585 transit person-trips during the weekday p.m. peak hour. The proposed project or variant would generate more transit trips during the p.m. peak hour than the a.m. peak hour. The analysis of local transit impacts therefore focuses on increase in transit trips that cross the local screenlines in an outbound direction in the p.m. peak hour, although both a.m. and p.m. peak hour ridership and capacity are presented.[52]

Of the total new transit ridership generated by the proposed project, approximately 185 transit person-trips during the weekday a.m. peak hour and 103 trips during the weekday p.m. peak hour would cross Muni's downtown screenlines, while 68 transit person-trips during the weekday a.m. peak hour and 38 trips during the weekday p.m. peak hour would cross the regional transit screenlines.[53] The remainder of the transit riders would both start and complete their transit trip within the greater downtown and would not cross a screenline.

Table 4.2.8: Muni Downtown Screenlines—Existing plus Project Conditions summarizes Muni ridership and capacity on the downtown screenlines under existing plus project conditions. As shown, project-generated transit ridership would not directly cause any Muni screenline or corridor to exceed the 85 percent capacity utilization threshold. One screenline and three corridors already operate above the capacity utilization threshold under existing conditions: the Southwest screenline during the weekday a.m. peak hour and the Subway lines during the weekday a.m. peak hour and Fulton/Hayes and Third Street corridors during the weekday p.m. peak hour. This operation above the 85 percent capacity utilization threshold would continue under existing plus project conditions. However, the project's contribution to total ridership on this screenline and these corridors would be less than 1 percent. The significance threshold for transit services already operating at or above the capacity utilization threshold is a contribution of 5 percent or more, substantially greater than the project or variant would contribute. Therefore, the impact on Muni capacity on the downtown screenlines would be less than significant.

[52] The variant would add six more transit trips during the p.m. peak hour. Therefore, it would have essentially the same effects as the proposed project.

[53] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV, p. 58.

Table 4.2.8: Muni Downtown Screenlines—Existing plus Project Conditions

	Existing Conditions						Existing plus Project Conditions					
	Weekday A.M. Peak Hour[1]			Weekday P.M. Peak Hour[1]			Weekday A.M. Peak Hour[1]			Weekday P.M. Peak Hour[1]		
							Ridership			Ridership		
Screenline	Rider-ship	Capa-city	Utili-zation	Rider-ship	Capa-city	Utili-zation	Added	Total	Utili-zation	Added	Total	Utili-zation
Northeast Screenline												
Kearny/Stockton	2,211	3,050	72%	2,245	3,327	68%	64	2,275	75%	36	2,281	69%
Other lines	538	1,141	47%	683	1,078	63%	63	601	53%	35	718	67%
Subtotal	*2,749*	*4,191*	*66%*	*2,928*	*4,405*	*67%*	*127*	*2,876*	*69%*	*71*	*2,999*	*68%*
Northwest Screenline												
Geary	1,821	2,490	73%	1,964	2,623	75%	4	1,825	73%	2	1,966	75%
California	1,610	2,010	80%	1,322	1,752	75%	2	1,612	80%	1	1,323	76%
Sutter/Clement	480	630	76%	425	630	68%	2	482	77%	1	426	68%
Fulton/Hayes	1,277	1,680	76%	1,184	1,323	**90%**	6	1,283	76%	3	1,187	**90%**
Balboa	758	1,019	74%	625	974	64%	6	764	75%	3	628	65%
Subtotal	*5,946*	*7,829*	*76%*	*5,519*	*7,302*	*76%*	*20*	*5,966*	*76%*	*11*	*5,531*	*76%*
Southeast Screenline												
Third Street	350	793	44%	782	793	**99%**	2	352	44%	1	783	**99%**
Mission	1,643	2,509	65%	1,407	2,601	54%	8	1,651	66%	4	1,411	54%
San Bruno/Bayshore	1,689	2,134	79%	1,536	2,134	72%	5	1,694	79%	3	1,539	72%
Other lines	1,466	1,756	83%	1,084	1,675	65%	6	1,472	84%	4	1,088	65%
Subtotal	*5,148*	*7,192*	*72%*	*4,810*	*7,203*	*67%*	*22*	*5,170*	*72%*	*12*	*4,821*	*67%*
Southwest Screenline												
Subway lines	6,330	6,205	**102%**	4,904	6,164	80%	12	6,342	**102%**	7	4,911	80%
Haight/Noriega	1,121	1,554	72%	977	1,554	63%	3	1,124	72%	2	979	63%
Other lines	465	700	66%	555	700	79%	1	466	67%	0	555	79%
Subtotal	*7,916*	*8,459*	***94%***	*6,435*	*8,418*	*77%*	*16*	*7,932*	***94%***	*9*	*6,445*	*77%*
Total	*21,759*	*27,671*	*79%*	*19,693*	*27,328*	*72%*	*185*	*21,944*	*79%*	*103*	*19,796*	*72%*

Notes:
Muni = San Francisco Municipal Railway

Bold indicates capacity utilization of 85 percent or greater.

[1] Shows the a.m. peak hour as inbound (i.e., toward downtown) only and the p.m. peak hour as outbound (i.e., away from downtown) only.

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No 2015-004568ENV.

Regional Transit

Table 4.2.9: Regional Transit Screenlines—Existing plus Project Conditions summarizes ridership and capacity on the regional transit screenlines under existing plus project conditions. As shown, transit ridership generated by the project would not directly cause any regional transit screenline to exceed the 100 percent capacity utilization threshold. Several regional screenlines and transit operators already exceed the 100 percent capacity utilization threshold under existing conditions, including East Bay BART service during the weekday a.m. and p.m. peak hours and the South Bay screenline and South Bay BART service during the weekday p.m. peak hour. However, in all of these cases, the project's contribution to total ridership on these screenlines and operators would be less than 1 percent. The significance threshold for transit services already operating at or above the capacity utilization threshold is a contribution to total ridership on a screenline of 5 percent or more. Therefore, the project's impact on regional transit capacity would be less than significant.

Table 4.2.9: Regional Transit Screenlines—Existing plus Project Conditions

Screenline	Existing Conditions						Existing plus Project Conditions					
	Weekday A.M. Peak Hour[1]			Weekday P.M. Peak Hour[1]			Weekday A.M. Peak Hour[1]			Weekday P.M. Peak Hour[1]		
	Ridership	Capacity	Utilization	Ridership	Capacity	Utilization	Ridership Added	Ridership Total	Utilization	Ridership Added	Ridership Total	Utilization
East Bay Screenline												
BART	25,399	23,256	**109%**	24,488	22,784	**107%**	21	25,420	**109%**	12	24,500	**107%**
AC Transit	2,256	3,926	57%	2,256	3,926	57%	6	2,262	57%	3	2,259	58%
Ferries	805	1,615	50%	805	1,615	50%	0	805	50%	0	805	50%
Subtotal	*28,460*	*28,797*	*99%*	*27,549*	*28,325*	*97%*	*27*	*28,487*	*99%*	*15*	*27,564*	*97%*
North Bay Screenline												
Golden Gate Transit Buses	1,384	2,817	49%	1,384	2,817	49%	17	1,401	49%	10	1,394	49%
Ferries	968	1,959	49%	968	1,959	49%	4	972	49%	2	970	50%
Subtotal	*2,352*	*4,776*	*49%*	*2,352*	*4,776*	*49%*	*20*	*2,372*	*49%*	*13*	*2,364*	*49%*
South Bay Screenline												
BART	14,150	19,367	73%	13,500	12,561	**107%**	13	14,163	73%	7	13,507	**107%**
Caltrain	2,377	3,100	77%	2,377	3,100	77%	3	2,380	77%	1	2,378	77%
SamTrans	141	320	44%	141	320	44%	4	145	44%	2	143	45%
Subtotal	*16,668*	*22,787*	73%	*16,018*	*15,981*	**100%**	*20*	*16,688*	*73%*	*11*	*16,029*	***100%***
Total	*47,480*	*56,360*	84%	*45,919*	*49,082*	*94%*	*68*	*47,548*	*84%*	*38*	*45,957*	*94%*

Notes:
AC Transit = Alameda–Contra Costa County Transit District; BART = Bay Area Rapid Transit; SamTrans = San Mateo County Transit District

Bold indicates capacity utilization of 100 percent or greater.

[1] Shows the a.m. peak hour as inbound (i.e., toward downtown) only and the p.m. peak hour as outbound (i.e., away from downtown) only.

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV.

TRANSIT OPERATIONS

The project would not introduce design features that would preclude or alter access to nearby transit facilities. In particular, no existing transit stops would be modified or relocated, and the new mid-block pedestrian passage through the project site would enhance access to and from existing stops. The project would provide a single driveway along 12th Street, and project-generated vehicular traffic at the driveway or on the surrounding streets would not generate substantial vehicle queues or conflicts with transit vehicles or existing transit operations. Therefore, project impacts on transit operations would be less than significant.

No mitigation for transit impacts would be necessary.

BICYCLE IMPACTS

Impact TR-4: The proposed project, the variant, or the straight-shot streetscape option would not create potentially hazardous conditions for bicyclists or otherwise substantially interfere with bicycle accessibility to the site or adjoining areas. (*Less than Significant*)

The project site is within convenient bicycling distance of residential, retail, office, and restaurant uses in neighboring areas. As described under "Bikeway Network" in the Environmental Setting on pp. 4.2.17–4.2.18 and shown on Figure 4.2.2, multiple bikeways are available in the vicinity of the project site, along Market Street, Valencia Street, Polk Street, 11th Street, and other streets. Therefore, a portion of the "other" person-trips identified in Table 4.2.5 (231 person-trips during the weekday a.m. peak hour and 292 person-trips during the weekday p.m. peak hour) would be bicycle trips.

Based on current levels of bicycle activity in the project vicinity during the weekday a.m. and p.m. peak periods, it is expected that the existing bikeways could safely accommodate the project-related increase in bicyclists. In addition, the project would not introduce design features that would eliminate or impede access to existing bikeways near the project site.

The proposed project or variant would result in an increase in vehicular traffic in the project vicinity. Based on existing traffic levels, however, this increase would represent a very small portion of the overall vehicular traffic on the surrounding street network. The proposed project or variant would also eliminate several existing curb cuts at the project site, reducing the potential for conflicts between bicyclists and vehicles along the project site's frontages. The straight-shot streetscape options would also reduce the potential for conflicts on 12th Street by providing for a shared-street design that emphasizes pedestrian use and traffic calming. As such, neither the proposed project nor the variant, with the proposed streetscape improvements or the straight-shot streetscape options would create potentially hazardous conditions for bicyclists or otherwise

substantially interfere with bicycle accessibility to the site and adjoining areas and impacts would be less than significant.[54] No mitigation would be necessary.

In addition, implementing the San Francisco Planning Department's standard conditions of approval regarding queue abatement (Improvement Measure I-TR-2a) and active garage driveway controls and curbside management (Improvement Measure I-TR-2b), as described under "Traffic Impacts" above, would further reduce less-than-significant bicycle impacts from vehicle queuing at the project driveway and curb cut. Further, coordination of freight loading/service vehicle activities (Improvement Measure I-TR-6 under Impact TR-6) would further reduce less-than-significant bicycle impacts from freight loading/service vehicle activities.

PEDESTRIAN IMPACTS

Impact TR-5: The proposed project, the variant, or the straight-shot streetscape options would not 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. (*Less than Significant*)

Pedestrian activity generated by the project would include walk trips to and from transit services and nearby complementary land uses. The project would generate approximately 703 pedestrian trips during the weekday a.m. peak hour (477 transit person-trips and 226 walk-only person-trips) and 962 pedestrian trips during the weekday p.m. peak hour (585 transit person-trips and 377 walk-only person-trips).[55] The proposed project would include multiple pedestrian access points to accommodate residents, employees, patrons, and other visitors, including retail entrances along South Van Ness Avenue, Market Street, and the proposed mid-block alley and entrances to the residential lobbies along South Van Ness Avenue. The variant would have a primary residential entrance along the proposed mid-block alley as well as one on South Van Ness Avenue.

Existing sidewalks along Market Street, South Van Ness Avenue, and 12th Street adjacent to the project site exceed the recommended sidewalk widths specified in the Better Streets Plan. The proposed streetscape design and straight-shot streetscape options would include additional sidewalk widening along 12th Street, and a realignment and redesign of the southern end of 12th Street at its intersection with South Van Ness Avenue, further increasing circulation space and safety features for pedestrians. Therefore, neither the proposed project nor the variant would result in any new hazardous conditions for pedestrians and implementation of either the proposed streetscape design or one of the straight-shot streetscape options would enhance pedestrian safety.

[54] Potential wind impacts on bicyclists are discussed separately in EIR Section 4.5, Wind, on pp. 4.5.19-4.5.20.

[55] The variant would add three additional pedestrian trips during the p.m. peak hour and therefore would have the same impacts as the proposed project.

Furthermore, neither the proposed project, the variant, nor the straight-shot streetscape options would introduce design features that would create hazards for pedestrians or interfere with pedestrian access or circulation. The east and west sidewalks along 12th Street would be widened to 21 feet, including a buffer zone adjacent to the vehicle travel lanes. An 8-foot-wide bulb-out would be provided at the intersection of 12th Street with Market Street, and a raised crosswalk (where the roadway pavement at the intersection is elevated to encourage vehicles to stop and yield to crossing pedestrians) would be provided at Stevenson Street. The existing channelization and median refuge island at the intersection with South Van Ness Avenue would be removed and replaced with wider sidewalks and a pedestrian plaza.

The straight-shot streetscape options would create a curbless "shared street" along 12th Street, where the traveled way for vehicles would function as a shared space with pedestrians and would be designed for low-speed travel with one 11-foot-wide, mixed-flow travel lane in each direction. Neither the base streetscape design nor the straight-shot streetscape options would include design features that would create hazards for pedestrians or interfere with pedestrian access or circulation. Rather, many of the streetscape changes under either design would be specifically intended to improve pedestrian safety and enhance pedestrian access and circulation.

The proposed project or variant would result in an increase in vehicular traffic in the project vicinity. Based on existing traffic levels, however, this increase would represent only a fraction of the overall vehicular traffic on the surrounding street network and would not cause new conflicts for pedestrians. The proposed project or variant would also reduce potential conflict points for pedestrians along the site frontages from the seven existing curb cuts (three along the west side of South Van Ness Avenue and four along the east side of 12th Street) by removing all of them and providing one new curb cut along the east side of 12th Street. As such, the project or variant would not create potentially hazardous conditions for pedestrians or otherwise interfere with pedestrian accessibility to the site and adjoining areas. Therefore, transportation impacts on pedestrians would be less than significant. No mitigation would be necessary.

Although pedestrian impacts would be less than significant, implementing the planning department's standard conditions of approval regarding queue abatement (Improvement Measure I-TR-2a) and active garage driveway controls and curbside management (Improvement Measure I-TR-2), as described above under "Traffic Hazard Impacts," would further reduce less-than-significant pedestrian impacts from vehicle queuing at the site driveway and curb cut and other less-than-significant project impacts related to pedestrian safety and access. In addition, coordination of freight loading/service vehicle activities (Improvement Measure I-TR-6 under Impact TR-6) would further reduce less than-significant pedestrian impacts from freight loading/service vehicle activities.

LOADING IMPACTS

Impact TR-6: The proposed project, the variant, or the straight-shot streetscape options would not result in a loading demand during the peak hour of loading activities that could not be accommodated within proposed onsite loading facilities or within convenient on-street loading zones, and would not create potentially hazardous conditions affecting traffic, transit, bicycles, or pedestrians or significant delays affecting transit. (*Less than Significant*)

As detailed in Chapter 2, Project Description, both the proposed streetscape design and the straight-shot streetscape options for 12th Street would provide on-street commercial loading (yellow curb) and passenger loading (white curb) zones, as well as Americans with Disabilities Act parking spaces (blue curb), along the west side of South Van Ness Avenue and both sides of 12th Street adjacent to the project site. These streetscape changes would replace existing on-street loading zones and would create capacity to accommodate increased demand for on-street loading generated by the proposed project and other nearby uses. Curbside loading zones are under the purview of the SFMTA, and use of the proposed zones would be subject to compliance with applicable SFMTA and City regulations and programs (e.g., Commuter Shuttle Program), including the Color Curb Program that requires review and approval by the SFMTA of a formal application for various color curb designations and payment of a fee if approved. In general, yellow zones would be available for active freight loading (e.g., tenant move-ins and move-outs, deliveries by e-commerce services and other service providers). White zones would be available for active passenger loading, such as drop-off and pick-up activities associated with paratransit, private vehicles, taxis, transportation network companies, and commuter shuttle services. The SFMTA would ultimately determine the extent and nature of the proposed curbside loading zones.

The project would generate a freight loading/service vehicle demand of one to two spaces during both the average hour and the peak hour for loading (Table 4.2.6). The below-grade garage would include three freight loading spaces and four service vehicle spaces, which would be sufficient to meet the estimated freight loading/service vehicle demand. Freight and service vehicles, as well as recycling and trash or compost collection trucks, would access the project's basement loading areas from the single new driveway on 12th Street. While all loading demand could be accommodated in the below-grade loading and service vehicle spaces, four on-street yellow (loading) zones are also proposed along 12th Street as part of the streetscape improvements, and two yellow zones are proposed along South Van Ness Avenue, increasing the likelihood that delivery vehicles would be able to locate temporary parking and reducing the potential for delivery vehicles to double park and block travel lanes.

There are currently no transit stops or transit routes on 12th Street where both off-street loading access and on-street loading spaces would be located. While there is transit service on South Van Ness Avenue, there are no southbound bus stops on the project block. The Van Ness Bus Rapid Transit facilities that are now under construction will be located in the center lanes away from the

parking/loading zones and would not be affected by vehicles pulling out into traffic from the yellow zones proposed along South Van Ness Avenue. No loading is proposed on Market Street, avoiding conflicts with the existing eastbound bicycle lane, transit services, and pedestrian crosswalks.

Residential move-in and move-out operations would be expected to occur within the off-street spaces for freight loading and service vehicles. Deliveries and other commercial loading needs for the proposed retail uses could be accommodated by the off-street spaces in the project or variant basement garage or, if involving larger vehicles such as a semi-trailer truck, by any of the proposed yellow zones adjacent to the project site. Waste collection would occur off-street, with Recology vehicles driving directly into the below-grade garage to collect waste. With the proposed streetscape improvements, freight loading/service vehicle activities would not create potentially hazardous conditions affecting traffic, bicycles, or pedestrians, or significant delays affecting transit.

There would be some differences in the proposed supply and location of on-street loading zones under the base streetscape design and the straight-shot streetscape options, with fewer yellow loading zones proposed under each of the straight-shot streetscape options on 12th Street. However, these differences would not be substantial enough to create potentially hazardous conditions affecting traffic, bicycles, or pedestrians, or substantial delays affecting transit, because the proposed loading docks and service vehicle spaces in the below-grade garage would meet loading demand from the proposed project's land uses and because there would be at least four yellow zones available under any scenario – two on the west side of South Van Ness Avenue and two or more on 12th Street.

For these reasons, project impacts related to loading would be less than significant. No mitigation would be necessary.

Although loading impacts would be less than significant, coordination of freight loading/service vehicle activities (Improvement Measure I-TR-6) would further reduce the less-than-significant impacts of freight loading/service vehicle activities.

> **Improvement Measure I-TR-6: Coordination of Freight Loading/Service Vehicle Activities**
>
> To reduce the potential for delivery vehicles to park in the travel lane adjacent to the project frontage on 12th Street (if on- and off-street loading spaces are occupied or truck size exceeds 45 feet in length), residential move-in/move-out activities and larger deliveries will be scheduled and coordinated through building management. For retail uses, appropriate delivery times will be scheduled and restricted to before 7 a.m., between 10 a.m. and 4 p.m., and after 8 p.m. No deliveries will occur between 4 p.m. and 8 p.m., to avoid conflicts with peak-period commute traffic and with bicyclists on adjacent streets and pedestrians in adjacent sidewalk areas.

The project sponsor will enforce strict regulations governing the size of trucks using the off-street loading spaces in the proposed freight loading area. Trucks more than 45 feet long will be prohibited from entering the parking garage and will use existing and proposed on-street loading spaces along 12th Street adjacent to the project site. Appropriate signage will be posted at the parking garage entrance to notify truck operators of the truck size regulations and the presence of on-street loading spaces on 12th Street. The project sponsor will notify building management (and related staff) and retail tenants regarding the imposed truck size limits for the proposed freight loading area.

Building management staff will notify operators of large trucks regarding the proper loading procedures to follow upon entering the off-street parking garage. Because trucks will be required to move into and out of a 24-foot driveway, building management will require a person (i.e., spotter) to safely guide the truck driver and assist in maneuvering the truck within the public right-of-way and into the parking garage, as needed.

Appropriate move-in/move-out and loading procedures will be enforced to avoid blockages of streets adjacent to the project site over an extended period of time, and to reduce potential conflicts with other roadway users along adjacent streets, including movers and pedestrians walking along 12th Street or South Van Ness Avenue. Curb parking for movers on 12th Street or South Van Ness Avenue will be reserved through SFMTA or by directly contacting the local 311 service. Residential move-in/move-out activities will be scheduled during weekday midday hours between 10 a.m. and 4 p.m. and/or on weekends to avoid any potential conflicts with peak-period commute traffic and all users of adjacent roadways.

In addition, the project sponsor will coordinate with Recology and enforce strict garbage pick-up periods. Such pick-up times will be restricted to before 7 a.m. and/or between 10 a.m. and 2 p.m. No garbage pick-up activities will occur after 3 p.m., to avoid conflicts with vehicular traffic and pedestrians on 12th Street, Market Street, or South Van Ness Avenue. Specific loading procedures (as described above) will also be enforced for Recology vehicles during garbage pick-up periods.

EMERGENCY VEHICLE ACCESS IMPACTS

Impact TR-7: The proposed project, the variant, or the straight-shot streetscape options would not result in inadequate emergency access to the project site or adjoining areas. (*Less than Significant*)

Although the proposed streetscape design and straight-shot streetscape options would include streetscape changes along South Van Ness Avenue and 12th Street, emergency vehicles would continue to be able to access the project site and adjoining areas as they currently do via South Van Ness Avenue, Market Street, and 12th Street. Proposed streetscape changes under either the base streetscape design or the straight-shot streetscape options would be designed according to City standards (and other applicable engineering standards), and the San Francisco Fire Department would review and comment on project building permit plans to ensure adequate access for fire-fighting equipment and personnel. The San Francisco Fire Department would provide final approval of all items related to emergency access. The project would generate

additional automobile traffic in the area; however, this increase would represent only a fraction of the overall vehicular traffic on the surrounding street network, and would not impede or hinder the movement of emergency vehicles in the project area. Therefore, emergency vehicle access impacts would be less than significant and no mitigation would be necessary.

CONSTRUCTION IMPACTS

Impact TR-8: The duration and magnitude of temporary construction activities for the proposed project or the variant would not result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas that could create potentially hazardous conditions. (*Less than Significant*)

Construction of either the proposed project or the variant is anticipated to take place over a period of 36 months, with typical construction hours between 7 a.m. and 8 p.m. Monday through Thursday and between 7 a.m. and 5 p.m. Friday and Saturday. Limited work during the evening (between 8 p.m. and 7 a.m.) and on weekends (7 a.m. to 5 p.m.) would be required for foundation/podium and superstructure/skin construction. The proposed project and variant would use the same kinds of construction equipment and would have the same construction schedule.

Construction staging is expected to occur within the adjacent sidewalk and parking lane on the east side of 12th Street, and on portions of the sidewalk along Market Street and South Van Ness Avenue adjacent to the project site. Temporary sidewalk and parking lane closures would be required for construction activities, but no travel lane closures or relocation of existing Muni bus stops would be needed. The construction contractor would follow the SFMTA's *Regulations for Working in San Francisco Streets*, which includes signage, alternative routes, and other provisions governing sidewalk closures and other construction-related traffic and transportation changes.[56]

In general, any sidewalk or parking lane closures would be subject to review and approval by the Transportation Advisory Staff Committee (TASC). The project would also include a construction management plan to minimize transportation-related impacts of construction activities. The TASC would review the construction management plan, which would address circulation (with a particular focus on ensuring transit, pedestrian, and bicycle access and connectivity), safety, parking, and other construction activities in the area. The contractor also would be required to meet with Muni, SFMTA Sustainable Streets, and other responsible City agencies to determine feasible traffic management measures to reduce traffic congestion during construction of the project and other nearby projects, as appropriate. In particular, the contractor would consult with SFMTA Muni Operations before construction to review potential effects on nearby transit operations.

[56] Available at https://www.sfmta.com/sites/default/files/reports-and-documents/2017/10/blue_book_8th_edition_pdf.pdf.

Throughout the construction period, construction-related trucks would flow into and out of the site. This traffic would temporarily lower the capacities of local streets because of the slower movements and larger turning radii of trucks, which may temporarily affect traffic operations, but would not cause hazardous conditions. It is anticipated that a majority of the construction-related truck traffic would use I-80, U.S. 101, and I-280 to access the project site from the East Bay and the South Bay. In general, trucks and construction workers would use Market Street, Mission Street, and South Van Ness Avenue to gain access to and from U.S. 101 and I-80.

An average of 40–450 construction workers per day are anticipated at the project site, depending on the construction phase and given expected overlapping of phases with the greatest numbers of workers. Construction activity would peak during an approximate 5-month overlap between superstructure/skin construction and interior work. The project would generate as few as eight haul truck trips per day to as many as 50 haul truck trips per day (when superstructure/skin construction and interior work overlap). This equates to approximately one to six 2-way truck trips per hour, depending on the phase. Haul trucks would be staged along the project frontage on 12th Street. Truck activity would take place outside of the weekday a.m. and p.m. peak hours to minimize potential disruptions to transit service or circulation on Market Street and South Van Ness Avenue. Combining construction worker trips and haul truck trips, project-related construction traffic would range from as few as 48 round trips (96 one-way trips) per day to as many as 500 round trips (1,000 one-way trips) per day during the peak overlap of construction phases. While the trip distribution and mode split of construction workers are not known, the impacts of worker-related vehicle-trips and transit ridership on overall transportation conditions would be similar to or less than those associated with the project (even conservatively assuming that each construction worker drives his or her own vehicle to/from the project site) and would be temporary in nature.

Based on the discussion above, the duration and magnitude of temporary construction activities for the project would not result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas. No bicycle routes or transit routes are located on 12th Street where haul trucks would be staged, and relatively few pedestrians would be expected to use the sidewalk on the east side of the street during construction. Pedestrians would be re-routed to the west side of the street during construction. That segment of 12th Street is not a major travel route for vehicles not destined to one of the buildings located there. Therefore, construction of the proposed project would not result in potentially hazardous conditions for motorists, pedestrians, bicyclists or transit vehicles. Therefore, project-related construction impacts would be less than significant and no mitigation would be necessary.

Cumulative Impacts

The cumulative conditions analysis (generally representing a 2040 horizon year) accounts for general background growth, as well as reasonably foreseeable development projects and

transportation network changes. The geographic context for the cumulative analysis is the network of local streets and sidewalks in the transportation study area shown in Figure 4.2.1, p. 4.2.4.

The cumulative conditions scenario was developed using the SF-CHAMP travel demand forecasting model. This model takes into account background growth in travel demand in the city and region, as well as future development projects and transportation network changes in the study area.

For the cumulative scenario, the SF-CHAMP model was reviewed to ensure that reasonably foreseeable future projects within the transportation study area were included in the 2040 scenario to allow for testing of these foreseeable projects in combination with the proposed project and variant.

Land Use Changes

SF-CHAMP accounts for major land use changes, citywide, in the cumulative time frame, including build-out under community plans.

The cumulative conditions analysis also considers nearby proposed development projects, where these development projects would include changes to the public right-of-way adjacent to the project site.

Transportation Network Changes

The cumulative conditions analysis also accounts for cumulative changes to the transportation network, such as the Van Ness BRT project, and SFMTA's Muni Forward program[57] (including the specific changes at the Mission Street/South Van Ness/Otis Street/12th Street intersection as part of the Mission and South Van Ness Transit Priority Project). In particular the transit improvements for the 14 Mission and 14 R Mission Rapid routes that are part of Muni Forward have been programmed for the length of Mission Street to reduce travel time along that corridor. Both the Van Ness BRT and the 14/14 R Mission route improvements would make physical changes in the street system that are estimated to result in diversions of vehicular traffic in their corridors, including in the vicinity of the project site. In addition, the SFMTA has planned various pedestrian/bicycle safety improvements at the intersection of South Van Ness Avenue/Mission Street/Otis Street/12th Street and along portions of Otis and Mission streets near that intersection,

[57] The Muni Forward program implements recommendations developed from the Transit Effectiveness Project, a comprehensive review of the City's public transit system designed to make Muni service more reliable, quicker, and more frequent. These recommendations include new routes and route extensions, service-related capital improvements, increased service on busy routes, designation of new "rapid" (formerly "limited") routes, travel time reduction proposals for major corridors, elimination or consolidation of certain low-ridership routes or route segments, and other changes.

to be implemented as part of the Van Ness BRT project improvements along South Van Ness Avenue. The cumulative analysis therefore made manual adjustments to the SF CHAMP model results to account for these vehicle trip diversions and street/sidewalk improvements in the vicinity of the project site.

Other transportation network improvements have been completed in the project vicinity or are planned, pursuant to a variety of city programs. For example, *Vision Zero*, a coordinated effort by multiple city departments to improve traffic safety for pedestrians and bicycles has multiple projects in various stages of planning, design and construction in the mid-Market area near the project site, such as new turn restrictions onto Market Street implemented in 2016 and new bike lanes on Polk Street and Golden Gate Avenue near Market Street, completed in 2016/2017. The Market and Haight Streets Transit and Pedestrian Improvement Project to improve service on the 6 Parnassus and 71/71L Haight/Noriega bus routes also included sidewalk widening and bulbouts, curb ramps and signal timing changes in the Haight/Gough/Market streets intersection, completed in 2014.

The Better Market Street project, a coordinated effort by multiple city agencies, consists of transportation and streetscape improvements on Market Street from Octavia Boulevard to The Embarcadero, with additional improvements being considered for Mission Street between Valencia Street and The Embarcadero. Three alternatives are under consideration, two of which have two design options. All are intended to restrict private automobile traffic on Market Street in favor of transit vehicles, taxis, emergency vehicles, bicycles and some commercial vehicles. Restricting private automobile use of Market Street would require some changes to streets north of Market Street to accommodate diverted traffic, including converting one-way streets to two-way configurations and restricting or eliminating commercial loading and passenger loading other than by paratransit users. Sidewalk widths along Market Street could be reduced to allow for installation of cycle tracks, and pedestrian improvements are being researched. The full scope of improvements and changes continue to be studied; therefore, the quantitative analyses of cumulative conditions in 2040 does not consider the potential features of the Better Market Street project.[58]

Detailed information on the specific changes to the transportation network planned as part of each of these projects is provided in the *10 South Van Ness Mixed-Use Project Final Transportation Impact Study*.[59]

In addition to the projects described above, many other development projects in the study area would be expected to implement streetscape changes on surrounding street frontages, consistent

[58] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Project Final Transportation Study*, December 2017, pp. 76-79.
[59] CHS Consulting Group, *10 South Van Ness Mixed-Use Project Final Transportation Impact Study*, December 2017, pp. 74-84.

with the Better Streets Plan and requirements specified in section 138.1 of the San Francisco Planning Code. The project's proposed streetscape changes along 12th Street, for example, would provide a cohesive design that would improve connectivity between the project site and the adjacent projects at 1629 Market Street and 30 Otis Street and their associated streetscape changes.

Impact C-TR-1: The proposed project, the variant, or the straight-shot streetscape option, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts related to VMT or traffic hazards. (*Less than Significant*)

Vehicle Miles Traveled Impacts

Table 4.2.10: Average Daily Vehicle Miles Traveled per Capita—2040 Cumulative Conditions summarizes average daily VMT per capita for the Bay Area (regional average) and for the TAZ containing the project site (TAZ 578) for residential and retail land uses under cumulative conditions as forecast for the year 2040, based on the SF-CHAMP travel demand model. The analysis uses the same methodology as described in the Environmental Setting section on pp. 4.2.28–4.2.29 and includes growth estimates and reasonably foreseeable development projects as well as transportation improvements under construction, approved and planned in the project vicinity.

Table 4.2.10: Average Daily Vehicle Miles Traveled per Capita—2040 Cumulative Conditions

	Average Daily VMT per Capita		
	San Francisco Bay Area		
Land Use	Regional Average	Regional Average minus 15%	TAZ 578
Residential (per resident)	16.1	13.7	3.1
Retail (per employee)	14.6	12.4	9.0

Notes: TAZ = transportation analysis zone; VMT = vehicle miles traveled
Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* Case No. 2015-004568ENV, December 2017.

As shown in the table, future average daily VMT per capita or per employee for TAZ 578 is forecast to be less than the corresponding Bay Area regional averages minus 15 percent:

- **Residential uses:** Future 2040 average daily household VMT per capita in TAZ 578 is projected to be 3.1, which is 81 percent less than the existing regional average daily household VMT per capita of 16.1.[60]

[60] Includes the VMT generated by the households in the development.

- **Retail uses:** Future 2040 average daily work-related VMT per employee in TAZ 578 is projected to be 9.0, which is 38 percent less than the existing regional average daily work-related VMT per employee of 14.6.

Overall, because the project site is located in an area where VMT is more than 15 percent below the projected 2040 regional average, the residential and retail uses proposed for the project or variant would not result in substantial additional VMT. As explained under Impact TR-1 on pp. 4.2.38–4.2.40, the proposed project or variant with streetscape improvements or the straight-shot streetscape options on 12th Street would alter the local transportation and circulation network, but these alterations are the type that would not induce automobile travel. Therefore, the proposed project or variant would not contribute new induced automobile travel to any reasonably foreseeable transportation projects that might result in increased VMT.

In addition, the proposed project or variant would meet the screening criterion for proximity to transit stations, further indicating that the project or variant would not cause substantial additional VMT.[61]

For these reasons, the project would not result in substantial additional VMT under cumulative conditions. The project would also not substantially induce automobile travel. Therefore, cumulative VMT impacts would be less than significant.

Traffic Hazard Impacts

Under cumulative conditions, land use changes would likely cause vehicular traffic in the study area to increase, but an increase in traffic alone would not be considered a traffic hazard. Transportation projects and the streetscape changes proposed by the project and other nearby development projects all would be designed according to applicable engineering and roadway safety standards established by the City and other organizations (e.g., National Association of City Transportation Officials, Federal Highway Administration). In addition, many of the changes to the transportation network would be designed primarily to improve transit operations and/or bicycle and pedestrian safety and access, and would not combine to create significant cumulative traffic hazards. The project's or variant's proposed streetscape changes would include design treatments to encourage slower vehicle speeds, which would increase safety for motorists by improving sight distance and reducing the likelihood of collisions. Therefore, cumulative impacts related to traffic hazards would be less than significant..

Although cumulative traffic hazard impacts would be less than significant, implementing the planning department's standard conditions of approval regarding queue abatement (Improvement Measure I-TR-2a), active garage driveway controls and curbside management (Improvement

[61] San Francisco Planning Department, *Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis, 10 South Van Ness Avenue,* Case Number 2015-004568ENV, 2017.

Measure I-TR-2b), and coordination of freight loading/service vehicle activities (Improvement Measure I-TR-6), as described for existing plus project conditions (Impacts TR-2 and TR-6), would further reduce these less-than-significant impacts.

Impact C-TR-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on transit. *(Less than Significant*)

The analysis of future year 2040 cumulative transit utilization considers future ridership and capacity projections provided by the SFMTA, which includes transit utilization data for all local screenlines and sub-corridors.

Transit Capacity

Local Transit

Table 4.2.11: Muni Downtown Screenlines—2040 Cumulative Conditions summarizes ridership and capacity on Muni's downtown screenlines under cumulative conditions. The Muni screenlines and corridors listed below would be expected to exceed the 85 percent capacity utilization threshold under cumulative conditions under either or both of the weekday a.m. and p.m. peak hours.

- California corridor in the Northwest screenline (weekday a.m. and p.m. peak hours)
- Sutter/Clement corridor in the Northwest screenline (weekday p.m. peak hour)
- Fulton/Hayes corridor in the Northwest screenline (weekday a.m. and p.m. peak hours)
- Northwest screenline (weekday p.m. peak hour)
- Mission corridor in the Southeast screenline (weekday a.m. and p.m. peak hours)
- San Bruno/Bayshore corridor in the Southeast screenline (weekday a.m. and p.m. peak hours)
- Other lines in the Southeast screenline (weekday a.m. peak hour)
- Subway lines in the Southwest screenline (weekday a.m. peak hour)
- Haight/Noriega corridor in the Southwest screenline (weekday a.m. peak hour)
- Southwest screenline (weekday a.m. peak hour)

All of these exceedances of the 85 percent capacity utilization threshold constitute significant cumulative impacts; however, the project or variant would contribute less than 1 percent to the total ridership on the individual screenlines and corridors that would exceed capacity. Therefore, the project or variant would not exceed the significance threshold contribution of 5 percent and would not have a considerable contribution to this significant cumulative impact.

Table 4.2.11: Muni Downtown Screenlines—2040 Cumulative Conditions

	Weekday A.M. Peak Hour[1]					Weekday P.M. Peak Hour[1]				
				Project					Project	
Screenline	Rider-ship	Capa-city	Utili-zation	Added Trips	Contri-bution	Rider-ship	Capa-city	Utili-zation	Added Trips	Contri-bution
Northeast Screenline										
Kearny/Stockton	7,394	9,473	78%	64		6,295	8,329	76%	36	
Other lines	758	1,785	42%	63		1,229	2,065	60%	35	
Subtotal	*8,152*	*11,258*	*72%*	*127*	*1.1%*	*7,524*	*10,394*	*72%*	*71*	0.7%
Northwest Screenline										
Geary	2,673	3,763	71%	4		2,996	3,621	83%	2	
California	1,989	2,306	**86%**	2	0.1%	1,766	2,021	**87%**	1	0.05%
Sutter/Clement	581	756	77%	2		749	756	**99%**	1	0.13%
Fulton/Hayes	1,962	1,977	**99%**	6	0.3%	1,762	1,878	**94%**	3	0.16%
Balboa	690	1,008	68%	6		776	974	80%	3	
Subtotal	*7,895*	*9,810*	*80%*	*20*	*0.25%*	*8,049*	*9,250*	***87%***	*11*	*0.1%*
Southeast Screenline										
Third Street	2,442	5,712	43%	2		2,300	5,712	40%	1	
Mission	3,117	3,008	**104%**	8	0.25%	2,673	3,008	**89%**	4	0.1%
San Bruno/Bayshore	1,952	2,197	**89%**	5	0.26%	1,817	2,134	**85%**	3	0.1%
Other lines	1,795	2,027	**89%**	6	0.3%	1,582	1,927	82%	4	
Subtotal	*9,286*	*12,944*	*72%*	*22*	*0.2%*	*8,372*	*12,781*	*66%*	*12*	0.14%
Southwest Screenline										
Subway lines	6,314	7,020	**90%**	12	0.2%	5,692	6,804	84%	7	
Haight/Noriega	1,415	1,596	**89%**	3	0.2%	1,265	1,596	79%	2	
Other lines	175	560	31%	1		380	840	45%	0	
Subtotal	*7,904*	*9,176*	***86%***	*16*	*0.2%*	*7,337*	*9,240*	*79%*	*9*	0.1%
Total	*33,237*	*43,188*	*77%*	*185*	*0.4%*	*31,282*	*41,665*	*75%*	*103*	0.2%

Notes:
Muni = San Francisco Municipal Railway

Bold indicates capacity utilization of 85 percent or greater.
Project contribution shown only for screenlines and corridors exceeding 85 percent capacity utilization.

[1] Shows the a.m. peak hour as inbound (i.e., toward downtown) only and the p.m. peak hour as outbound (i.e., away from downtown) only.

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017, Case No. 2015-004568ENV.

Regional Transit

Table 4.2.12: Regional Transit Screenlines—2040 Cumulative Conditions summarizes ridership and capacity on the regional transit screenlines under cumulative conditions. BART service on the East Bay screenline would exceed the established capacity utilization threshold of 100 percent during both the weekday a.m. and p.m. peak hours. This would constitute a

significant cumulative impact. The proposed project or variant would contribute less than 1 percent to the total ridership to BART East Bay service. Therefore, the project or variant would not exceed the threshold contribution of 5 percent, and would not have a considerable contribution to this significant cumulative impact.

Table 4.2.12: Regional Transit Screenlines—2040 Cumulative Conditions

	Weekday A.M. Peak Hour[1]					Weekday P.M. Peak Hour[1]				
				Project					Project	
Screenline	Rider-ship	Capa-city	Utili-zation	Added Trips	Contri-bution	Rider-ship	Capa-city	Utili-zation	Added Trips	Contri-bution
East Bay Screenline										
BART	38,000	32,100	**118%**	21	0.1%	36,000	32,100	**112%**	12	0.0%
AC Transit	7,000	12,000	58%	6		7,000	12,000	58%	3	
Ferries	4,682	5,940	79%	0		5,319	5,940	90%	0	
Subtotal	*49,682*	*50,040*	*99%*	*27*		*48,319*	*50,040*	*97%*	*15*	
North Bay Screenline										
Golden Gate Transit Buses	1,990	2,543	78%	17		2,070	2,817	74%	10	
Ferries	1,619	1,959	83%	4		1,619	1,959	83%	2	
Subtotal	*3,609*	*4,502*	*80%*	*20*		*3,689*	*4,776*	*77%*	*13*	
South Bay Screenline										
BART	21,000	28,808	73%	13		20,000	28,808	69%	7	
Caltrain	2,310	3,600	64%	3		2,529	3,600	70%	1	
SamTrans	271	520	52%	4		150	320	47%	2	
Ferries	59	200	30%	*0*		59	200	30%	*0*	
Subtotal	*23,640*	*33,128*	*71%*	20		*22,738*	*32,928*	*69%*	11	
Total	*76,931*	*87,670*	*88%*	*68*		*74,746*	*87,744*	*85%*	*38*	

Notes:
AC Transit = Alameda–Contra Costa County Transit District; BART = Bay Area Rapid Transit; SamTrans = San Mateo County Transit District
Bold indicates capacity utilization of 100 percent or greater.
Project contribution shown only for screenlines and corridors exceeding 100 percent capacity utilization.
[1] Shows the a.m. peak hour as inbound (i.e., toward downtown) only and the p.m. peak hour as outbound (i.e., away from downtown) only.
Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study,* December 2017.

Transit Operations

Under cumulative conditions, land use changes would likely cause vehicular traffic in the study area to increase, which could increase delays for transit vehicles or result in other conflicts with transit operations. However, these effects would be balanced by improving transit operations through the Muni Forward program, Van Ness BRT project, the Better Market Street project, and other changes to the transportation network. Those improvements would include transit-only lanes, transit signal priority systems, transit islands/bulbs, and other features. The proposed project or variant, with either the streetscape improvements or the straight-shot streetscape

options, would change transportation facilities on streets adjacent to the project site. These changes would not affect local or regional transit operations on South Van Ness Avenue or Market Street (there are no transit operations on 12th Street where the majority of circulation changes are proposed). Therefore, cumulative impacts related to transit operations would be less than significant.

BICYCLE IMPACTS

Impact C-TR-3: The proposed project or variant, or the straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on bicycle travel. *(Less than Significant*)

Bicycle impacts by their nature are site-specific and generally do not combine with impacts from other development projects. There are multiple bicycle routes adjacent to and near the project site, including class II facilities on Market, Valencia, Otis, McCoppin, Polk and 11th streets.

Under cumulative conditions, vehicular traffic and bicycle activity in the study area would increase, which could increase the potential for vehicle/bicycle conflicts at intersections and driveways.

Streetscape changes that are proposed by both the project or variant and other nearby development projects include traffic calming measures that would improve safety for both bicycles and pedestrians. Bicycle safety/access improvements planned or under consideration as part of the Better Market Street project include fewer opportunities for private automobiles to travel on Market Street, an enhanced version of the existing shared bicycle and vehicle lane with sharrows where a dedicated bicycle facility does not already exist, and options to install cycle tracks on Market Street and/or Mission Street, with 7- to 8-foot wide vertically-separated bicycle lanes. Improvements at the South Van Ness Avenue/Mission Street/Otis Street/12th Street intersection, to be constructed as part of the Van Ness BRT project, would improve bicycle access at that complicated intersection adjacent to the project site. These changes would include road diets, traffic calming measures, and new or improved bikeways with enhanced protection and segregation from motorized traffic. The proposed project or variant would not interfere with any of the planned bicycle improvements on adjacent and nearby streets, and would contribute to bicycle safety with the improvements proposed for 12th Street. Therefore, cumulative impacts related to bicycle safety and access would be less than significant.

Although cumulative bicycle impacts would be less than significant, implementing the planning department's standard conditions of approval regarding queue abatement (Improvement Measure I-TR-2a), active garage driveway controls and curbside management (Improvement Measure I-TR-2b), and coordination of freight loading/service vehicle activities (Improvement Measure I-

TR-6), as described under existing plus project conditions (Impacts TR-2 and TR-6), would further reduce these less-than-significant impacts.

PEDESTRIAN IMPACTS

Impact C-TR-4: The proposed project, variant, or straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on pedestrians. *(Less than Significant*)

Pedestrian circulation impacts by their nature are site-specific and generally do not contribute to impacts from other development projects. Under cumulative conditions, vehicle traffic and pedestrian activity in the study area would increase, which could increase the potential for vehicle/pedestrian conflicts.

Potential increases in vehicle/pedestrian conflicts would, however, be balanced by streetscape changes included in both the proposed project or variant and other nearby development projects pursuant to the Better Streets Plan that requires wider sidewalks and narrower curb cuts for driveways. In addition, pedestrian safety/access improvements are under consideration as part of the Better Market Street project, the Van Ness BRT project, Muni Forward, and other changes to the transportation network. These changes would include road diets, traffic calming measures, sidewalk widening, corner bulb-outs, raised crosswalks/intersections, pedestrian refuges, and other features. The proposed project or variant would not interfere with construction of any of these pedestrian safety projects.

Furthermore, the project proposes to widen the sidewalk on both sides of 12th Street, in coordination with the 1629 Market Street and 30 Otis Street projects, and remove seven existing curb cuts/driveways on 12th Street and South Van Ness Avenue, improving pedestrian facilities in the project vicinity, and reducing the number of locations where vehicle/pedestrian conflicts might occur.

Therefore, cumulative impacts related to pedestrian activity and pedestrian safety and access would be less than significant.

Although cumulative pedestrian impacts would be less than significant, implementing the planning department's standard conditions of approval regarding queue abatement (Improvement Measure I-TR-2a), active garage driveway controls and curbside management (Improvement Measure I-TR-2b), and coordination of freight loading/service vehicle activities (Improvement Measure I-TR-6), as described under existing plus project conditions (Impacts TR-2 and TR-6), would further reduce these less-than-significant impacts.

LOADING IMPACTS

Impact C-TR-5: The proposed project, variant, or straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on loading. *(Less than Significant*)

Loading impacts by their nature are site-specific and generally do not contribute to impacts from other development projects. The project's proposed supply of off-street loading/service vehicle spaces would meet the project's freight loading/service vehicle demand, as discussed under existing plus project conditions (Impact TR-6).

The proposed project's streetscape changes under the proposed streetscape design or either of the straight-shot streetscape options for 12th Street would provide additional on-street loading zones. These changes, developed in close coordination with the adjacent 1629 Market Street project and the 30 Otis Street project, include on-street loading zones that would be available for use by these and other nearby development projects. The coordinated design for 12th Street accounts for new driveways to provide access to these two development projects that are located across the street from the proposed project or variant. The proposed streetscape changes would not affect nor be affected by proposed street improvements on other nearby streets that are part of other development projects.

Passenger loading zones are planned along South Van Ness Avenue near the entrances to residential lobbies and along 12th Street to serve the proposed project or variant as well as the 1629 Market Street and 30 Otis Street projects and existing residential buildings.

Streetscape improvement designs for the proposed project or variant in combination with streetscape improvements proposed for the 1629 Market Street and 30 Otis Street projects along 12th Street were coordinated to serve all three proposals and would not combine to produce significant environmental impacts. Other nearby cumulative development that could affect other streets in the vicinity would not combine or interfere with the streetscape improvements proposed for the project or variant. Therefore, cumulative impacts related to freight loading and passenger loading would be less than significant.

Although cumulative loading impacts would be less than significant, implementing the planning department's standard conditions of approval regarding queue abatement (Improvement Measure I-TR-2a), active garage driveway controls and curbside management (Improvement Measure I-TR-2b), and coordination of freight loading/service vehicle activities (Improvement Measure I-TR-6), as described under existing plus project conditions (Impacts TR-2 and TR-6), would further reduce these less-than-significant impacts.

EMERGENCY VEHICLE ACCESS IMPACTS

Impact C-TR-6: The proposed project, variant, or straight-shot streetscape options, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to significant cumulative impacts on emergency vehicle access. *(Less than Significant*)

Cumulative development projects approved and under review in the vicinity of the project site would not substantially change basic circulation patterns. Therefore, emergency vehicles would continue to access the project site and other development sites from the same routes as those currently available. In addition, each proposed development project and transportation improvement proposal must be reviewed and approved by the San Francisco Fire Department, which considers emergency vehicle access issues during that review.

Under cumulative conditions, land use changes would likely cause vehicular traffic, transit, bicycle, and pedestrian activity in the area to increase, which could affect emergency vehicle access to, from, or through the study area (e.g., by increasing response times). Projects such as the Muni Forward program, Better Market Street project, and Van Ness BRT project may include streetscape changes that would affect curb lines or other features of the surrounding street network; however, these streetscape changes would be designed according to City standards (and other applicable engineering standards) to maintain adequate emergency vehicle access. The San Francisco Fire Department would also review the proposed changes to ensure adequate access for emergency vehicles.

Some projects such as the Van Ness BRT project would repurpose roadway capacity by replacing general-purpose travel lanes with a transit-only right-of-way. However, these changes would likely help to improve emergency response times through the area, because emergency vehicles would be able to use these lanes to bypass other traffic. Along other streets, emergency vehicles would be permitted to move into opposing travel lanes, and nonemergency vehicles would be required to yield right-of-way to emergency vehicles per section 21806 of the California Vehicle Code.

Therefore, no significant cumulative impacts on emergency vehicle access have been identified, and impacts would be less than significant.

Cumulative Construction Impacts

Impact C-TR-7: The duration and magnitude of temporary construction activities for the proposed project, the variant, or the straight-shot streetscape option, in combination with construction of past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in a significant cumulative impact from potentially hazardous conditions to which the proposed project or variant would contribute considerably. (*Significant and Unavoidable with Mitigation*)

Under cumulative conditions, project-related construction activities may overlap with other construction activities within one block of the project site, for transportation projects (e.g., Better Market Street, Van Ness BRT project) and other development projects that are either already under construction, approved or under consideration, or are otherwise reasonably foreseeable including at 1629 Market Street, 30 Otis Street, One Oak Street, 1546-1564 Market Street, 1500 Mission Street,[62] 1601 Mission Street, 30 Van Ness Avenue, and 1 South Van Ness Avenue. Given the duration and magnitude of construction activities for these various projects, such construction activities could substantially interfere with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in cumulative potentially hazardous conditions.

As outlined above, the project would follow SFMTA's *Regulations for Working in San Francisco Streets*, to minimize impacts on pedestrians and bicyclists, transit service and emergency vehicle access.

If construction occurs at more than one site in the project vicinity during the same time as the proposed project or variant is under construction, multiple travel/parking lane and sidewalk closures could be required and high volumes of construction-related trucks and other traffic could be present in the project vicinity. These activities could delay or otherwise disrupt transit service and cause hazardous conditions for bicyclists and pedestrians, particularly given the uncertainty regarding the construction schedules for individual projects. Even if each individual project alone would not result in a significant construction-related impact on transportation and circulation, concurrent construction of two or more projects could substantially interfere with background traffic, transit, bicycle, and pedestrian circulation and cause corresponding hazardous conditions, despite the best efforts of project sponsors and construction contractors. Given the number of concurrent construction projects that could occur in the vicinity of the project site, the relatively small geographic area in which the proposed projects are located and the duration of construction activities on each site, this would be a significant cumulative impact.

[62] The project identified as "1500 Mission Street" includes the buildings currently under construction at both 1500 Mission Street and 49 South Van Ness Avenue.

Construction of the proposed project or variant would contribute considerably to the significant cumulative construction-related impacts. While the proposed project and other development projects would implement construction management plans, as required by City regulations, that would limit construction traffic during peak a.m. and p.m. commute periods, establish construction-related vehicle routes and detours, require coordination with the SFMTA and Public Works related to maintaining efficient transit service, and provide for pedestrian and bicycle safety, these provisions would reduce but not eliminate the significant cumulative impacts related to conflicts between multiple construction activities and pedestrians, bicyclists, transit vehicles and automobiles. Therefore, cumulative construction transportation impacts would be significant and unavoidable, and the proposed project or variant would contribute considerably to this significant and unavoidable impact.

Mitigation Measure M-C-TR-7a: Cumulative Construction Coordination: The project sponsor or its contractor(s) shall consult with City departments such as the SFMTA and Public Works through ISCOTT, and other interdepartmental meetings as deemed necessary by the SFMTA, Public Works, and the San Francisco Planning Department, to develop a Coordinated Construction Management Plan that shall address construction-related vehicle routing, detours, and maintaining transit, bicycle, vehicle, and pedestrian movements in the vicinity of the construction area for the duration of the cumulative construction period overlap. Key coordination meetings would be held jointly between project sponsors and contractors of other projects for which the relevant City departments determine impacts could overlap. The Coordinated Construction Management Plan shall consider other ongoing construction in the project vicinity, including development and transportation infrastructure project, and shall include, but not be limited to, the following:

- Restricted Construction Truck Access Hours – Limit construction truck movements to the hours between 9:00 a.m. and 4:00 p.m., or other times if approved by the SFMTA, to minimize disruption to vehicular traffic, including transit during the AM and PM peak periods.
- Construction Truck Routing Plans – Identify optimal truck routes between the regional facilities and the project site, taking into consideration truck routes of other development projects and any construction activities affecting the roadway network.
- Coordination of Temporary Lane and Sidewalk Closures – The project sponsor shall coordinate lane closures with other projects requesting concurrent lane and sidewalk closures through the ISCOTT and interdepartmental meetings process above, to minimize the extent and duration of requested lane and sidewalk closures. Lane closures shall be minimized especially along transit and bicycle routes, so as to limit the impacts to transit service and bicycle circulation and safety.
- Maintenance of Transit, Vehicle, Bicycle, and Pedestrian Access – The project sponsor/construction contractor(s) shall meet with Public Works, SFMTA, the San Francisco Fire Department, Muni Operations and other City agencies to

coordinate feasible measures to include in the Coordinated Construction Management Plan to maintain access for transit, vehicles, bicycles and pedestrians. This shall include an assessment of the need for temporary transit stop relocations or other measures to reduce potential traffic, bicycle, and transit disruption and pedestrian circulation effects during construction of the project.

- Carpool, Bicycle, Walk and Transit Access for Construction Workers – The construction contractor shall include methods to encourage carpooling, bicycling, walk and transit access to the project site by construction workers (such as providing transit subsidies to construction workers, providing secure bicycle parking spaces, participating in free-to- employee ride matching program from www.511.org, participating in emergency ride home program through the City of San Francisco (www.sferh.org), and providing transit information to construction workers).
- Construction Worker Parking Plan – The location of construction worker parking shall be identified as well as the person(s) responsible for monitoring the implementation of the proposed parking plan. The use of on-street parking to accommodate construction worker parking shall be discouraged. All construction bid documents shall include a requirement for the construction contractor to identify the proposed location of construction worker parking. If on-site, the location, number of parking spaces, and area where vehicles would enter and exit the site shall be required. If off-site parking is proposed to accommodate construction workers, the location of the off-site facility, number of parking spaces retained, and description of how workers would travel between off-site facility and project site shall be required.
- Project Construction Updates for Adjacent Businesses and Residents – To minimize construction impacts on access for nearby institutions and businesses, the project sponsor shall provide nearby residences and adjacent businesses with regularly-updated information regarding project construction, including construction activities, peak construction vehicle activities (e.g., concrete pours), travel lane closures, and lane closures. At regular intervals to be defined in the Coordinated Construction Management Plan, a regular email notice shall be distributed by the project sponsor that shall provide current construction information of interest to neighbors, as well as contact information for specific construction inquiries or concerns.

Mitigation Measure M-C-TR-7b: Construction Truck Deliveries During Off-Peak Periods: Any construction traffic occurring between 7:00 a.m. and 9:00 a.m. or between 3:30 p.m. and 6:00 p.m. would coincide with peak hour traffic and could temporarily impede traffic and transit flow, although it would not be considered a significant impact. Limiting truck movements to the hours between 9:00 a.m. and 3:30 p.m. (or other times, if approved by SFMTA) would further minimize disruption of the general traffic flow on adjacent streets during the a.m. and p.m. peak periods.

As required, the Project Sponsor and construction contractor(s) shall meet with the Sustainable Streets Division of the SFMTA, the San Francisco Fire Department, Muni, and the San Francisco Planning Department to determine feasible measures to reduce

traffic congestion, including potential transit disruption, and pedestrian circulation impacts during construction of the project. To minimize cumulative traffic impacts due to project construction, the Project Sponsor shall coordinate with construction contractors for any concurrent nearby projects that are planned for construction or which later become known.

Mitigation Measure M-C-TR-7c: Construction Management Plan: In addition to items required in the Construction Management Plan, the project sponsor shall include the following:

- Carpool, Shuttle, and Transit Access for Construction Workers – As an improvement measure to minimize parking demand and vehicle trips associated with construction workers, the construction contractor shall include methods to encourage carpooling, shuttle use, and transit use to the project site by construction workers in the Construction Management Plan contracts.
- Project Construction Updates – As an improvement measure to minimize construction impacts on nearby businesses, the project sponsor shall provide regularly-updated information (typically in the form of website, news articles, on-site posting, etc.) regarding project construction and schedule, as well as contact information for specific construction inquiries or concerns.

Implementation of these mitigation measures would reduce, but would not eliminate the proposed project or variant's considerable contribution to significant cumulative construction impacts.

Parking Demand

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. As explained above, SB 743 eliminated parking as an effect that can be considered in determining significant transportation and circulation effects for infill residential projects in transit priority areas. The San Francisco Planning Department acknowledges, however, that parking conditions may be of interest to the public and the decision makers; therefore, parking is analyzed here for informational purposes.

Based on the methodology prescribed in the SF Guidelines, the project would generate an automobile parking demand of up to approximately 1,170 spaces: 1,164 long-term spaces and six short-term spaces.[63] As detailed in Chapter 2, Project Description, the project would provide approximately 507 off-street parking spaces (492 for the residential use and 15 for the retail use) plus 6 car-share spaces, for a total of 513 spaces. The project would also implement various streetscape changes along the adjacent street frontages, resulting in minor changes to on-street parking adjacent to the project site. Based on the estimated parking demand and proposed parking supply, the project would result in a net deficit of about 673 long-term parking spaces. The 14 on-

[63] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Transportation Impact Study,* Final, Case Number 2015-004568ENV, December 2017.

site parking spaces for retail use would satisfy the demand for six short-term retail parking spaces.

Overall on-street parking occupancy was surveyed on a typical weekday evening in February 2016. The survey showed a supply of about 469 on-street parking spaces in the study area. During the survey period occupancy was approximately 71 percent, although some concentrated areas north of Market Street were at practical capacity (85 percent occupancy or greater). Some (limited) public parking is also available in nearby on-street spaces or off-street facilities. As such, some of the parking deficit could be accommodated by existing parking capacity.

Further, as discussed in the "Environmental Setting," the project site is well served by local and regional transit services, and the surrounding area is generally conducive to both biking and walking. Additionally, in compliance with the City's Transportation Demand Management Program Standards, the proposed project would implement several transportation demand management measures, which would encourage transit use, biking, and walking and would help to reduce automobile use and parking demand.

Supplemental Information

During the scoping period for this environmental impact report, several members of the public commented on the parking and passenger and freight loading operations for the proposed project. These comments were largely tied to the size and location of the proposed project, proximity to transit, and the recent increase in on-demand deliveries and the use of transportation network companies. A supplemental transportation study (supplemental study) was prepared to assess passenger loading needs for the proposed project, and to better understand commercial loading and valet operations within the garage.[64] The supplemental study is summarized, for informational purposes, below.

Methodology. The supplemental study was based on data collection and observations at the NEMA building located at the northwest corner of 10th and Market streets, approximately two blocks to the east of the project site. The NEMA building is owned and operated by the project sponsor, Crescent Heights, and includes 754 residential units and 12,500 gsf of commercial uses. The NEMA building and the project site are surrounded by similar and diverse land uses, and are immediately adjacent to multiple transit lines and bicycle lanes on Market Street. The NEMA building includes transportation amenities that would also be a part of the proposed project, including bicycle parking, bike repair facilities, and dedicated car share parking. The proposed project's dwelling units would be similar in size and type to those at the NEMA building, and would likely attract a similar tenant demographic. If the 10 South Van Ness Avenue project is approved, the commercial loading and valet operations would be operated by the project sponsor

[64] CHS Consulting Group, Memorandum to Rachel Schuett, San Francisco Planning Department, *10 South Van Ness Development – Supplemental Transportation Study Memorandum – Final*, October 12, 2018.

in a substantially similar way to the NEMA building, including a 24/7 valet service, and a fully-staffed garage.[65]

Passenger Loading. In order to establish the expected rates of daily curbside passenger loading activity, a 48-hour field observation was conducted at the passenger loading (white curb) zone adjacent to the NEMA building. This 60-foot-long zone provides space for about three vehicles.

Based on the field observation, transportation network company vehicles (TNCs) frequently use this passenger loading zone. TNC pick-up and drop-off activities at that location include NEMA residents as well as other residents, workers, and visitors in the area, including (but not limited to) employees and visitors of the Twitter office building on the east side of 10th Street. This is likely due to the restrictions on passenger loading activities along Market Street, and because this is the closest passenger loading zone to the Twitter building.

The field observation found that during the a.m. peak hour, 4 of 35 passenger arrivals and 2 of 14 passenger departures were attributable to users of the NEMA building, accounting for 12 percent of a.m. peak hour passenger loading trips. During the p.m. peak hour, 1 of 6 passenger arrivals and 8 of 49 passenger departures were attributable to users of the NEMA building. This accounted for 16 percent of p.m. peak hour passenger loading trips.

The general pattern of peak hour loading activities for residential buildings are departures in the a.m. peak hour and arrivals in the p.m. peak hour. This indicates that a large share of the vehicle trips to the passenger loading zone at the NEMA building are associated with commute trips to nearby commercial office uses.

Based on the observed passenger loading activities discussed above, the NEMA building, itself, has demand for one passenger loading space.

Based on the NEMA building field observations, it is estimated that the proposed project would result in approximately 29 passenger loading vehicle trips during the p.m. peak hour, requiring two passenger loading spaces. The proposed project would include five or six passenger loading spaces, depending on the streetscape plan that is implemented. Therefore, either scenario would provide an adequate supply of passenger loading spaces for the proposed project.

Freight Loading. In the 2017 Final TIS for the proposed project, loading demand was calculated based on the methodology outlined in the *SF Guidelines* Appendix H. Based on the *SF Guidelines*, the proposed project would generate up to 35 daily truck trips, which corresponds to a demand for two commercial loading spaces during both the average loading hour and during the

[65] Ibid., see in particular p. 9 of 26.

peak loading hour. In the supplemental analysis, data provided by Crescent Heights for the NEMA building was used to re-estimate the demand for deliveries for the proposed project.

Based on data provided by Crescent Heights, the NEMA building receives an average of 14 commercial delivery trucks daily. Based on the demand for deliveries at the NEMA building, the proposed project would likely receive an average of about 459 packages per day (compared to 365 packages per day at NEMA). This increase in the volume of packages is not likely to increase the number of daily delivery trucks or the size of the delivery vehicles, because deliveries would be scheduled and coordinated by the service providers. Therefore, the proposed project's three on-site loading spaces in level B1 and the four commercial van loading spaces in level B2 would provide an adequate supply of on-site commercial loading spaces to accommodate the frequency and duration of daily commercial deliveries.

Valet Operations. Based on the 2017 Final TIS, the proposed project is expected to generate approximately 451 new vehicle-trips during the weekday p.m. peak hour (284 inbound and 167 outbound). In the supplemental analysis, data from the NEMA building was used to re-estimate the p.m. peak hour vehicle trips for the proposed project.

Based on the trip generation rates provided in the *SF Guidelines*, NEMA was expected to generate about 290 new vehicle-trips during the weekday p.m. peak hour (192 inbound and 97 outbound). Based on three months of data provided by Crescent Heights and verified by field observation at the NEMA building, only 13 percent of the vehicle trips estimated using the *SF Guidelines* were actually observed. For a conservative analysis, the expected inbound p.m. peak hour vehicle trips to the project site were reduced by 50 percent. Based on this adjustment, it is estimated that the proposed project would experience approximately 143 inbound vehicle trips during the p.m. peak hour, 29 of which would be passenger loading trips.

Finally, based on field observations of the valet operations conducted at the NEMA building during the p.m. peak hour, the average arrival rate was one vehicle every minute and 45 seconds and the average turnover rate for each vehicle was approximately one minute. Assuming the same turnover rate for the proposed project, a maximum queue length of approximately six vehicles would be anticipated during the p.m. peak period. The proposed project's garage ramp would provide capacity for approximately 28 vehicles. Therefore, no vehicle queuing onto 12th Street would be anticipated.

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4.3 NOISE

Section 4.3, Noise, describes the existing environmental and regulatory setting related to noise and vibration and discusses noise and vibration impacts that would result from construction and operation of the proposed project and the variant. The analysis addresses the potential for the proposed project and the variant to affect existing noise levels based on quantification of the noise that would be generated on a temporary basis during construction and over the long term from operation. The analysis determines whether construction or operation would result in significant changes in existing noise levels and identifies mitigation measures, where appropriate. The analysis also assesses vibration that could occur during construction and operation of the proposed project or variant to determine whether vibration could affect nearby historic structures or cause sleep disturbance. Construction and operation of the straight-shot streetscape options, which could be implemented with either the proposed project or the variant, would be the same as the streetscape option for the proposed project or variant, as the differences in the two straight-shot streetscape options relate to the numbers of on-street passenger and freight loading spaces and location of the building's driveway entrance, not to sidewalk and roadway widths or construction activities to make the improvements. Therefore, any impacts identified for the proposed project or the variant would be the same for the straight-shot streetscape options and those options are not analyzed separately.

The information and analysis in this section is based primarily on the *10 South Van Ness Avenue Mixed-Use Project Final Noise Technical Report*.[1]

Summary of Market and Octavia Neighborhood Plan Final EIR Noise Section

Market and Octavia Neighborhood Plan Final EIR Setting

The Market and Octavia Neighborhood Plan Final EIR includes both measurements of existing outdoor ambient sound levels and predictions of traffic noise for existing conditions (2003) and future conditions (2025), with and without implementation of the Market & Octavia Area Plan at a variety of representative neighborhood locations. At assessment location #29 (near the intersection of Otis Street and South Van Ness Avenue, the assessment location nearest to the project site) both measured outdoor ambient sound levels in 2003 and predicted traffic noise levels for 2025 ranged from 70 to 75 A-weighted decibels (dBA) day-night noise level (L_{dn}).

[1] AECOM, *10 South Van Ness Avenue Mixed-Use Project - Final Noise Technical Report*, January 2018, Revised September 2018.

Market and Octavia Neighborhood Plan Final EIR Impacts and Mitigation Measures

At assessment location #29, the 70 to 75 dBA L_{dn} range of traffic noise levels predicted for 2025 was not expected to change with or without implementation of the Market & Octavia Area Plan, and thus this was considered to be a less-than-significant impact. Construction of projects within the Market & Octavia Area Plan area was expected to comply with the construction noise limits in the Noise Ordinance in the San Francisco Police Code, and thus, to result in a less-than-significant impact with respect to temporary increases in ambient noise levels. Cumulative operational noise impacts in 2025 with the Market & Octavia Area Plan were also expected to be less than significant.

Environmental Setting

Fundamentals of Noise

ACOUSTICS

Noise generally is defined as unwanted or objectionable sound. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and in the extreme, hearing impairment. Noise effects can be caused by pitch or loudness. Pitch is the number of complete vibrations or cycles per second of a wave that result in the range of tone from high to low; higher-pitched sounds are louder to humans than lower-pitched sounds. Loudness is the intensity or amplitude of sound. The sound pressure level is the descriptor most commonly used to characterize the loudness of a sound level. Because sound pressure can vary enormously within the range of human hearing, the logarithmic decibel scale (dB) is used to quantify sound levels. **Table 4.3.1: Acoustical Terminology** briefly defines these measurement descriptors and other acoustical terminology used in this section.

The human ear is not equally sensitive to all frequencies within the audible sound spectrum, so sound pressure level measurements can be weighted to better represent frequency-based sensitivity of average healthy human hearing. A logarithmic scale is used to quantify sound intensity that approximates the range of sensitivity of the human ear that normally extends from 0 dBA to about 140 dBA. A 10-dBA increase in the level of continuous noise represents a perceived doubling of loudness. With respect to traffic noise, increases of 3 dBA are barely perceptible to people, while a 5-dBA increase is readily noticeable.

Different descriptors for sound-level measurements are used to characterize the time-varying nature of sound. Several rating scales have been developed to analyze the adverse effect of community noise on people. Because environmental noise fluctuates over time, these scales consider that noise effects are dependent on the total acoustical energy content and the time and duration of occurrence.

Table 4.3.1: Acoustical Terminology

Term	Definition
Sound	A vibratory disturbance created by a vibrating object that (when transmitted by pressure waves through a medium, such as air) can be detected by a receiving mechanism, such as the human ear or a microphone.
Noise	Sound that is loud, unpleasant, unexpected, or otherwise undesirable.
Ambient noise	The composite of noise from all sources near and far in a given environment.
Decibel (dB)	A measure of sound on a logarithmic scale, which represents the squared ratio of sound-pressure amplitude to a reference sound pressure. The reference pressure is 20 micropascals, representing the threshold of human hearing (0 dB).
A-weighted decibel (dBA)	An overall frequency-weighted sound level that approximates the frequency response of the human ear.
Equivalent noise level (L_{eq})	The average sound energy occurring over a specified time period. In effect, L_{eq} is the steady-state sound level that in a stated period would contain the same acoustical energy as the time-varying sound that actually occurs during the same period.
Maximum and minimum noise levels (L_{max} and L_{min})	The maximum or minimum instantaneous sound level measured during a measurement period.
Day-night level (L_{dn})	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m. (nighttime).
Community noise equivalent level (CNEL)	The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added to the A-weighted sound levels occurring between 7 p.m. and 10 p.m. and 10 dB added to the A-weighted sound levels occurring between 10 p.m. and 7 a.m.

Source: Data compiled by AECOM in 2016.

Table 4.3.2: Typical Sound Levels shows examples of various sound levels in numerous outdoor and indoor environments, with the descriptions placed corresponding to their typical sound levels along a vertical scale of increasing dBA.

In a typical environment, the day-night noise level (L_{dn}) and community noise equivalent level (CNEL) noise descriptors rarely differ by more than 1 dB. As a matter of practice, L_{dn} and CNEL values are considered to be equivalent, and they are treated as such in this section.

Table 4.3.2: Typical Sound Levels

Common Outdoor Activities	Noise Levels, dBA	Common Indoor Activities
	110	Rock band
Jet fly-over at 1,000 feet		
	100	
Gas lawn mower at 3 feet		
	90	
Diesel truck at 50 feet at 50 miles per hour		Food blender at 3 feet
	80	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower at 100 feet	**70**	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	**60**	
		Large business office
Quiet urban area, daytime	**50**	Dishwasher in the next room
Quiet urban area, nighttime	**40**	Theater, large conference room (background)
Quiet suburban area, nighttime		
	30	Library
Quiet rural area, nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio (background)
	10	
Lowest threshold of human hearing	**0**	Lowest threshold of human hearing

Source: California Department of Transportation, *Technical Noise Supplement*, 2013, http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013A.pdf, accessed January 25, 2018.

NOISE FROM MULTIPLE SOURCES

Because sound pressure levels in decibels are based on a logarithmic scale, they cannot be added or subtracted in the usual arithmetical way. Therefore, sound pressure levels in decibels are added logarithmically on an energy summation basis. In other words, adding a new noise source to an existing noise source, where both sources produce noise at the same level, will not double the noise level. Instead, if the difference between two noise sources is 10 dBA or more, the louder noise source will dominate and the resultant noise level will equal the noise level of the louder source. In general, if the difference between two noise sources is 0–1 dBA, the resultant noise

level will be 3 dBA higher than the louder noise source, or both sources if they are equal. If the difference between two noise sources is 2–3 dBA, the resultant noise level will be 2 dBA above the louder noise source. If the difference between two noise sources is 4–10 dBA, the resultant noise level will be 1 dBA higher than the louder noise source.

ATTENUATION OF NOISE

Sound typically attenuates from stationary point sources at a rate of 6 dB per doubling of distance (e.g., 6 dB at 50 feet, 12 dB at 100 feet, 18 dB at 200 feet). For line sources such as free-flowing traffic on freeways, sound attenuates at approximately 3 dB per doubling of distance (e.g., 3 dB at 50 feet, 6 dB at 100 feet, 9 dB at 200 feet).

Atmospheric conditions (such as wind, temperature gradients, and humidity) can change how sound propagates over distance and can affect the level of sound received at a given location. The degree to which the ground surface absorbs acoustical energy also affects sound propagation. Sound traveling over an acoustically absorptive surface (such as grass) attenuates at a greater rate than sound traveling over a hard surface (such as pavement). The increased attenuation caused by acoustical air and ground absorption typically is in the range of 1–2 dB per doubling of distance. Barriers that block the line of sight between a source and receiver, such as buildings and topography, also increase the attenuation of sound over distance.

SENSITIVE RECEPTORS

Noise-sensitive land uses generally consist of those uses where exposure to noise would result in adverse effects, and uses for which quiet is an essential element of the intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. Other noise-sensitive uses include hospitals, convalescent facilities, hotels, churches, libraries, and other uses where low noise levels are essential.

The San Francisco General Plan quantifies noise sensitivity with guidelines for "satisfactory" noise levels by land-use type. For example, residences are expected to have a maximum exterior L_{dn} of 60 dBA, while 65 dBA L_{dn} is considered to be appropriate for schools and libraries.

Health Effects of Environmental Noise

The U.S. Environmental Protection Agency (U.S. EPA) noise investigation and control program has been inactive since the 1970s, but European nations have continued to study noise and its health effects. Therefore, the World Health Organization is one of the best sources of current

knowledge regarding health impacts of noise.[2] The organization found that sleep disturbance can occur when continuous indoor noise levels exceed a 30-dBA equivalent noise level (L_{eq}), or when intermittent interior noise levels reach a 45-dBA maximum noise level, particularly if background noise is low.[3]

The World Health Organization's criteria suggest that when a bedroom window is slightly open (representing a 15-dB noise level reduction from outside to inside), exterior continuous (ambient) nighttime noise levels in residential areas should be 45 dBA L_{eq} or quieter, particularly in areas with older housing stock. An acoustically well-insulated building with its windows and doors closed can provide 30–35 dB of noise attenuation. More conventional residential construction provides 20–25 dB of noise reduction with the windows closed and only about 15 dB of noise reduction when the windows are open.

Other potential health effects of noise identified by the World Health Organization 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. This last effect generally occurs after long-term occupational exposure, although shorter term exposure to very high noise levels, such as concert noise at 100 dBA several times a year, also can impair hearing.

In addition, relatively low-level noise can disrupt speech intelligibility (e.g., in a classroom setting, a noise level as low as 35 dBA can disrupt clear understanding). Furthermore, noise can cause annoyance and trigger emotional reactions, including anger, depression, and anxiety. The World Health Organization reports that during daytime hours, few people are seriously annoyed by activities with noise levels below 55 dBA or moderately annoyed by noise levels below 50 dBA.[4]

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. The peak particle velocity (PPV) and root-mean-square (RMS) velocity normally are described in inches per second (in/sec). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is

[2] The San Francisco General Plan's land use compatibility guidelines for community noise, shown in Figure IV.E-3 of the general plan, were created during the same era (see Table 4.3.10 below).
[3] World Health Organization, *Guidelines for Community Noise,* April 1999, http://apps.who.int/iris/handle/10665/66217, accessed January 25, 2018.
[4] Ibid.

the metric often used to describe blasting vibration and other vibration sources that may result in structural stresses on buildings.[5]

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response to ground vibrations. It takes some time for the human body to respond to vibration signals; therefore, average vibration amplitude (the RMS velocity) is the most appropriate descriptor for gauging human response to typical ground vibration. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a period of 1 second. As with airborne sound, the RMS velocity often is expressed in dB notation as vibration dB (VdB), which serves to compress the range of numbers required to describe vibration. This VdB scale is based on a reference value of 1 microinch per second. According to Federal Transit Administration (FTA) guidance,[6] the background vibration-velocity level typical of residential areas is approximately 50 VdB.

Groundborne vibration normally is perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels.[7]

Existing Noise Environment

The project area's existing noise environment is typical of a downtown urban setting, with primarily commercial, office, and mixed-use residential development within a grid of about two dozen city blocks surrounding the project site. Motor vehicles traveling on U.S. Highway 101 and arterial roadways (such as South Van Ness Avenue and Market Street), along with occasional distant aircraft overflights, generally contribute to transportation-related noise. In addition to vehicular traffic, intermittent outdoor noise sources on and near the project site include construction activities occurring, people talking, building equipment operating (e.g., heating, ventilation, and air conditioning [HVAC]), vehicle doors slamming, vehicle horns honking, and dogs barking. These continuous (e.g., roadway traffic) and intermittent acoustical contributors combine to influence the measurable, perceptible outdoor sound environment.

[5] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06, May 2006, https://transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf, accessed January 25, 2018.
[6] Ibid.
[7] Ibid.

EXISTING NOISE-SENSITIVE LAND USES

The project site is in the Market & Octavia Area Plan area and is located in the South of Market neighborhood of San Francisco. The site is a triangular lot, bordered by South Van Ness Avenue to the east, Market Street to the north, and 12th Street to the west. Noise-sensitive multifamily residential land uses in the project vicinity occur among the several large, mixed-use commercial, office, and residential land uses along Van Ness Avenue and Market Street.

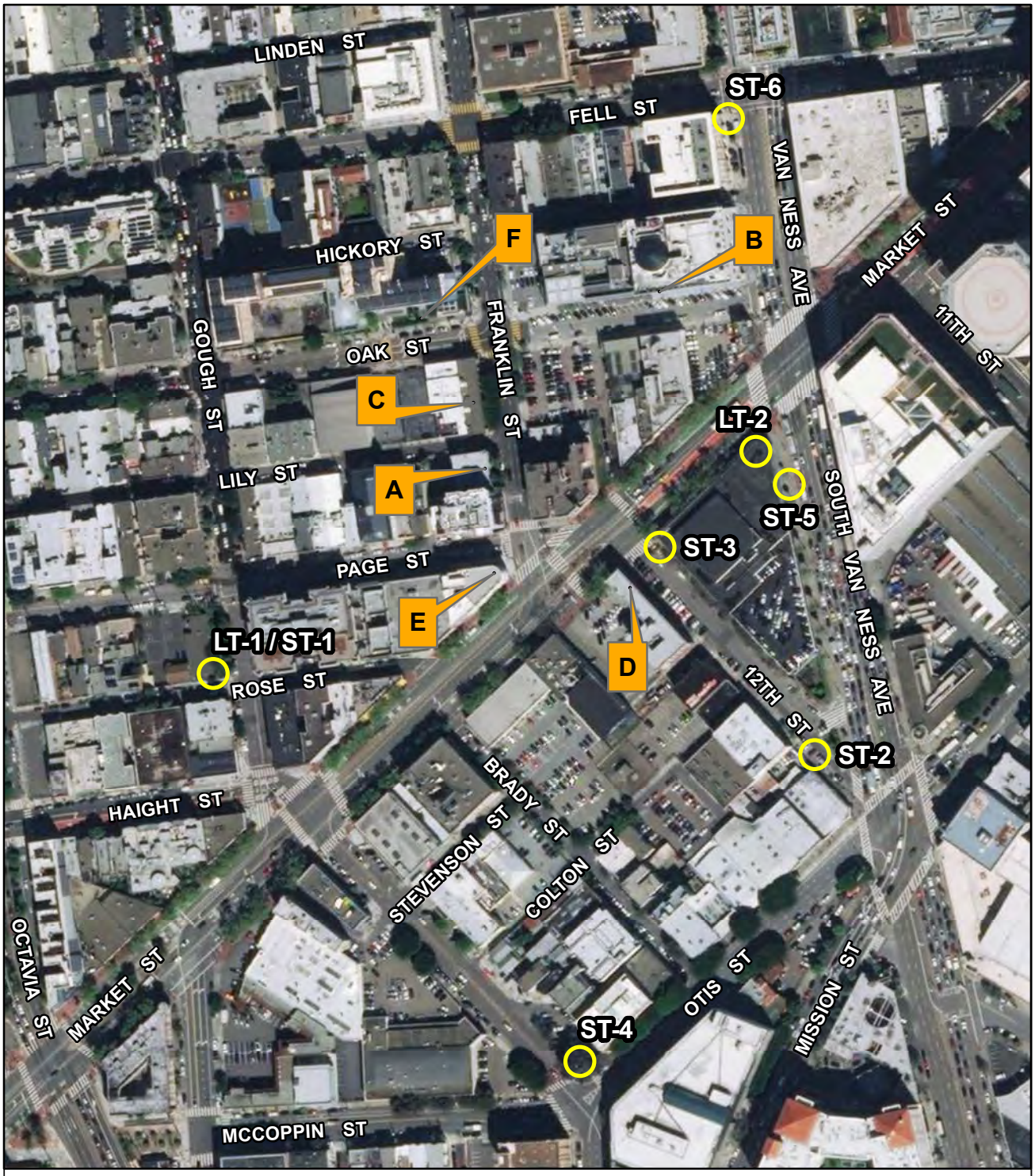
Figure 4.3.1: Noise Measurement Locations shows the six nearby noise-sensitive receptors and the locations where outdoor existing ambient sound levels were measured near the project site during the sound level survey, performed in May 2016.[8] The noise-sensitive receptors and noise monitoring locations are identified with callouts and yellow circles, respectively. The following existing noise-sensitive receptors are identified in the figure:

- **Location A:** 20 and 23 Franklin Street, multifamily residential buildings, each approximately 250 feet north of the project site
- **Location B:** The Conservatory of Music at 50 Oak Street, approximately 250 feet north of the project site
- **Location C:** 41 Franklin Street, a mixed-use residential and commercial building, approximately 300 feet north of the project site
- **Location D:** 20 12th Street, the Civic Center Hotel, a residential hotel, approximately 65 feet west of the project site
- **Location E:** 1600 Market Street, the Golden Gate Urgent Care facility, approximately 260 feet west of the project site
- **Location F:** 150 Oak Street, the Chinese American International School and French American International School, approximately 500 feet north of the project site

OUTDOOR AMBIENT NOISE LEVEL MEASUREMENTS

Table 4.3.3: Existing Outdoor Ambient Sound Levels shows long-term and short-term noise monitoring results. During the monitoring to establish existing sound levels, temperatures generally ranged from 61 to 68 degrees Fahrenheit, relative humidity ranged from 52 to 69 percent, and wind speeds were calm (0–2 miles per hour).

[8] The sound level measurements were made in 2016, before the new building at 1500 Mission Street began construction, in 2017. Therefore, the temporary construction noise from this development across from the project site was not captured in the measurements of existing noise conditions. As a result, the noise analysis may be conservative, as a higher "existing" noise level could reduce the additive effect of new noise from the proposed project or variant.



Source: AECOM (2017), SWCA (2018)

10 SOUTH VAN NESS MIXED-USE PROJECT

2015.004568ENV

FIGURE 4.3.1 NOISE MEASUREMENT LOCATIONS AND SENSITIVE RECEPTOR SITE LOCATIONS

Table 4.3.3: Existing Outdoor Ambient Sound Levels

Monitoring Location ID	Date(s)	Start and End Times	L_{eq} (dBA)
LT-1	May 11–12, 2016	10:50 a.m. to 10:50 a.m.	64 (day); 69 (evening); 64 (night)
LT-2	May 18–19, 2016	10:00 a.m. to 10:00 a.m.	71 (day); 69 (evening); 67 (night)
ST-1	May 11, 2016	10:52 a.m. to 11:07 a.m.	61.6
	May 11, 2016	4:50 p.m. to 5:10 p.m.	61.9
	May 11, 2016	9:21 p.m. to 9:27 p.m.	59.8
	May 11, 2016	10:00 p.m. to 10:05 p.m.	57.6
	May 12, 2016	9:22 a.m. to 9:32 a.m.	65.9
ST-2	May 11, 2016	11:26 a.m. to 11:39 a.m.	65.2
	May 11, 2016	5:28 p.m. to 5:38 p.m.	69.2
	May 12, 2016	8:44 a.m. to 8:54 a.m.	64.3
ST-3	May 11, 2016	11:46 a.m. to 11:56 a.m.	64.9
	May 11, 2016	5:41 p.m. to 5:51 p.m.	64.7
	May 12, 2016	8:30 a.m. to 8:40 a.m.	65.9
ST-4	May 11, 2016	12:08 p.m. to 12:18 p.m.	64.4
	May 11, 2016	5:14 p.m. to 5:24 p.m.	63.7
	May 12, 2016	8:59 a.m. to 9:10 a.m.	65.3
ST-5	May 11, 2016	12:33 p.m. to 12:43 p.m.	72.3
	May 11, 2016	5:54 p.m. to 6:09 p.m.	73.1
	May 11, 2016	9:09 p.m. to 9:15 p.m.	72.4
	May 11, 2016	10:12 p.m. to 10:17 p.m.	70.9
	May 12, 2016	8:17 a.m. to 8:27 a.m.	74.8
ST-6	May 11, 2016	12:52 p.m. to 1:02 p.m.	71.5
	May 11, 2016	6:17 p.m. to 6:27 p.m.	68.2
	May 11, 2016	9:00 p.m. to 9:05 p.m.	67.0
	May 11, 2016	10:21 p.m. to 10:26 p.m.	66.0
	May 12, 2016	8:03 a.m. to 8:13 a.m.	72.8

Notes: dBA = A-weighted decibels; ID = identification; L_{eq} = equivalent sound level; LT = long-term; ST = short-term

Source: AECOM, *10 South Van Ness Avenue Mixed-Use Project Final Noise Technical Report*, January 2018.

All but one of the sound level monitoring locations were at street level. Long-term (LT) sound level monitoring position #2 was located in the northern corner of the roof of the existing structure on the project site. The CNEL values that were calculated from measured sound pressure levels at LT-1 and LT-2 are 71 and 61 dBA, respectively. As the measurements were taken in 2016, they do not include the temporary noise levels from construction of the new high-rise building at 1500 Mission Street that began in 2017 and is anticipated to be completed by 2020.[9]

Regulatory Framework

Federal

NOISE CONTROL ACT

The U.S. EPA Office of Noise Abatement and Control originally was established to coordinate federal noise control activities. The federal Noise Control Act of 1972 established programs and guidelines to identify and address the effects of noise on public health and welfare, and the environment. Although primary responsibility for regulating noise was transferred to state and local governments in 1982, U.S. EPA provided guidelines for noise levels that were considered safe for community exposure without the risk of adverse health or welfare effects. U.S. EPA found that to prevent hearing loss over the lifetime of a receptor, the yearly average L_{eq} should not exceed 70 dBA, and to prevent interference and annoyance, the L_{dn} should not exceed 55 dBA in outdoor activity areas or 45 dBA indoors. **Table 4.3.4: Summary of Noise Levels Identified by U.S. EPA as Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety** lists these guidance metrics among other U.S. EPA recommendations.

FEDERAL TRANSIT ADMINISTRATION STANDARDS AND GUIDELINES

The City currently does not have quantitative vibration standards or limits. Instead, the City uses the groundborne vibration standards and guidelines from FTA's technical manual, *Transit Noise and Vibration Impact Assessment,*[10] which provides guidelines for analyzing impacts of construction noise and groundborne vibration with respect to building damage occurring during construction activities. **Table 4.3.5: Federal Transit Administration General Assessment Criteria for Construction Noise** summarizes the FTA's general assessment criteria for construction noise.

[9] Thomas DiSanto, Deputy Director of Administration and Deborah Landis, Deputy Director of Administration, Memorandum to Planning Commission, FY 2018-20 Budget – Proposed Budget and Work Program, January 18, 2018. Available on line at http://default.sfplanning.org/administration/finance/finance_CPC_FY2018-20_Budget_Proposed_Budget_and_Work_Program-011818.pdf. Accessed August 9, 2018.

[10] Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06, May 2006, https://transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf, accessed January 25, 2018.

Table 4.3.4: Summary of Noise Levels Identified by U.S. EPA as Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety

Effect	Level	Area
Hearing loss	L_{eq} (24 hr) < 70 dBA [a]	All areas
Outdoor activity interference and annoyance	L_{dn} < 55 dBA	Outdoor residential areas and farms as well as other outdoor areas where people spend varying amounts of time and places where quiet is a basis for use
Outdoor activity interference and annoyance	L_{eq} (24 hr) < 55 dBA	Outdoor areas where people spend limited amounts of time, such as school yards and playgrounds
Indoor activity interference and annoyance	L_{dn} < 45 dBA	Indoor residential areas
Indoor activity interference and annoyance	L_{eq} (24 hr) < 45 dBA	Other indoor areas with human activities, such as schools

Notes: dBA = A-weighted decibels; hr = hour; L_{dn} = day-night noise level; L_{eq} = equivalent noise level; U.S. EPA = U.S. Environmental Protection Agency

[a] Yearly average equivalent sound levels in decibels; the exposure period that results in hearing loss at the identified level is 40 years.

Source: U.S. Environmental Protection Agency, *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*, 1974, http://nepis.epa.gov/Exe/ZyPDF.cgi/2000L3LN.PDF?Dockey=2000L3LN.PDF, accessed December 3, 2015.

Table 4.3.5: Federal Transit Administration General Assessment Criteria for Construction Noise

	1-Hour L_{eq} (dBA)	
Land Use	**Day**	**Night**
Residential	90	80
Commercial	100	100
Industrial	100	100

Notes: dBA = A-weighted decibels; L_{eq} = equivalent noise level.

Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06, May 2006, https://transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf, accessed January 25, 2018.

FTA recommends the guidelines specified in Table 4.3.5 for a general assessment of construction noise. If the combined noise level in one hour from the two noisiest pieces of equipment exceeds these criteria, an adverse community reaction may result.

FTA also provides guidelines that are applicable to various building categories for evaluating potential damage from groundborne vibration. **Table 4.3.6: Federal Transit Administration–Recommended Vibration-Damage Criteria** shows FTA's recommended vibration-damage criteria for construction activities: 0.20 in/sec PPV (94 VdB) for nonengineered timber and masonry buildings and 0.50 in/sec PPV (102 VdB) for structures or buildings constructed of reinforced concrete, steel, or timber.

Table 4.3.6: Federal Transit Administration–Recommended Vibration-Damage Criteria

Building Category	PPV (in/sec)	Approximate VdB[1]
Reinforced concrete, steel, or timber (no plaster)	0.50	102
Engineered concrete and masonry (no plaster)	0.30	98
Nonengineered timber and masonry buildings	0.20	94
Buildings extremely susceptible to vibration damage	0.12	90

Notes:
in/sec = inch per second; PPV = peak particle velocity; VdB = vibration decibels
[1] Root-mean-square velocity in decibels (i.e., VdB) referenced to 1 microinch per second.
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06, May 2006, https://transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf, accessed January 25, 2018.

In addition, FTA has guidelines for the maximum acceptable vibration criteria for different types of land uses. These criteria, based on the frequency of an event, are applied to specific land use types to address the human response to groundborne vibration. **Table 4.3.7: Federal Transit Administration–Recommended Criteria for Groundborne Vibration Impacts** shows the FTA-recommended criteria for groundborne vibration impacts for various land uses. As shown, FTA recommends a maximum vibration level of 80 VdB for residential uses and buildings where people normally sleep, and 83 VdB for institutional land uses with primarily daytime operations (e.g., schools, churches, clinics, offices).[11]

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

The U.S. Department of Housing and Urban Development has set guidelines for acceptable noise levels in residential areas. These guidelines are specified in Code of Federal Regulations Title 24, part 51, and are as follows:

- Acceptable—65 dBA L_{dn} or less
- Normally unacceptable—exceeding 65 dBA L_{dn} but not exceeding 75 dBA L_{dn}

[11] Ibid.

Table 4.3.7: Federal Transit Administration–Recommended Criteria for Groundborne Vibration Impacts

Land Use Category	Impact Levels (VdB)		
	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations	65[4]	65[4]	65[4]
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime uses	75	78	83

Notes:
VdB = vibration level in decibels, referenced to 1 microinch per second.
[1] Defined as more than 70 vibration events of the same source per day. Most rapid-transit projects fall into this category.
[2] Defined as 30–70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
[3] Defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail branch lines.
[4] This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research requires detailed evaluation to define the acceptable vibration levels. Ensuring lower vibration levels in a building often requires special design of the heating, ventilation, and air conditioning systems, and stiffened floors.
Source: Federal Transit Administration, *Transit Noise and Vibration Impact Assessment*, FTA-VA-90-1003-06, May 2006, https://transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf, accessed January 25, 2018.

- Unacceptable—exceeding 75 dBA L_{dn}. The department's guidelines also include a goal (not a standard) for interior noise levels not to exceed 45 dBA L_{dn}.[12] Sound-attenuating features, such as barriers or sound-attenuating building materials, are to be used to achieve the interior noise goal where feasible. Standard building construction generally provides 20 dB of sound attenuation; therefore, if the exterior noise environment is classified as acceptable (e.g., 65 dBA L_{dn} or less) according to the U.S. Department of Housing and Urban Development's guidelines, the interior noise environment should not exceed 45 dBA L_{dn}. The guidelines also encourage the use of quieter construction equipment and methods.[13]

[12] Code of Federal Regulations title 24, section 51.103(c).
[13] Code of Federal Regulations Title 24, section 51.101(7).

State

CALIFORNIA DEPARTMENT OF TRANSPORTATION VIBRATION GUIDELINES

In its *Transportation and Construction Vibration Guidance Manual,*[14] Caltrans provides guidance related to annoyance from noise, as shown in **Table 4.3.8: Vibration Guidelines for Annoyance**.

Table 4.3.8: Vibration Guidelines for Annoyance

	Maximum Peak Particle Velocity (in/sec, PPV)	
Human Response	**Transient Sources[1]**	**Continuous/Frequent Intermittent Sources[2]**
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.10

Notes:
in/sec = inches per second; PPV = peak particle velocity
[1] Transient sources create a single, isolated vibration event, such as blasting or drop balls.
[2] Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
Source: Caltrans, *Transportation and Construction Vibration Guidance Manual*, September 2013, Table 20, p. 38. Available online at http://www.dot.ca.gov/hq/env/noise/publications.htm.

Caltrans also offers guidance with respect to vibration velocity thresholds pertaining to building damage risk. Similar to the FTA-based guidance shown in Table 4.3.6, the Caltrans guidance shown in **Table 4.3.9: Caltrans Guidelines for Vibration Damage Potential** includes suggested vibration limits for two types of vibration sources: transient and continuous, explained in the table note.

STATE OF CALIFORNIA GENERAL PLAN GUIDELINES

The State of California has adopted noise compatibility guidelines for general land use planning. The types of land uses addressed by the state standards and the acceptable noise categories for each land use are included in Appendix D, Noise Element Guidelines, of the *State of California General Plan Guidelines,*[15] published and updated by the Governor's Office of Planning and Research. The level of acceptability of the noise environment depends on the activity associated with each particular land use. According to the state guidelines, an exterior noise environment up to 65 dBA L_{dn}/CNEL is considered normally to be acceptable for residential use; up to 70 dBA L_{dn}/CNEL is considered normally to be acceptable for school, office, and commercial uses.

[14] California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013, http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf, accessed April 8, 2018.
[15] Governor's Office of Planning and Research, *State of California General Plan Guidelines*, 2017, http://www.opr.ca.gov/planning/general-plan/guidelines.html, accessed January 25, 2018.

Table 4.3.9: Caltrans Guidelines for Vibration Damage Potential

Structure and Condition	Transient Sources PPV (in/sec)	Continuous/Frequent Intermittent Sources PPV (in/sec)
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Notes:
Caltrans = California Department of Transportation; in/sec = inch per second; PPV = peak particle velocity
Transient sources create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.
Source: California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, 2013, http://www.dot.ca.gov/hq/env/noise/pub/TCVGM_Sep13_FINAL.pdf, accessed April 8, 2018.

CALIFORNIA BUILDING STANDARDS CODE

The State of California has established noise insulation standards for new multifamily residential units, hotels, and motels that would be subject to relatively high levels of transportation-related noise. These requirements are collectively known as the California Noise Insulation Standards and are provided in the 2016 California Building Code.[16] The noise insulation standards set forth an interior standard of 45 dBA L_{dn}/CNEL in any habitable room. The code requires an acoustical analysis, demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dBA L_{dn}/CNEL. Title 24 standards typically are enforced by local jurisdictions through the building permit application process.

CALIFORNIA GREEN BUILDING STANDARDS CODE

In addition to the noise insulation standards for residential and hotel uses, as described above, the State of California has established noise insulation standards for nonresidential uses in the 2016 California Green Building Standards Code.[17] The code's noise insulation standards establish an interior standard of 50 dBA 1-hour L_{eq} in occupied areas during hours of operation.

[16] California Code of Regulations Title 24, part 2, section 1207.
[17] California Code of Regulations, Title 24, part 11, section 5.507.

Local

SAN FRANCISCO GENERAL PLAN

The *San Francisco General Plan* (general plan) focuses on the effect on the community of noise from ground-transportation noise sources and includes a land use compatibility chart for community noise. This chart (**Table 4.3.10: San Francisco Land Use Compatibility Chart for Community Noise**) identifies a range of noise levels considered generally to be compatible or incompatible with various land uses.

The chart also indicates when to consider or analyze special noise reduction requirements, such as providing sound insulation for affected properties. Residential and hotel uses are considered compatible (satisfactory) in areas where the noise level is 60 dBA L_{dn} or less; schools, classrooms, libraries, churches, and hospitals are compatible in areas where the noise level is 65 dBA L_{dn} or less; and playgrounds, parks, offices, retail commercial uses, and noise-sensitive manufacturing and communication uses are considered compatible in areas where the noise level is 70 dBA L_{dn} or less.

SAN FRANCISCO NOISE CONTROL ORDINANCE

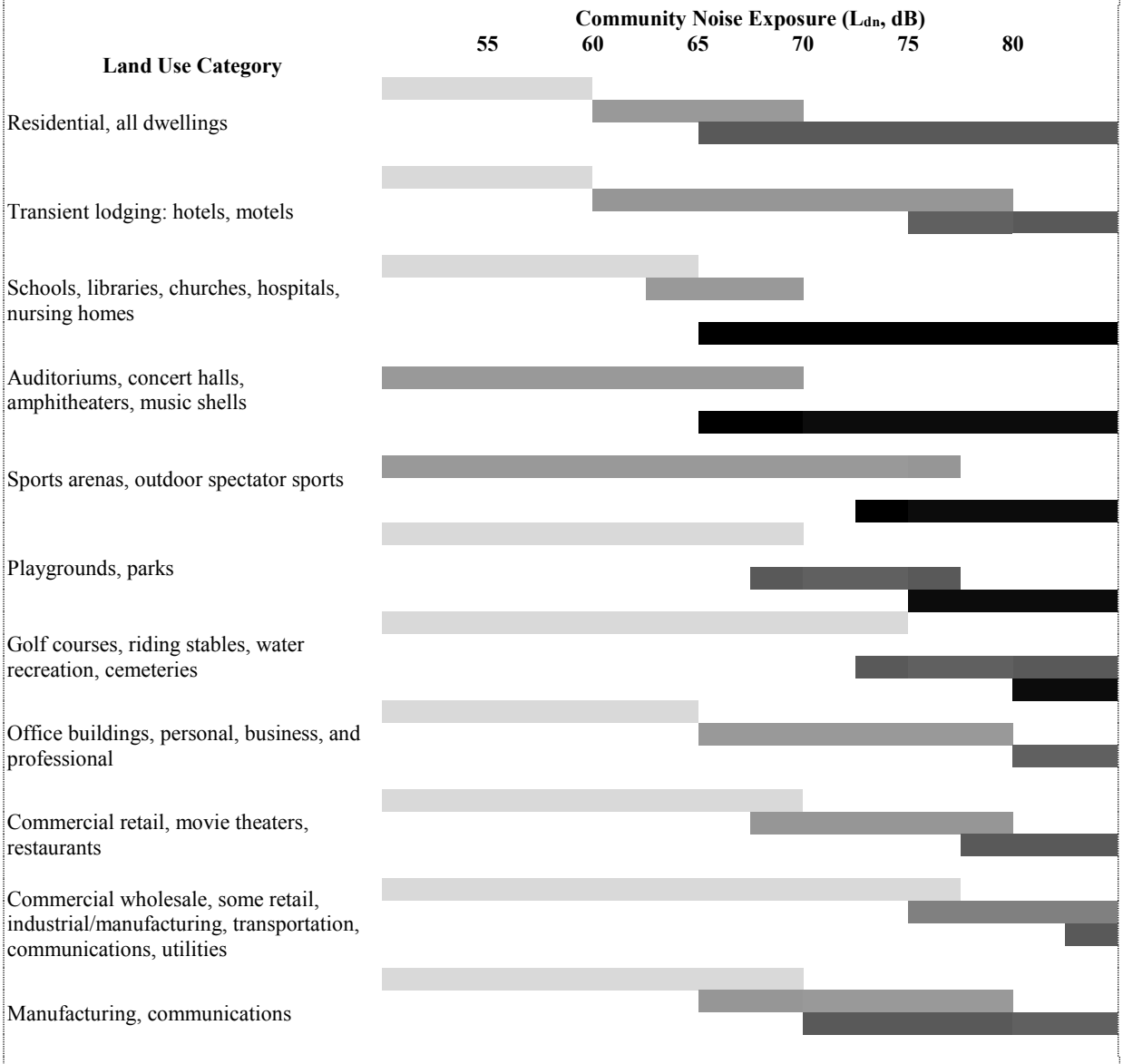
The San Francisco Noise Control Ordinance regulates sources of both construction noise and stationary-source noise within the city limits, such as transportation, construction, mechanical equipment, entertainment, and human or animal behavior. San Francisco Police Code article 29, Regulation of Noise, addresses noise from construction equipment, nighttime construction work, and stationary mechanical equipment and waste processing activities.

Section 2907, Construction Equipment, and Section 2908, Construction Work at Night

The following sections of the Noise Control Ordinance establish noise levels for construction equipment. Section 2907(a) limits noise levels from construction equipment to 80 dBA at 100 feet (or other equivalent noise level at another distance) between 7 a.m. and 8 p.m. According to section 2908, construction work at night (from 8 p.m. to 7 a.m.) may not exceed the ambient level by 5 dB at the nearest property plane unless the director of public works or the director of building inspection grants a special permit before the start of such work.

The provisions of section 2907(a) do not apply to impact tools and equipment that have intake and exhaust mufflers as recommended by the manufacturers, and that are approved by the director of public works or the director of building inspection as accomplishing maximum noise attenuation. The noise exemption also applies to pavement breakers and jackhammers that are equipped with acoustically attenuating shields or shrouds as recommended by the manufacturers, and that are approved by the director of public works or the director of building inspection as accomplishing maximum noise attenuation.

Table 4.3.10: San Francisco Land Use Compatibility Chart for Community Noise



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 requirement must be made and needed noise insulation features included in the design.

New construction or development should generally not be undertaken.

Notes: dB = decibels; L_{dn} = day-night noise level
Source: City and County of San Francisco, *San Francisco General Plan*, Environmental Protection Element, 2009, Available on-line at: http://generalplan.sfplanning.org/I6_Environmental_Protection.htm#ENV_TRA_11_1, accessed January 24, 2018.

Section 2909, Noise Limits

This section of the Noise Control Ordinance regulates noise from onsite stationary noise sources (e.g., stationary mechanical and electrical equipment) within specific land uses. Section 2909 states that the noise levels from equipment operating on the project property is not to exceed the ambient noise levels at the property plane by the following amounts:

- 5 dBA, if the noise source is on a residential property
- 8 dBA, if the noise source is on a commercial or industrial property
- 10 dBA, if the noise source is on a public property

In addition, section 2909 states that no fixed (permanent) noise source may cause the noise level inside any sleeping or living room in a residential dwelling unit to exceed 45 dB between 10 p.m. and 7 a.m., or 55 dB between 7 a.m. and 10 p.m. when windows are open, except where building ventilation is achieved through mechanical systems that allow windows to remain closed.

Impacts and Mitigation Measures

Significance Thresholds

The significance thresholds in this analysis are consistent with the environmental checklist in CEQA Guidelines Appendix G, as modified by the San Francisco Planning Department (planning department). For this analysis, the following applicable thresholds were used to determine whether implementing the proposed project or the variant would result in a significant impact related to noise and vibration. The project would have a significant effect on noise and vibration 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.

Approach to Analysis

CONSTRUCTION NOISE IMPACTS

Construction of the proposed project or variant is anticipated to occur over 36 months and would include the following general phases: (1) demolition; (2) shoring and excavation; (3) foundation

and podium construction; (4) tower(s)/superstructure/skin; and (5) interior work. Construction hours typically would be from 7 a.m. to 8 p.m., Monday through Thursday, and 7 a.m. to 5 p.m. on Fridays. Limited evening/nighttime work (from 8 p.m. to 7 a.m.) and work on Saturdays (from 7 a.m. to 5 p.m.) would be required during the third and fourth construction phases. The construction noise analysis includes an evaluation of compliance with the noise ordinance criteria.

Daytime construction noise levels were estimated using a method similar to the general assessment technique that is described in the FTA guidance manual, a method that studied the anticipated two loudest pieces of onsite construction equipment. The noise technical report[18] presents details regarding the approach to the analysis, including the construction equipment considered for each construction phase, their respective reference sound levels, their locations, and the expected noise attenuation factors of approximately 6 dBA reduction for every doubling of distance. Construction activities that would cause a temporary increase in noise levels of greater than 10 dBA above the ambient noise level or noise levels of 90 dBA at sensitive receptor locations could be considered a significant impact if either the degree of exceedance of the above quantitative standards or the duration of the exceedance is substantial, or both.

In addition, in order to prevent health effects resulting from sleep disturbance, the quantitative analysis of nighttime construction noise was evaluated based on the potential for construction noise to result in interior noise levels of 45 dBA or more at sensitive receptor locations. A significant noise impact from nighttime construction noise is determined by considering the degree of the exceedance of the 45 dBA interior noise standard and the duration of the exceedance.

OPERATIONAL NOISE IMPACTS

Both project scenarios would include one emergency generator and mechanical equipment, which would be located in the garage. Heating, ventilation and air conditioning (HVAC) equipment would be located on the roof of either the proposed project or variant. To evaluate operational noise impacts from stationary sources, such as HVAC equipment and backup generators, the noise levels generated by outdoor stationary noise sources associated with the proposed project or variant were estimated and then were compared to the City's standards in the noise ordinance.

For the buildings' fixed mechanical equipment (which also would include equipment installed inside with intakes or vents on the building facades), a noise performance criterion was specified to meet the City's noise standards because detailed design information is not available at this stage of the proposed project. The City's Noise Control Ordinance states that noise from project-related fixed mechanical equipment should not exceed the ambient noise level by 5 dBA at the

[18] AECOM, *10 South Van Ness Avenue Mixed-use Project Noise Final Technical Report*, January 2018, pp. 18-19.

noise source property plane for residential uses. The ordinance also specifies that noise levels generated by loading dock and trash compactor operations are not to exceed 75 dBA at a distance of 50 feet.

TRAFFIC NOISE IMPACTS

A potentially significant increase in the ambient noise level due to traffic resulting from a proposed project is unlikely unless the project would cause a doubling of existing traffic levels, which in turn is generally assumed to result in a 3 dBA increase in the existing ambient noise level.[19] Although a 5 dBA increase in the ambient noise environment is readily perceptible, in areas where the noise environment is already degraded, such as the project site, a lower standard of 3 dBA is necessary to ensure that there would not be a significant increase in ambient noise levels.

GROUNDBORNE VIBRATION IMPACTS

The proposed project and variant would require the same construction activities and would have the same intensity and duration of construction.

Determining potential vibration effects at the location of a noise-sensitive land use requires comparing predicted vibration levels with established criteria. The analysis of potential building damage is based on the vibration levels generated by the project at nearby buildings. A significant impact would occur if the FTA vibration standard listed in Table 4.3.6 on p. 4.3.13 is exceeded at nearby buildings, with a particular focus on vibration effects on historic buildings. A significant impact with regard to human annoyance from vibration could occur if vibration would result in sleep disturbance.

For assessing human annoyance resulting from a transient vibration event (e.g., a heavy vehicle pass-by or temporary operation of stationary vibration-producing equipment), FTA guidance indicates that a maximum of 80 VdB is acceptable for infrequent (fewer than 70 per day) vibration events. For this analysis, it was assumed that these transient, construction-related vibration events may take place as close as the project site boundary.

This analysis of construction vibration assumes that during each of the four studied exterior-construction phases for noise, a piece of equipment or activity may dominate with respect to vibration. The assumed equipment or activity for these phases and their reference vibration velocity levels are as follows:

[19] Caltrans, *Technical Noise Supplement*, November 2009, p. 2-48. Available at: http://www.dot.ca.gov/env/noise/docs/tens-nov2009.pdf. Accessed December 18, 2017.

- **Demolition:** Large bulldozer (0.089 in/sec and 87 RMS VdB at 25 feet)
- **Shoring and excavation**: Loaded truck (0.076 in/sec and 86 RMS VdB at 25 feet)
- **Foundation and podium**: Caisson drilling (i.e., augering cast-in-place piles, 0.089 and 87 RMS VdB, respectively)
- **Tower(s)/superstructure/skin**: Loaded truck (0.076 in/sec and 86 RMS VdB at 25 feet)

Project Features

The proposed project or variant would demolish the existing building on the project site and construct a mixed-use development that would include residential, commercial, parking, and open space uses. A complete project description is included in Chapter 2, Project Description. This section includes a description of project features that are pertinent to noise impacts. The proposed project and variant features related to noise are similar; therefore, they are discussed together.

Under the proposed project, the existing building would be demolished and two podiums would be constructed, with one tower above each podium. The towers would have a maximum height of approximately 400 feet above the ground (420 feet total, including roof screens and the stair/elevator penthouse on each tower) and would have 20-foot-tall parapets. The podium portion would rise to a height of approximately 120 feet above the ground.

Under the variant, the existing building would be demolished and a single podium would be constructed, with a single tower above. The tower would be 590 feet tall and 55 stories above the ground. Like the proposed project, the variant would include a stair/elevator penthouse that would extend up to 20 feet above the roof height, for a total height of 610 feet. The podium portion of the building would rise to a height of approximately 164 feet above the ground.

As noted above, construction of either the proposed project or the variant is anticipated to occur over 36 months and would include the following generalized phases: (1) demolition; (2) shoring and excavation; (3) foundation and podium construction; (4) tower(s)/superstructure/skin; and (5) interior work. Construction hours would typically be from 7 a.m. to 8 p.m., Monday through Thursday, and 7 a.m. to 5 p.m. on Fridays. Limited evening/nighttime work (from 8 p.m. to 7 a.m.) and work on Saturdays (7 a.m. to 5 p.m.) would be required for the third and fourth construction phases. No impact pile driving is required for construction of the proposed project. The straight shot streetscape design variant would widen the sidewalk on 12th Street adjacent to the proposed building to provide a pedestrian promenade. Construction would involve the same types of equipment and activities for the proposed project and variant, and therefore is not analyzed separately.

The proposed project or variant would include onsite stationary sources consisting of HVAC equipment, a loading dock, a standby generator, and a trash compactor near existing sensitive uses. The design and placement of the loading dock and trash compactor would include barriers

and/or shielding as required to meet the limit of 75 dBA at a distance of 50 feet established by section 2904 of the Noise Control Ordinance.

Impact Analysis

Impact NO-1: Proposed project or variant construction would generate noise levels in excess of standards and would result in substantial temporary increases in ambient noise levels. (*Less than Significant with Mitigation)*

CONSTRUCTION NOISE ORDINANCE COMPLIANCE

The proposed project and variant would require the same construction activities and would have the same intensity and duration of construction. The loudest of the reference L_{max} values for the non-impact-type equipment anticipated for construction (of either the proposed project or variant), as listed in the *10 South Van Ness Avenue Mixed-Use Project Final Noise Technical Report*,[20] is 84 dBA at a reference distance of 50 feet (for a drill rig). Propagating this sound level to a distance of 100 feet would mean that use of this equipment at 100 feet would be less than 80 dBA; thus, noise from this loudest equipment and individual pieces of equipment having quieter reference noise levels would be compatible with the limit of 80 dBA at 100 feet, required by section 2907 of the noise ordinance in the San Francisco Police Code.

Daytime Construction Noise Impacts

Table 4.3.11: Predicted Daytime Construction Noise Levels (average hourly L_{eq}) at the Nearest Noise-Sensitive Receptors shows the predicted daytime construction noise levels resulting from project construction, assuming the simultaneous operation of the two loudest pieces of equipment for either the proposed project or variant at the six noise-sensitive receptor locations shown on Figure 4.3.1 for the first four construction phases: demolition, shoring and excavation, foundation and podium, and tower(s)/superstructure/skin. The fifth phase, interior work, is not expected to produce noise levels greater than any preceding phase. Most activities during the fifth phase would take place within the newly skinned structures, and thus, would be substantially attenuated by the building façade and would not significantly affect the noise-sensitive receptors. Because impact pile driving is not planned for the proposed project or variant, operation of other impact-type equipment that is expected to be used for construction would be compatible with the FTA daytime standards shown in Table 4.3.5.

[20] AECOM, *10 South Van Ness Avenue Mixed-use Project Final Noise Technical Report*, January 2018, revised September 2018, pp. 19-20.

Table 4.3.11: Predicted Daytime Construction Noise Levels (average hourly L_{eq}) at the Nearest Noise-Sensitive Receptors

Noise-Sensitive Receptor Location[1]	Street Address or Intersection	Approximate Distance from Construction Activity Centerpoint to Receiver (feet)	Estimated Existing Daytime L_{eq} (dBA) at Noise-Sensitive Receptor	Predicted Average Hourly L_{eq} (dBA) per Construction Phase			
				Demolition (Dozer + Dump Truck)	Shoring & Excavation (Excavator + Dump Truck)	Foundation & Podium (Concrete Pump Truck + Auger)	Tower(s)/ Superstructure /skin (Crane + Air Compressor)
A	20 and 23 Franklin Street	285	67	68	67	70	67
B	50 Oak Street	285	70	68	67	70	67
C	41 Franklin Street	335	67	66	65	69	66
D	20 12th Street	100	67	77	76	**80**	77
E	1600 Market Street	295	67	67	66	70	67
F	150 Oak Street	535	67	62	61	65	62

Notes:
dBA = A-weighted decibels; L_{eq} = equivalent sound level; **Bold** values indicate that the increase over the existing ambient sound level is predicted to exceed 10 dBA.
[1]Figure 4.3.1 shows the locations of the noise-sensitive receptors.
Source: AECOM, *10 South Van Ness Avenue Mixed-use Project Noise Technical Report*, January 2018, revised September 2018.

Based on the average of short-term (ST) measurements from ST-1 and ST-5, existing daytime L_{eq} levels at noise-sensitive receptor locations A, C, D, E, and F are approximately 67 dBA. Based on the short-term L_{eq} measurements from ST-6, the existing daytime L_{eq} at noise-sensitive receptor location B is approximately 70 dBA. Considering these existing daytime noise levels, the use of a concrete pump truck and augur during the foundation and podium construction phase may result in a noise level of 80 dBA, an increase above this ambient of up to 13 dBA at noise-sensitive receptor location D (the Civic Center Hotel on 12th Street, across the street from the project site). While the foundation and podium construction phase may last from four to five months, the main concrete pumping activity would occur during short periods of this phase. A continuous concrete pour for the foundation mat is expected to take approximately 24 hours, and thus would occur over at least one night. Use of concrete pump trucks for other aspects of building construction would be much shorter and are expected to occur during daytime hours. The 13 dBA increase would be greater than 10 dBA above the ambient noise level; therefore, this impact would be significant.

Mitigation Measure M-NO-1: Prepare and Implement Construction Noise Plan

The project sponsor shall prepare a construction noise plan for review and approval by Planning Department and Department of Building Inspection before permit issuance, demonstrating that daytime and nighttime construction noise resulting from the proposed project or variant will not exceed applicable limits of the noise ordinance and will not cause a temporary increase in ambient noise levels greater than 10 dBA L_{eq}. The plan shall include, and project sponsor's construction contractor(s) shall implement, the following features:

- **Stage Concrete Pump Trucks during Daytime along South Van Ness Avenue or Attenuate Truck Noise at Noise Sensitive Receptors**

  The project sponsor shall (through the construction contractor) stage the use of concrete pump trucks along South Van Ness Avenue adjacent to the project site during daytime construction activities. If it is undesirable to stage concrete pump trucks along South Van Ness Avenue, the project sponsor shall install noise attenuation features around the staging area of the concrete pump trucks in order to attenuate construction noise at the closest sensitive receptor at 20 12th Street.

- **Prohibit Use of Concrete Pump Trucks at Night at Any Locations that Analysis Shows Fail to Meet Established Noise Levels at Sensitive Receptors**

  The project sponsor shall (through the construction contractor) prepare a site-specific noise analysis, including measurements at the closest sensitive receptor site, the Civic Center Hotel at 20 12th Street, of noise from concrete pump trucks, showing that use of concrete pump trucks at various locations on or around the project site including along South Van Ness Avenue would not result in interior noise levels above 45 dBA during nighttime hours (8 p.m. to 7 a.m.) at the receptor site. A report presenting the results of this analysis shall be provided to the Department of Building Inspection prior to authorization to conduct nighttime construction activities that would involve the use of any concrete pump trucks, and concrete pump trucks shall be authorized only at the locations on or adjacent to the project site that are shown in the report to meet the 45 dBA interior noise level at the sensitive receptor site.

- **Telephone Hotline for Noise Complaint Reporting**

  The project sponsor (through the construction contractor) shall establish a telephone hotline for use by the public to report any perceived adverse noise conditions associated with construction of the proposed project or variant. If the telephone is not staffed 24 hours per day, the contractor shall include an automatic answering feature, with date and time stamp recording, to answer calls when the phone is unattended. This hotline telephone number shall be posted at the project site during construction in a manner and at a location visible to passers-by. This telephone number shall be maintained until the proposed project or variant has been considered commissioned and is ready for occupancy.

- **Investigate and Respond to Noise Complaints**

  The project sponsor (through the construction contractor) shall document, investigate, evaluate, and attempt to resolve all project-related noise complaints. The contractor or authorized agent shall implement all of the following measures:

- Use a noise complaint resolution form to document and respond to each noise complaint.
- Contact the person(s) making the noise complaint within 24 hours.
- Conduct an investigation to attempt to determine the source of noise related to the complaint.
- Take reasonable measures to reduce noise at its source (or abate the noise along the direct sound path between the source and the receptor of concern) if the source of the noise that has generated the complaint is associated with construction of the proposed project or variant and is found to involve any of the following:
  - Noise from a construction activity that is causing interior noise levels at a noise-sensitive receptor to exceed 45 dBA during the nighttime hours of 8 pm to 7 am.
  - Noise levels that exceed 10 dBA above the ambient at noise sensitive receptors

To determine if any of the above are met, noise readings shall be taken at the noise sensitive receptor location with the equipment at issue in operation and again with such equipment not in operation.

- **Implement Best Construction Practices**

  To the extent practical, the construction contractor shall adopt and implement the following typical field techniques for reducing noise from construction activities, to reduce aggregate construction noise levels for nearby noise-sensitive receptors

  - Unless safety provisions require otherwise, adjust audible backup alarms downward in sound level while still maintaining an adequate signal-to-noise ratio for alarm effectiveness. Consider signal persons, strobe lights, or alternative safety equipment and/or processes as allowed to reduce reliance on high-amplitude sonic alarms/beeps.
  - Place stationary noise sources, such as generators and air compressors, on the project site as far away from nearby noise-sensitive receptors as possible.
  - Place non-noise-producing mobile equipment, such as trailers, in the direct sound pathways between suspected major noise-producing sources and noise-sensitive receptors.

- **Implement Measures to Reduce Equipment Noise Generation**

  To the extent practical, the construction contractor shall implement one or more of the following measures for construction equipment selection (or preferences) and expected functions to help reduce noise:

  - Provide impact noise-producing equipment (i.e., jackhammers and pavement breaker[s]) with noise-attenuating shields, shrouds, or portable barriers or enclosures, to reduce operating noise.
  - Line or cover hoppers, storage bins, and chutes with sound-deadening material (e.g., apply wood or rubber liners to metal bin impact surfaces).

- Provide upgraded mufflers, acoustical lining, or acoustical paneling for other noisy equipment, including internal combustion engines.
- Use alternative procedures of construction and select a combination of techniques that generates the least overall noise and vibration.
- Use construction equipment manufactured or modified to reduce noise and vibration emissions, such as the following:
  - Electric equipment instead of diesel-powered equipment
  - Hydraulic tools instead of pneumatic tools
  - Electric saws instead of air- or gasoline-driven saws

If insufficient space exists or the construction contractor lacks available resources (such as semi-truck trailers, bulk material storage containers, or field office trailers) to create a noise barrier using non-noise-producing equipment in use at an active construction site as suggested above under Best Construction Practices, the contractor also may employ field-erected temporary noise barriers. Options for such onsite barriers may include using appropriately thick wooden panel walls (at least 0.5 inch thick) that are high enough to block the line of sight from the dominant construction noise source(s) such as the concrete pump trucks to the noise-sensitive receptors. Depending on factors such as barrier height, barrier extent, and distance between the barrier and the noise-producing equipment or activity, such barriers may reduce construction noise by 3–15 dBA at the locations of nearby noise-sensitive receptors.

Alternately, field-erected noise curtain assemblies may be installed around specific equipment sites or zones of anticipated mobile or stationary activity. These techniques will be most effective and practical when the noise source for the construction activity is stationary (e.g., auger or drill operation) and the specific source locations of noise emission are near the ground and can be placed as close to the equipment/activity-facing side of the noise barrier as possible.

Implementing Mitigation Measure M-NO-1: Prepare and Implement Construction Noise Plan, would reduce the daytime noise level at noise-sensitive receptor location D, the Civic Center Hotel, during the foundation and podium construction phase by a range of 3-15 dBA, to reduce the increase in ambient noise to below the 10 dBA increase above ambient noise level standard. Mitigation Measure M-NO-1 would achieve this reduction by either locating concrete pump trucks along South Van Ness Avenue where distance and potentially intervening new structures would attenuate their noise or erecting noise attenuation features to block noise between the concrete pump trucks and sensitive noise receptors at the Civic Center Hotel. This feature of the mitigation measure would reduce the noise level such that construction activities at receptor location D (the Civic Center Hotel) would not be expected to exceed 10 dBA above the ambient noise levels. Thus, the impact would be less than significant with implementation of mitigation.

Nighttime Construction Impacts

Table 4.3.12: Predicted Ambient Noise Increment Resulting from Nighttime Construction Noise Levels under the Proposed Project or Variant shows that among the six noise-sensitive receptors evaluated in the noise technical report, receptor location D, the Civic Center Hotel, is expected to experience evening and nighttime construction noise levels during the foundation and podium phase, resulting in an increase in the ambient noise level of 5 dBA or more (see boldfaced values in the table). Given that nighttime construction work would exceed an increase of 5 dBA above the ambient at noise sensitive receptors, it would also exceed the noise ordinance requirements, which are based on increases in ambient noise levels at the property plane. This would exceed the exposure standards in section 2908 of the San Francisco Noise Ordinance. Therefore, nighttime construction work would require a permit under section 2908 of the Noise Ordinance. Based on information from the project sponsor, the potential for nighttime project construction activity, such as concrete pours and operating generators, would be limited to the third and fourth construction phases.[21] Therefore, no nighttime construction noise impact would occur during the first two construction phases.

To evaluate potential construction noise resulting from the proposed project or variant as related to sleep disturbance, **Table 4.3.13: Predicted Interior Noise Levels Resulting from Nighttime Construction Noise under the Proposed Project or Variant** refines the analysis results shown in Table 4.3.12 by applying a 25-dB exterior-to-interior noise reduction associated with typical building construction and closed windows. During the foundation and podium construction phase at noise-sensitive receptor location D, the proposed project or variant is expected to cause a temporary and intermittent increase in interior noise levels that would exceed the 45-dBA threshold by 5–6 dBA. Although it is anticipated that nighttime construction work would be limited, there are currently no specific details regarding the duration of nighttime construction work other than the approximately 24-hour period of the continuous concrete pour for the foundation mat during the foundation and podium construction phase. However, the project sponsor indicates that nighttime construction work occasionally may be required for the foundation and tower/superstructure work. The duration of each phase is approximately 8 and 9 months, respectively, with some overlap. Therefore, this impact would be significant.

Implementing Mitigation Measure M-NO-1 would reduce evening and nighttime construction exterior noise levels during the foundation and podium construction phase to 69 dBA L_{eq} and 67 dBA L_{eq}, respectively. With a 25-dB exterior-to-interior noise reduction to account for the building structure with windows closed, the resulting interior noise levels at the Civic Center Hotel would be approximately 44 to 42 dBA. Therefore, the impact would be less than significant with mitigation incorporated.

[21] AECOM, *10 South Van Ness Project Final Noise Technical Report,* p. 18.

Table 4.3.12: Predicted Ambient Noise Increment Resulting from Nighttime Construction Noise Levels under the Proposed Project or Variant

Noise-Sensitive Land Use[1] (time of day)	Baseline Ambient Sound Level (dBA L_{eq})	Predicted Evening/Nighttime Construction Noise Level (dBA)		Noise Levels During Construction (dBA)		Ambient Noise Level Increment (dBA)	
		Foundation & Podium (concrete pump truck)	Tower(s)/ Superstructure/ Skin (generator)	Foundation & Podium (concrete pump truck)	Tower(s)/ Superstructure/ Skin (generator)	Foundation & Podium (concrete pump truck)	Tower(s)/ Superstructure/ Skin (generator)
A (evening)	66 [2]	66	58	69	67	3	1
A (nighttime)	64 [3]	66	58	68	65	4	1
B (evening)	67 [4]	66	58	70	68	3	1
B (nighttime)	66 [5]	66	58	69	67	3	1
C (evening)	66 [2]	64	56	68	66	2	0
C (nighttime)	64 [3]	64	56	67	65	3	1
D (evening)	66 [2]	75	67	76	70	**10**	4
D (nighttime)	64 [3]	75	67	75	69	**11**	**5**
E (evening)	66 [2]	65	57	69	67	3	1
E (nighttime)	64 [3]	65	57	68	65	4	1
F (evening)	66 [2]	60	52	67	66	1	0
F (nighttime)	64 [3]	60	52	65	64	1	0

Notes:
dBA = A-weighted decibels; L_{eq} = equivalent sound level
[1] Figure 4.3.1 shows the locations of the noise-sensitive receptors and Table 4.3.11 lists the addresses of these receptors.
[2] Value based on average of measured evening period (7 p.m. to 10 p.m.) L_{eq} at ST-1 and ST-5, given proximity of receptor.
[3] Value based on average of measured nighttime period (10 p.m. to 7 a.m.) L_{eq} at ST-1 and ST-5, given proximity of receptor.
[4] Value based on measured L_{eq} at ST-6 during evening period (7 p.m. to 10 p.m.).
[5] Value based on measured L_{eq} at ST-6 during nighttime hours (10 p.m. to 7 a.m.).
Bold values indicate that the increase over the existing ambient sound level is predicted to meet or exceed 5 dBA.
Source: AECOM, *10 South Van Ness Avenue Mixed-use Project Final Noise Technical Report*, January 2018, revised September 2018.

Table 4.3.13: Predicted Interior Noise Levels Resulting from Nighttime Construction Noise under the Proposed Project or Variant

Noise-Sensitive Receptor[1] (time of day)	Baseline Indoor Ambient Sound Level[2] (dBA L_{eq})	Predicted Interior Evening/ Nighttime Construction Noise Level (dBA)		Interior Noise Levels during Construction (dBA)		Decibels above the 45-dBA Sleep Disturbance Threshold (dB)	
		Foundation (concrete pump truck)	Tower(s)/ Superstructure (generator)	Foundation (concrete pump truck)	Tower(s)/ Superstructure (generator)	Foundation (concrete pump truck)	Tower(s)/ Superstructure (generator)
A (evening)	41	41	33	44	42	N/A	N/A
A (nighttime)	39	41	33	43	40	N/A	N/A
B (evening)	42	41	33	45	43	N/A	N/A
B (nighttime)	41	41	33	44	42	N/A	N/A
C (evening)	41	39	31	43	41	N/A	N/A
C (nighttime)	39	39	31	42	40	N/A	N/A
D (evening)	41	50	42	51	45	**6**	N/A
D (nighttime)	39	50	42	50	44	**5**	N/A
E (evening)	41	40	32	44	42	N/A	N/A
E (nighttime)	39	40	32	43	40	N/A	N/A
F (evening)	41	35	27	42	41	N/A	N/A
F (nighttime)	39	35	27	40	39	N/A	N/A

Notes:
dB = decibels; dBA = A-weighted decibels; L_{eq} = equivalent sound level; N/A = not applicable; **Bold** values indicate that the increase over the existing ambient sound level is predicted to exceed interior noise level of 45 dBA.
[1] Figure 4.3.1 shows the locations of the noise-sensitive receptors.
[2] Based on outdoor ambient values from Table 4.3.3, assuming an exterior-to-interior noise level reduction of 25 dBA consistent with Federal Highway Administration, *Highway Traffic Noise Analysis and Abatement Policy and Guidance,* 2011.
Source: AECOM, *10 South Van Ness Avenue Mixed-use Project Final Noise Technical Report*, January 2018, revised September 2018.

Construction-Related Traffic Noise

With respect to temporary increases in roadway traffic volumes due to construction activities for the proposed project or variant, the combination of haul trips and construction worker trips to and from the site construction traffic would range from as few as 48 round trips (96 one-way trips) per day to as many as 500 round trips (1,000 one-way trips) per day during peak construction periods. At this quantity, the increase in local roadway traffic volumes from construction activities at the eight study intersections shown in Table 4.3.14, p. 4.3.34, would be no greater than about 50 percent, representing less than a 2-dBA increase in traffic noise. An increase of less than 2 dBA would be an imperceptible change in noise levels; therefore, construction traffic noise impacts would be less than significant.

Impact NO-2: Operation of the proposed project or variant would generate noise levels in excess of standards or result in substantial temporary increases in ambient noise levels, above levels existing without the project. (*Less than Significant with Mitigation*)

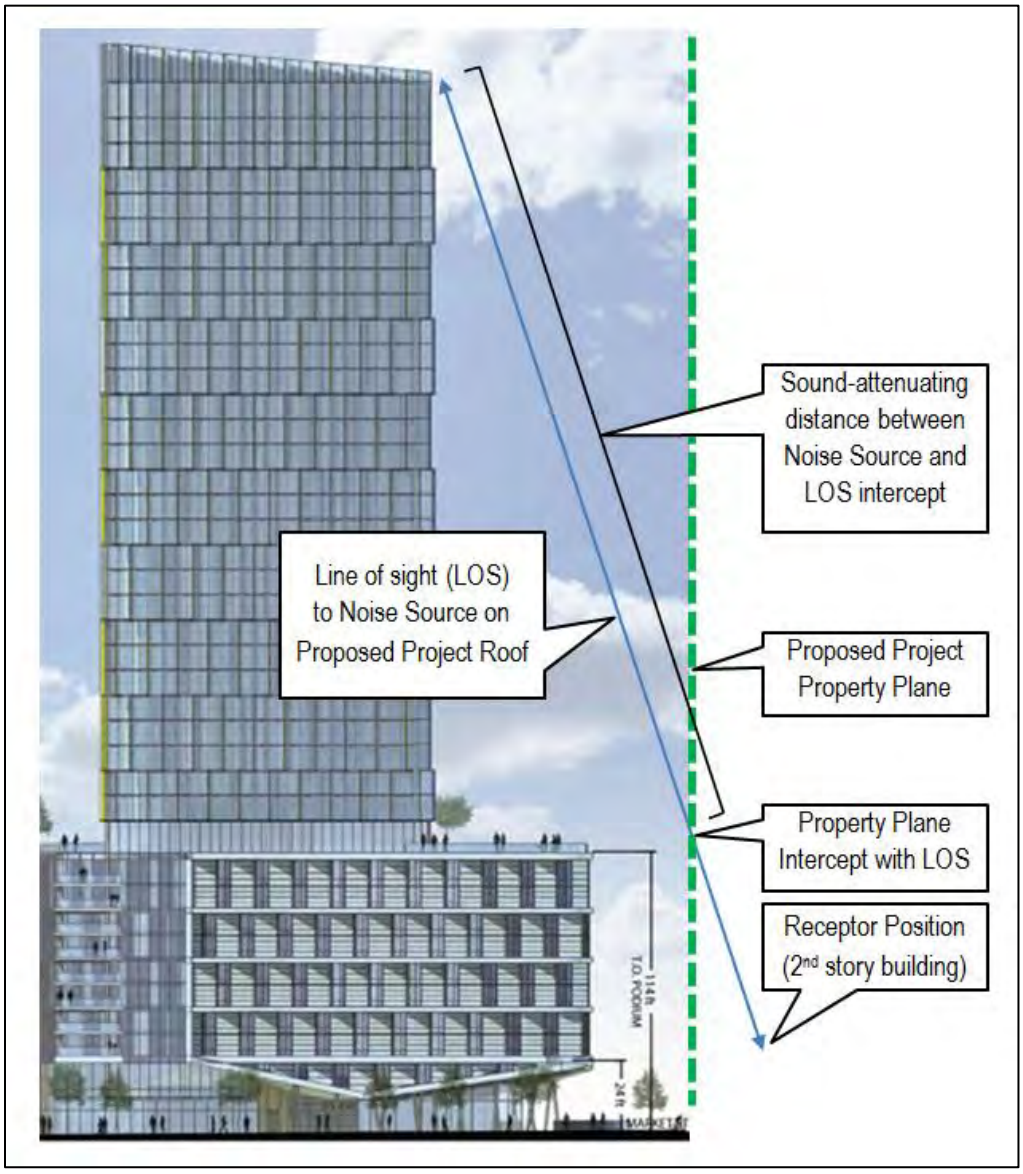
As required in section 2909(a)(1) of the San Francisco Noise Ordinance, noise from stationary sources (fixed noise sources) may not exceed ambient noise levels at the edge of the project site by 5 dBA for fixed mechanical equipment associated with residential land uses. In addition, pursuant to section 2909(d), no fixed-source noise may cause the noise level inside the sleeping or living area of a residential property to exceed 45 dBA between 10 p.m. and 7 a.m. or 55 dBA between 7 p.m. and 10 p.m.

Trash collection and waste disposal noise is governed separately in Section 2904 of the noise ordinance. That section prohibits unnecessary noise by persons engaged in waste removal, collection, or disposal activities in general, and specifies that related mechanical equipment shall not be operated in such a way as to create mechanical or hydraulic noise exceeding 75 dBA at a distance of 50 feet.

Onsite Stationary Operational Noise

The proposed project or variant would include onsite stationary sources consisting of HVAC equipment, a loading dock, a standby generator, and a trash compactor near existing sensitive uses. The HVAC mechanical equipment would be located on the rooftop, and the loading dock, standby generator, and trash compactor would be located in the basement.

Noise from rooftop HVAC would need to travel at least 65 feet in the horizontal plane to reach the nearest noise-sensitive receptor, location D shown in Figure 4.3.1 (20 12th Street, the Civic Center Hotel). This sound propagation distance would be increased substantially because of the height of the source with respect to the receiver height, as shown in **Figure 4.3.2: Rooftop Noise Travel to Nearest Noise-Sensitive Receptor** by a sample line-of-sight illustration (using the proposed project for illustrative purposes). While all building mechanical equipment would be designed with appropriate noise-control devices, such as sound-absorptive equipment interior linings, HVAC duct sound attenuators, acoustical louvers, and sound screen/parapet walls, to comply with the City's Noise Control Ordinance, the HVAC equipment has not yet been selected and its precise placement on the roof of the proposed project or variant has not been established; therefore it is not possible to provide a project-specific analysis to confirm that the project would comply with the Noise Ordinance. Furthermore, because the proposed project is required to comply with Health Code article 38, which requires the project's residential units to be equipped with Minimum Efficiency Reporting Value (MERV) 13 filters, the project is likely to require a substantial HVAC system; one that is larger than what would typically be required for a project of this size that is not subject to Health Code article 38. Therefore, the impact is determined to be significant. **Mitigation Measure M-NO-2: Require that Exterior Mechanical Equipment Comply with Noise Ordinance Prior to Certificate of Occupancy**, establishes a performance standard that when met would result in compliance with the Noise Ordinance and thus reduce the impact to a less-than-significant level.



Source: City and County of San Francisco, *10 South Van Ness Avenue Mixed-use Project Noise Technical Report*, prepared by AECOM in 2017.

Figure 4.3.2: Rooftop Noise Travel to Nearest Noise-Sensitive Receptor

Loading dock and trash compactor operations would generate noise levels of approximately 71 dBA L_{eq} and 65 dBA L_{eq}, respectively, at a distance of 50 feet.[22] The stationary noise sources in the basement would be shielded from nearby noise-sensitive land uses by the building structure. In addition, the design and placement of the loading dock and trash compactor would include barriers and/or shielding as required to meet the limit of 75 dBA at a distance of 50 feet, established by section 2904 of the Noise Ordinance. Therefore, loading and trash compactor operations would comply with the noise ordinance and would not cause significant noise impacts at the nearest sensitive receptors.

Mitigation Measure M-NO-2: Require that Exterior Mechanical Equipment Comply with Noise Ordinance Prior to Certificate of Occupancy

After completing installation of the HVAC equipment but before receipt of any Certificate of Occupancy, the project sponsor shall conduct noise measurements to ensure that the noise generated by stationary equipment complies with section 2909 (a) and (d) of the San Francisco Noise Ordinance.

The noise measurements shall be conducted by persons qualified in acoustical analysis and/or engineering. The measurements shall demonstrate with reasonable certainty that the project's stationary mechanical equipment will not do either of the following:

(a) Cause the noise level measured inside any sleeping or living room in a dwelling unit on residential property to exceed 45 dBA with windows open, except where building ventilation is achieved through mechanical systems that allow windows to remain closed

(b) Result in an increase in ambient noise levels of 5 dBA or more at the property plane

On completion of such testing, the acoustical consultant/acoustical engineer shall submit a memorandum summarizing test results to the San Francisco Planning Department. If measured noise levels are found to exceed these standards, the project sponsor shall be responsible for implementing stationary equipment noise-control measures or other acoustical upgrades such as additional noise insulation in mechanical rooms, until similar measurements of interior sound levels in sleeping or living rooms in residential units after installation of these upgrades demonstrate compliance with the noise ordinance standards above.

No Certificate of Occupancy shall be issued for any part of the structure until the standards in the Noise Ordinance are shown to be met.

Implementation of Mitigation Measure M-NO-2 would result in compliance with the noise ordinance requirements and would reduce the onsite stationary noise impact to a less-than-significant level.

[22] Ibid.

Transportation Noise

Table 4.3.14: Predicted Changes in Traffic Noise Levels with the Proposed Project shows a comparison of existing and existing plus project-generated peak-hour traffic volumes for both the morning and afternoon peak periods at eight study intersections near the project site. The number of vehicle trips generated by the variant would be comparable to those generated by the proposed project (within 1 percent);[23] therefore, traffic noise was not calculated separately for the variant. The table also shows the change in outdoor ambient noise levels near these locations that are expected to result from changes in traffic volumes with trips added by the proposed project or variant. At all eight intersections studied, the increase in the outdoor ambient noise level is shown to be much less than 3 dBA. Therefore, the impact would be less than significant. No mitigation is necessary.

Table 4.3.14: Predicted Changes in Traffic Noise Levels with the Proposed Project

Studied Intersection	Existing Intersection Peak-Hour Traffic Volumes		Existing + Proposed Project Intersection Peak-Hour Traffic Volumes		Traffic Volume Change with the Proposed Project		Noise Level Change (dBA) with the Proposed Project	
	a.m.	p.m.	a.m.	p.m.	a.m.	p.m.	a.m.	p.m.
Market Street/South Van Ness Avenue/Oak Street	3,705	3,906	3,781	4,084	76	178	0.09	0.19
Market Street/12th Street/ Page Street/Franklin Street	1,921	2,254	2,231	2,644	310	390	0.65	0.69
Mission Street/South Van Ness Avenue/Otis Street/ 12th Street	4,544	4,589	4,734	4,893	190	304	0.18	0.28
Mission Street/11th Street	1,447	1,769	1,501	1,860	54	91	0.16	0.22
Market Street/Gough Street/Haight Street	2,969	3,156	3,032	3,394	63	238	0.09	0.32
Otis Street/McCoppin Street/Mission Street/ Gough Street	1,384	1,630	1,537	1,795	153	165	0.46	0.42
Howard Street/11th Street	1,032	1,375	1,040	1,405	8	30	0.03	0.09
Van Ness Avenue/Fell Street	4,392	4,073	4,445	4,142	53	69	0.05	0.07

Note:
According to the *10 South Van Ness Avenue Single Tower Project Variant–Draft Memorandum*, prepared by CHS Consulting, the variant would result in a number of vehicle trips similar to that of the proposed project (within 1 percent). Therefore, the noise levels resulting from traffic generated by the variant would be the same as or similar to those presented above.

Source: CHS Consulting Group, *10 South Van Ness Avenue Mixed-use Residential Project Transportation Impact Study,* December 2017; AECOM, *10 South Van Ness Avenue Mixed-Use Project Final Noise Technical Report*, January 2018, revised September 2018.

[23] CHS Consulting Group, *10 South Van Ness Avenue Mixed-use Project Transportation Impact Study*, December 2017, Appendix A, p. 1 of 12.

Impact NO-3: The proposed project or variant would not generate or result in exposure of persons to excessive groundborne vibration. ***(Less than Significant)***

Construction Vibration

Sleep Disturbance

The results from vibration can range from no perceptible effects at the lowest levels, to low rumbling sounds and perceptible vibrations at moderate levels, to the risk of varying degrees of building damage or human annoyance at the highest levels. Sensitive receptors in the project area are occupants of buildings surrounding the project site. The FTA guidance sets vibration limits for human annoyance at 80 VdB. An analysis was conducted of vibration effects during construction of the proposed project or variant during four of the five construction phases (Phase 5, interior finishing, would not result in noticeable vibrations at off-site locations) at the six nearest sensitive residential receptors. As shown in Table 4.3.15, the FTA human annoyance limit of 80 VdB would not be exceeded at any of the sensitive receptor locations either during the daytime or during nighttime construction and therefore would not result in sleep disturbance.

Building Damage

Table 4.3.15: Predicted Construction Vibration Levels at the Nearest Noise-Sensitive Receptors shows the predicted construction vibration levels associated with either the proposed project or the variant at the four nearest noise-sensitive receptors for each construction phase studied.

Of the noise-sensitive receptors listed in Table 4.3.15, four have been identified as historic resources by the San Francisco Planning Department: A (20 Franklin Street), B (Conservatory of Music), C (41 Franklin Street), and D (20 12th Street). The planning department has also identified 42–50 12th Street and 68 12th Street as historic resources. Historic buildings may be sensitive to vibration, depending on the building construction. Because 42-50 and 68 12th Street lie south of noise-sensitive receptor D (20 12th Street) at approximately the same distance from the project site, the vibration level at location D is assumed to be representative of the vibration levels experienced at these two neighboring historic properties. The clock tower that has been preserved as part of the project at 1500 Mission Street is located across South Van Ness Avenue from the project site (more than 200 feet to the east) and also is considered to be a historic resource. The vibration level at 1500 Mission Street is anticipated to be between the levels experienced at noise-sensitive receptors D and A.

Table 4.3.15: Predicted Construction Vibration Levels at the Nearest Noise-Sensitive Receptors

Noise-Sensitive Receiver Location (see Figure 4.3.1)	Street Address	Approximate Distance from Construction Activity to Receiver (feet)	Predicted PPV (in/sec) and Lv (VdB) per Anticipated Construction Phase			
			Demolition (large bulldozer)	Excavation (loaded truck)	Foundation (caisson drilling)	Superstructure (loaded truck)
A	20 and 23 Franklin Street	250	0.003 in/sec 57 VdB	0.002 in/sec 56 VdB	0.003 in/sec 57 VdB	0.002 in/sec 56 VdB
B	50 Oak Street	250	0.003 in/sec 57 VdB	0.002 in/sec 56 VdB	0.003 in/sec 57 VdB	0.002 in/sec 56 VdB
C	41 Franklin Street	300	0.002 in/sec 55 VdB	0.002 in/sec 54 VdB	0.002 in/sec 55 VdB	0.002 in/sec 54 VdB
D	20 12th Street	65[See Note A]	0.021 in/sec 75 VdB	0.018 in/sec 74 VdB	0.021 in/sec 75 VdB	0.018 in/sec 74 VdB
E	1600 Market Street	260	0.003 in/sec 56 VdB	0.002 in/sec 55 VdB	0.003 in/sec 56 VdB	0.002 in/sec 55 VdB
F	150 Oak Street	500	0.001 in/sec 48 VdB	0.001 in/sec 47 VdB	0.001 in/sec 48 VdB	0.001 in/sec 47 VdB

Notes:
in/sec = inch(es) per second; Lv = vibration level; PPV = peak particle velocity; VdB = vibration decibel(s) or vibration velocity level.
Note A: Installation of the Muni elevator could require excavation that could occur as close as 40 feet from 20 12th Street. At a reference distance of 25 feet, the PPV value for a large bulldozer or caisson drilling would be 0.089 PPV and 0.076 PPV for a loaded truck. *Source*: Federal Transit Administration, Office of Planning and Environment, *Transit Noise and Vibration Impact Assessment*, 2006, Table 12-2: Vibration Source Levels for Construction Equipment. https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/FTA_Noise_and_Vibration_Manual.pdf
Source: AECOM, *10 South Van Ness Avenue Mixed-use Project Noise Technical Report*, January 2018, revised September 2018.

None of the predicted, construction-related vibration levels listed in Table 4.3.15 would exceed the building damage risk threshold of 0.12 in/sec for the most sensitive of buildings, based on FTA guidance. Based on these estimates, the construction vibration impact on existing buildings and noise-sensitive receptors would be less than significant.

Bay Area Rapid Transit (BART) structures underlie the project site. These structures are constructed of reinforced concrete, and thus would have a corresponding vibration damage risk threshold of 0.50 in/sec PPV (Table 4.3.6). The BART structures are not expected to be affected by construction vibration for the following reasons:

- Reference vibration levels for representative equipment and vehicles used in construction of the proposed project or variant would not exceed 0.09 in/sec PPV at a reference distance of 25 feet. Assuming that vibration would propagate hemispherically close to the source and in a manner similar to propagation near the surface, the distance at which the resulting construction vibration would approach the aforementioned applicable damage risk threshold would be 8 feet.

- Blasting and pile driving, considered generators of high levels of transient vibration, would not occur as part of construction of the proposed project or variant.

BART requires that structures over or adjacent to the BART subway structures provide for a minimum clearance between them of at least 7.5 feet, with a minimum cover of 8 feet wherever feasible.[24] BART requires that design and construction documents be submitted for review and approval, that dewatering monitoring and recharging plans be submitted if applicable, and that steel-lined BART tunnels be monitored for vibration effects (movement and deformation) during construction. Based on these requirements, the construction vibration impact on underlying BART structures would be less than significant.

Operational Vibration

Operation of the building(s) and mechanical systems under either the proposed project or variant would be unlikely to create sources of enduring vibration perceptible to noise- and vibration-sensitive receptors in the surrounding community. This would include users of the project and the surrounding buildings. Undue vibration from such stationary operating equipment typically is a symptom of rotational imbalance that requires service and correction. Anticipated typical sources of potential vibration (e.g., fans, pumps, motors, and compressors in HVAC systems) would be designed, installed, and maintained to be well balanced and produce minimal vibration levels, unlikely to be perceived beyond the project site. Therefore, the operational vibration impact on existing noise-sensitive receptors, including both people and buildings, would be less than significant, and no mitigation is necessary.

Cumulative Impacts

The geographic extent of the analysis of cumulative projects is within 1,500 feet of the project site for traffic-generated noise and within 900 feet for construction noise. For the cumulative analysis, reasonably foreseeable future projects in the project area were included in the evaluation in conjunction with the proposed project (see Section 4.0 for a discussion of reasonably foreseeable projects).

Impact C-NO-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects, would result in a considerable contribution to significant cumulative construction noise. (*Less than Significant with Mitigation*)

Construction noise is a localized impact that reduces as distance from the noise source increases. Intervening features (e.g., buildings) increase noise attenuation with distance by providing barriers to sound wave propagation. Construction activities for the proposed project or variant could coincide with similar activities for private development projects, municipal street

[24] Langan Engineering and Environmental Services, *Geotechnical Investigation, 10 South Van Ness Avenue, San Francisco, California,* March 2017, Appendix F.

improvements, and infrastructure maintenance and replacements. Nearby developments that may be under construction during construction of some portion of the proposed project or variant include One Oak Street, 1500 Mission Street, 1546–1564 Market Street, 30 Otis Street, 42 Otis Street, 1629 Market Street, and the Van Ness Bus Rapid Transit (BRT) project. Therefore, noise-sensitive receptors near the project site could be exposed to these concurrent construction activities and could experience temporary increases in outdoor ambient sound levels. Construction noise from projects further from the project site would attenuate substantially due to distance and intervening structures and would not contribute to cumulative construction noise.

All project-related construction activity in the City would be required to comply with the San Francisco Noise Ordinance, which prohibits construction activities between 8 p.m. and 7 a.m. without a special nighttime noise permit, and limits noise from any individual piece of construction equipment, except impact tools approved by San Francisco Public Works Department or Department of Building Inspection, to 80 dBA at 100 feet. As explained above in the Fundamentals of Noise (pp. 4.3.4–4.3.5), multiple noise sources when added together typically increase the overall noise level by about 3 decibels or less unless the difference in two pieces of equipment is greater than 10 decibels. In addition, noise from a single source is reduced by distance and by intervening structures.

Construction schedules for the cumulative projects listed above could change once construction of the proposed project or variant is underway. Therefore, it is difficult to predict whether construction activities associated with nearby projects would overlap with that of the proposed project or variant. However, based on the number of projects in the immediate vicinity of the project site, it is possible that construction activities from cumulative projects could overlap with the proposed project's construction activities, increasing the severity of construction noise impacts. Based on all of the above, construction of the proposed project in combination with that of nearby projects could combine to result in a significant cumulative construction noise impact. Based on the noise levels predicted for some of the proposed project's construction activities, the proposed project or variant would contribute considerably to the significant cumulative noise impacts.

However, with implementation of Mitigation Measure M-NO-1, the proposed project's contribution to significant cumulative construction noise impacts would not be cumulatively considerable. Therefore, cumulative construction noise impacts would be less than significant with mitigation.

Impact C-NO-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects, would not result in a significant cumulative impact related to vibration. (*Less than Significant*)

Similar to noise, vibration impacts are localized because vibration attenuates rapidly from the source. Because of the principles of groundborne vibration propagation, potential significant

vibration impacts attributable to construction activities generally would be limited to buildings and structures close to the project site.[25] Therefore, unless other projects would be constructed concurrently with the proposed project or variant and would be as close as the proposed project to the same noise-sensitive receptors or the same historic buildings (which are considered sensitive to vibration), their vibration impacts would not combine to produce a cumulative impact. The reasonably foreseeable projects that are close enough to the project site to potentially contribute to cumulative vibration impacts during construction are 1629 Market Street, 30 Otis Street and 42 Otis Street.

The closest sensitive receptor to the project site is the Civic Center Hotel at 20 12th Street (about 65 feet from the project site, and about 40 feet from the nearest construction activities), which is also the closest historic structure. The proposed project would result in a maximum vibration level of 0.021 in/sec PPV during construction which would be substantially below the building damage risk threshold of 0.12 in/sec based on FTA guidance. Installation of the Muni elevator could require excavation somewhat closer to the building at 20 12th Street; however, the PPV values for typical equipment would range from 0.076 to 0.089 in/sec PPV at 25 feet reference distance and would continue to be substantially below the building damage risk threshold. Therefore, the proposed project would not have the potential to result in building damage to the Civic Center Hotel.

Since the proposed project would not result in vibration-related damage to adjacent structures during construction activities, and because vibration is localized, attenuating rapidly from the source, project construction activities would not have the potential to combine with construction activities from cumulative projects to result in cumulative vibration effects that would damage nearby buildings. Therefore, cumulative vibration effects to the Civic Center Hotel or other nearby historic buildings would be less than significant.

Impact C-NO-3: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects, would not result in a considerable contribution to significant cumulative impacts related to operational noise and vibration. *(Less than Significant)*

Operational Noise

To determine the cumulative noise level, operational traffic noise from the proposed project was evaluated based on information from the 10 South Van Ness Avenue Transportation Impact Study (TIS). The TIS 2040 cumulative analysis used the results of a computer model run of the San Francisco County Transportation Authority's SF CHAMP travel demand forecasting model that accounts for reasonably foreseeable development projects near the project site, including the One Oak Street, 1500 Mission Street, 1629 Market Street, and 30 Otis Street projects, as well as

[25] AECOM, *10 South Van Ness Avenue Mixed-Use Project Final Noise Technical Report*, January 2018, revised September 2018, p. 6.

forecasted background growth and approved transportation projects such as Muni Forward, the San Francisco Bicycle Plan, the central subway project and the Van Ness BRT project. Planned roadway and transit changes associated with the Better Market Streets Plan and other transportation-related projects were reviewed and used to adjust the CHAMP model 2040 results for intersections analyzed in the 10 South Van Ness project's TIS.[26]

Because of the additive properties of noise, traffic would have to double in the future, to increase traffic-related noise by 3 dBA, the level perceptible to most people. The predicted increase in roadway traffic under 2040 cumulative conditions, which accounts for background growth and anticipated development, would not double existing traffic volumes along any transportation corridors in the project vicinity. **Table 4.3.16: Predicted Changes in Traffic Noise Levels under Cumulative Conditions** shows examples of these predicted changes in traffic-dominated, outdoor ambient noise levels at four of the study intersections. As shown, cumulative traffic would increase noise levels by less than 2 dBA at all four intersections, which would not be perceptible to the human ear.

The number of vehicle trips generated by the variant would be comparable to those generated by the proposed project (within 1 percent).[27] Therefore, the cumulative traffic noise impacts for the variant would be similar to those shown in Table 4.3.16.

Table 4.3.16: Predicted Changes in Traffic Noise Levels under Cumulative Conditions

	Existing Intersection Peak-Hour[1] Traffic Volumes		2040 Cumulative Peak-Hour[1] Traffic Volumes		Traffic Volume Change (2040–Existing)		Noise Level (dBA) Change	
Study Intersection	**a.m.**	**p.m.**	**a.m.**	**p.m.**	**a.m.**	**p.m.**	**a.m.**	**p.m.**
Market Street/South Van Ness Avenue/Oak Street	3,705	3,906	3,858	4,141	153	235	0.18	0.25
Market Street/12th Street/ Page Street/Franklin Street	1,921	2,254	n/a	2,810	n/a	556	n/a	0.96
Mission Street/South Van Ness Avenue/Otis Street/ 12th Street	4,544	4,589	5,550	5,808	1,006	1,219	0.87	1.02
Mission Street/11th Street	1,447	1,769	n/a	2,609	n/a	840	n/a	1.69

Notes:
dBA = A-weighted decibels
1. CHS Consulting Group, *10 South Van Ness Avenue Mixed-use Project Transportation Impact Study*, December 2017, Figure 8, p. 23, and Figure 16, p. 87.

Source: AECOM, *10 South Van Ness Avenue Mixed-use Project Final Noise Technical Report*, January 2018 revised September 2018, Table 9, p. 39.

[26] CHS Consulting Group, *10 South Van Ness Avenue Mixed-use Project Transportation Impact Study*, December 2017, pp. 74-76.
[27] Ibid., Appendix A, p. 1 of 12.

In addition, other planned projects (e.g., the Better Market Street project, Muni Forward and the Van Ness BRT project) are expected to result in reduced vehicle trips associated with future development near the project site through reduced roadway capacity for single occupancy vehicles, improved conditions for pedestrians and bicyclists, and increased transit service.

Reductions in passenger vehicle volumes would reduce traffic noise levels as well (see Impact NO-1 for a discussion of the relationship between traffic volumes and operational noise impacts). Therefore, vehicle trips generated by the proposed project or variant, combined with vehicle trips associated with future development in the project area, would not be expected to double the traffic volumes and cumulative traffic noise impacts would be less than significant.

Aside from traffic noise, operational noise from future land use development projects likely would be generated by stationary noise sources, such as mechanical equipment. However, that mechanical equipment would be required to comply with the San Francisco Noise Ordinance, as would the proposed project or variant's mechanical equipment. In addition, beyond the project site boundaries, noise from the proposed project or variant's mechanical equipment generally would not be audibly distinct from other acoustical contributors to the outdoor ambient sound environment. Thus, increases in ambient noise levels from operation of mechanical equipment at individual development projects would not combine to create a significant cumulative noise impact, and the cumulative impact would be less than significant.

Operational Vibration

As described above, both the proposed project and variant would include typical residential and commercial-grade HVAC equipment, which would produce limited vibration associated with their normal operational modes. Because of the principles of groundborne vibration propagation, including the fact that vibration diminishes rapidly with distance, the proposed project's limited vibration associated with normal operating modes of HVAC equipment would not combine with other sources of operational vibration to result in cumulative vibration impacts. Therefore, the cumulative impact related to operational vibration would be less than significant.

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4.4 AIR QUALITY

Section 4.4, Air Quality, evaluates the impacts related to air quality and the health risks and hazards that could result from short-term construction and long-term operation of the proposed project and variant. The analysis identifies both project-level and cumulative environmental impacts, and feasible mitigation measures that could reduce or avoid the identified significant impacts. The information and analysis in this section is based primarily on the *10 South Van Ness Project Final Criteria Air Pollutant Analysis*[1] and the *10 South Van Ness Final Health Risk Assessment*.[2]

Summary of Market and Octavia Neighborhood Plan Final EIR Air Quality Section

Market and Octavia Neighborhood Plan Final EIR Setting

The Market and Octavia Neighborhood Plan Final EIR included ambient air quality standards and San Francisco Bay Area (Bay Area) attainment status for various pollutants including ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM),[3] and visibility-reducing particles. The nearest permanent air quality monitoring station to the project area is in San Francisco on Arkansas Street. This station monitors ozone, CO, NO_2, SO_2, PM_{10}, and $PM_{2.5}$.

Market and Octavia Neighborhood Plan Final EIR Impacts and Mitigation Measures

As stated in the Market and Octavia Neighborhood Plan Final EIR, air quality impact assessments were done by estimating concentrations of pollutants for the 2025 Without Plan and 2025 With Plan scenarios. The Final EIR found that with adherence to the San Francisco General Plan (general plan), implementing the Market & Octavia Area Plan would have no significant air quality or odor impacts on sensitive receptors. The plan projected an increase in residential density, which could increase traffic congestion and increase CO concentrations at intersections. However, the predicted CO concentrations would be below both the state and national average eight-hour standard and the average one-hour standard mostly because vehicular emissions would be lower in future years because of various federal and state emissions reduction programs.

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1 AECOM, *10 South Van Ness Project Final Criteria Air Pollutant Analysis*, January 2018 (hereinafter "AECOM*, Criteria Air Pollutant Analysis*").

2 AECOM, *10 South Van Ness Final Health Risk Assessment*, January 2018, revised September 2018 (hereinafter "AECOM, HRA").

3 Particulate matter (PM) is subdivided into two classes based on particle size: PM equal to or less than 10 microns in diameter (PM_{10}) and PM equal to or less than 2.5 microns in diameter ($PM_{2.5}$).

Therefore, the Market & Octavia Area Plan would not have a significant impact on CO concentrations.

The Market and Octavia Neighborhood Plan Final EIR found that dust emissions and emissions from construction equipment would result in a potentially significant air quality impact. With Mitigation Measure 5.8.A: Construction Mitigation Measure for Particulate Emissions identified in the EIR, the impact would be reduced to a less-than-significant level. The impact of short-term exhaust emissions from construction equipment would also be potentially significant if not mitigated. Implementing Mitigation Measure 5.8.B: Construction Mitigation Measure for Short-Term Exhaust Emissions would reduce the impact to a less-than-significant level. Because the plan would be consistent with the Clean Air Plan for development in San Francisco, there would be no significant cumulative air quality impacts.

Environmental Setting

Regional Air Quality

CLIMATE AND METEOROLOGY

The project site and vicinity are within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD or air district). The air district is the regional agency with jurisdiction to regulate air quality within the nine-county San Francisco Bay Area Air Basin (SFBAAB), which includes San Francisco, Alameda, Contra Costa, Marin, San Mateo, Santa Clara, and Napa counties, and portions of Sonoma and Solano counties.

The Bay Area has a Mediterranean climate characterized by mild, dry summers and mild, moderately wet winters; moderate daytime onshore breezes; and moderate humidity. The project site is located in the Peninsula region of the Bay Area, which extends from northwest of San Jose to the Golden Gate Bridge. The Santa Cruz Mountains run up the center of the Peninsula, with elevations exceeding 2,000 feet at the southern end, decreasing to 500 feet in South San Francisco. Coastal towns experience a high incidence of cool, foggy weather in the summer. Cities in the southeastern Peninsula area experience warmer temperatures and fewer foggy days because the marine layer is blocked by the ridgeline to the west. San Francisco lies at the northern end of the Peninsula. Because most of San Francisco's topography is below 200 feet, marine air is able to flow easily across most of the City, making its climate cool and windy.

The blocking effect of the Santa Cruz Mountains results in variations in summertime maximum temperatures in different parts of the Peninsula. For example, in coastal areas and in San Francisco, the mean maximum summer temperatures are in the mid 60s, while in Redwood City the mean maximum summer temperatures are in the low 80s. Mean minimum temperatures during the winter months are in the high 30s to low 40s on the eastern side of the Peninsula and in the low 40s along the coast.

Two important gaps in the Santa Cruz Mountains occur on the Peninsula. The larger of the two is the San Bruno Gap, extending from Fort Funston on the Pacific Ocean to San Francisco International Airport on San Francisco Bay. Because the gap is oriented in the same northwest-to-southeast direction as the prevailing winds, and because the elevations along the gap are less than 200 feet, marine air can easily penetrate to the bay and beyond. The other gap is the Crystal Springs Gap, between Half Moon Bay and San Carlos. As the sea breeze strengthens on summer afternoons, the gap permits maritime air to pass across the mountains, and its cooling effect is commonly seen from San Mateo to Redwood City.

Annual average wind speeds range from 5 to 10 miles per hour (mph) throughout the Peninsula, with higher wind speeds usually found along the coast. Winds on the eastern side of the Peninsula are often high in certain areas, such as near the San Bruno Gap and the Crystal Springs Gap.

The prevailing winds along the Peninsula's coast are from the west, although individual sites can show substantial differences. For example, Fort Funston in western San Francisco shows a southwest wind pattern while Pillar Point in San Mateo County shows a northwest wind pattern. On the east side of the mountains, winds are generally from the west, although wind patterns in this area are often influenced greatly by local topographic features.

Air pollution potential along the Peninsula is highest in the southeastern portion. This is the area most protected from the high winds and fog of the marine layer. Pollutant transport from upwind sites is common. In the southeastern portion of the Peninsula, air pollutant emissions are higher than in the rest of the Peninsula because of emissions from motor vehicle traffic and stationary sources. At the northern end of the Peninsula in San Francisco, pollutant emissions are high primarily because of motor vehicle congestion.

AIR POLLUTANT STANDARDS AND ATTAINMENT DESIGNATIONS

Air pollutant standards have been identified by the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (ARB) for the following six criteria air pollutants that affect ambient air quality: ozone, CO, PM, NO_2, SO_2, and lead. These air pollutants are called "criteria air pollutants" because they are regulated by specific public health- and welfare-based criteria. California has also established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. **Table 4.4.1: Federal and State Air Quality Standards in the San Francisco Bay Area Air Basin** presents the national ambient air quality standards (NAAQS or national standards) and California ambient air quality standards (CAAQS or California standards).

Table 4.4.1: Federal and State Air Quality Standards in the San Francisco Bay Area Air Basin

Pollutant	Averaging Time	California Standards		National Standards	
Ozone	1 Hour	0.090 ppm (180 µg/m^3)	Nonattainment	–	N/A
	8 Hours	0.070 ppm (137 µg/m^3)	Nonattainment	0.070 ppm (137 µg/m^3)	Nonattainment
Respirable Particulate Matter (PM_{10})	24 Hours	50 µg/m^3	Nonattainment	150 µg/m^3	Unclassified
	AAM	20 µg/m^3	Nonattainment	–	N/A
Fine Particulate Matter ($PM_{2.5}$)	24 Hours	–	N/A	35 µg/m^3	Nonattainment
	AAM	12 µg/m^3	Nonattainment	12.0 µg/m^3	Nonattainment
Carbon Monoxide (CO)	8 Hours	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Attainment
	1 Hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Attainment
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm (57 µg/m^3)	Attainment	0.053 ppm (100 µg/m^3)	Attainment
	1 Hour	0.18 ppm (339 µg/m^3)	Attainment	100 ppb (188 µg/m^3)	Attainment
Sulfur Dioxide (SO_2)	24 Hours	0.04 ppm (105 µg/m^3)	Attainment	0.14 ppm (365 µg/m^3)	Attainment
	1 Hour	0.25 ppm (655 µg/m^3)	Attainment	75 ppb (196 µg/m^3)	Attainment
	AAM	–	Attainment	0.030 ppm (80 µg/m^3)	Attainment
Lead (Pb)	30-Day Average	1.5 µg/m^3	Attainment	–	Attainment
	Calendar Quarter	–	Attainment	1.5 µg/m^3	Attainment
	Rolling 3-Month Average[14]	–	Attainment	0.15 µg/m^3	Attainment
Visibility-Reducing Particles	8 Hours	See note 1	N/A	No national standards[2]	
Sulfates	24 Hours	25 µg/m^3	Attainment		
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (42 µg/m^3)	Unclassified		
Vinyl Chloride (C_2H_3Cl)	24 Hours	0.01 ppm (26 µg/m^3)	Unclassified		

Notes: µg/m^3 = micrograms per cubic meter; AAM = annual arithmetic mean; mg/m^3 = milligrams per cubic meter; ppm = parts per million

[1] In 1989, the California Air Resources Board converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

[2] National ambient air quality standards have not been established for visibility-reducing particles, sulfates, hydrogen sulfide, or vinyl chloride.

Source: California Air Resources Board, Ambient Air Quality Standards, May 4, 2016, https://www.arb.ca.gov/research/aaqs/aaqs2.pdf, accessed in April 2018.

Both EPA and ARB use ambient air quality monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. "Attainment" status refers to those regions that are meeting federal and/or state standards for a specified criteria pollutant. "Nonattainment" refers to regions that do not meet federal and/or state standards for a specified criteria pollutant. "Unclassified" refers to regions where there is not enough data to determine the region's attainment status for a specified criteria air pollutant.

As shown in Table 4.4.1, the SFBAAB is designated as either in attainment or unclassified for most criteria pollutants with the exception of ozone, $PM_{2.5}$, and PM_{10}. These three pollutants are designated as nonattainment under either the state or federal standards.

Ambient air pollutant concentrations in the SFBAAB are measured at air quality monitoring stations operated by the ARB and BAAQMD. In general, the SFBAAB experiences low concentrations of most pollutants compared to federal or state standards. **Table 4.4.2: Summary of Criteria Pollutant Monitoring Data (2013–2017)** presents a five-year summary of the highest annual concentrations of criteria air pollutants collected at the air quality monitoring station at Arkansas and 16th streets in San Francisco's lower Potrero Hill area. This is the closest monitoring station to the project site (approximately 1.25 miles southeast of the project site) and best represents available air quality data.

Air Pollutant Types, Sources, and Effects

As discussed above, air pollutants are termed criteria air pollutants because they are regulated by specific public health– and welfare-based criteria. The following discussion explains the types, sources, and effects of criteria air pollutants.

CRITERIA AIR POLLUTANTS

Ozone, or smog, is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between reactive organic gases (ROG) and oxides of nitrogen (NO_X) in the presence of sunlight. Ozone formation is greatest on warm, windless, sunny days. The main sources of NO_X and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines), the evaporation of solvents, paints, and fuels, and biogenic sources. Automobiles are the single largest source of ozone precursors in the SFBAAB. Tailpipe emissions of ROG are highest during cold starts, hard acceleration, stop-and-go conditions, and slow speeds. They decline as speeds increase up to about 50 mph, then increase again at high speeds and high engine loads. ROG emissions associated with evaporation of unburned fuel depend on vehicle and ambient temperature cycles. NO_X emissions exhibit a different curve; emissions decrease as the vehicle approaches 30 mph and then begin to increase with increasing speeds. Ozone levels usually build up during the day, peaking in the afternoon hours.

Table 4.4.2: Summary of Criteria Pollutant Monitoring Data (2013–2017)

Air Pollutant	Averaging Time	Item	Applicable Standard	2013	2014	2015	2016	2017
Ozone	1 Hour	Max 1 Hour (ppb)		69	79	85	70	87
		Days > State Standard	90ppb	0	0	0	0	0
	8 Hour	Max 8 Hour (ppb)		59	69	67	57	54
		Days > State Standard	70 ppb	0	0	0	0	0
		Days > National Standard	70 ppb	0	0	0	0	0
		3-Year Average		46	47	48	49	47
Carbon monoxide	1 Hour	Max 1 Hour (ppm)	20 ppm	4.8	1.6	1.8	1.7	2.5
	8 Hour	Max 8 Hour (ppm)		1.4	1.2	1.3	1.1	1.4
		Days > State Standard	9 ppm	0	0	0	0	0
		Days > National Standard	9 ppm	0	0	0	0	0
Nitrogen dioxide	Annual	Annual Average (ppb)		14	12	12	11	11
	1 Hour	Max 1 Hour (ppb)		73	84	71	58	73
		Days > State Standard	180 ppb	0	0	0	0	0
		Days > National Standard	100 ppb	0	0	0	0	0
Sulfur dioxide	1 Hour	Max 1 Hour (ppb)		–	–	–	–	–
		Days > National Standard		–	–	–	–	–
	24 Hour	Max 24 Hour (ppb)		–	–	–	–	–
		Days > State Standard		–	–	–	–	–
PM_{10}	Annual	Annual Average ($\mu g/m^3$)		18.3	17.0	19.2	17.0	22.0
		Max 24 Hour ($\mu g/m^3$)	20 $\mu g/m^3$	44	36	47	29	**77**
	24 Hour	Days > State Standard	50 $\mu g/m^3$	0	0	0	0	2
		Days > National Standard	150$\mu g/m^3$	0	0	0	0	0
$PM_{2.5}$	Annual	Annual Average ($\mu g/m^3$)	12$\mu g/m^3$	10.1	7.7	8.9	7.5	9.7
		3-Year Average ($\mu g/m^3$)		9.3	8.6	10.5	7.6	8.3
	24 Hour	24 Hour ($\mu g/m^3$)	35 $\mu g/m^3$	**48.5**	33.2	35.4	19.6	**49.9**
		Estimated Days > National Standard	35 $\mu g/m^3$	2	0	0	0	7
		3-Year Average ($\mu g/m^3$)		25	23	25	22	27

Notes: > = exceed; $\mu g/m^3$ = micrograms per cubic meter; – = insufficient data; National Standard = national ambient air quality standard; $PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter; PM_{10} = particulate matter equal to or less than 10 microns in diameter; ppb = parts per billion; ppm = parts per million; State Standard = California ambient air quality standard

Bold = exceeds standard

Source: Bay Area Air Quality Management District, Annual Bay Area Air Quality Summaries: 2013, 2014, 2015, 2016, and 2017, available on line at http://www.baaqmd.gov/~/media/files/communications-and-outreach/annual-bay-area-air-quality-summaries/pollsum2017-pdf.pdf?la=en, similar URLs for earlier years, accessed June 2018.

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

Table 4.4.2 shows that, according to published data, the standards for ozone (state one-hour standard of 90 parts per billion [ppb] and the state/federal eight-hour standard of 70 ppb) were not exceeded at the San Francisco – Arkansas Street monitoring station between 2013 and 2017. However, the air basin remains listed as nonattainment for ozone because of exceedances at other monitoring stations in the SFBAAB.

Particulate matter (PM_{10} and $PM_{2.5}$) refers to a wide range of solid or liquid particles in the atmosphere, including smoke, dust, aerosols, and metallic oxides. Respirable particulate matter with an aerodynamic diameter of 10 microns or less is referred to as PM_{10}. $PM_{2.5}$ includes a subgroup of finer particles that have an aerodynamic diameter of 2.5 microns or less. Some particulate matter, such as pollen, is naturally occurring. In the SFBAAB, most particulate matter is caused by combustion, factories, construction, grading, demolition, agricultural activities, and motor vehicles. Land use development projects typically result in particulate matter emissions as a result of increases in vehicle trips, space heating and natural gas combustion, landscape maintenance, and construction activities.

Fugitive dust is PM_{10} and $PM_{2.5}$ suspended in the air by wind action and human activities. Fugitive dust particles are composed mainly of soil minerals (e.g., oxides of silicon, aluminum, calcium, and iron), but can also contain sea salt, pollen, spores, and tire particles. Because of their small size, PM_{10} and $PM_{2.5}$ can remain airborne for weeks. Fugitive dust accounts for about 90 percent of all primary PM_{10} emissions.[4] PM_{10} and $PM_{2.5}$ pose health concerns because the PM can contain harmful substances that can deposit deep in the lungs when inhaled, causing respiratory illnesses and lung damage. In addition, fugitive dust can reduce visibility.

As shown in Table 4.4.2, the state 24-hour PM_{10} standard of 50 micrograms per cubic meter ($\mu g/m^3$) was exceeded up to 24 days in 2017 during the wildfires in counties north of San Francisco, when air quality reached unhealthy levels in these counties.[5] While there have also been wildfires in counties north of San Francisco in 2018, the resulting poor air quality is considered an extraordinary condition that rarely occurs in the Bay Area. The state 24-hour $PM_{2.5}$ standard was exceeded on 9 days between 2013 and 2017. The SFBAAB is designated as nonattainment for the state PM_{10} and both the federal and state $PM_{2.5}$ standards.

[4] California Air Resources Board, Fugitive Dust Control Self-Inspection Handbook How to Control Dust and Reduce Air Pollution, 2007, https://www.arb.ca.gov/pm/fugitivedust_large.pdf, accessed May 2017.

[5] PM_{10} concentrations were sampled every twelfth day; therefore, actual days over the standard can be estimated to be 12 times the numbers listed in the table.

Nitrogen dioxide is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

In 2010, a new federal one-hour NO_2 standard was implemented. As shown in Table 4.4.2, the federal standard was not exceeded between 2013-2017.

Carbon monoxide is an odorless, colorless gas. It is formed by the incomplete combustion of fuels. The single largest source of CO in the SFBAAB is motor vehicles. Emissions are highest during cold starts, hard acceleration, stop-and-go driving, and when a vehicle is moving at low speeds.

When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease or anemia, as well as fetuses. Even healthy people exposed to high CO concentrations can experience headaches, dizziness, fatigue, unconsciousness, and even death.

As shown in Table 4.4.2, the applicable standards for CO (state one-hour standard of 20 ppm and the state/federal eight-hour standard of 9 ppm) were not exceeded between 2013 and 2017. The SFBAAB is classified as an attainment/maintenance area for both the state and federal CO standards.

Sulfur dioxide is a colorless acid gas with a pungent odor. SO_2 has the potential to damage materials and can have health effects at high concentrations. It is produced by the combustion of sulfur-containing fuels, such as oil, coal and diesel. SO_2 can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

EPA has designated the SFBAAB as an attainment area for SO_2. In 2013, EPA established requirements for a monitoring network to measure SO_2 concentrations; however, no additional SO_2 monitors were required for the SFBAAB because the air basin had never been designated as nonattainment for SO_2.

Lead is a metal found naturally in the environment and in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. In the early 1970s, EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline

was introduced for motor vehicles equipped with catalytic converters. EPA banned the use of leaded gasoline in highway vehicles in December 1995. As a result of EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector and levels of lead in the air decreased dramatically.

On October 15, 2008, EPA strengthened the national ambient air quality standard for lead by lowering it from 1.5µg/m^3 to 0.15 µg/m^3. EPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas. Lead monitoring stations in the SFBAAB are located at the Palo Alto Airport, Reid-Hillview Airport (San Jose), and San Carlos Airport. Non-airport locations for lead monitoring are in Redwood City and San Jose. The SFBAAB is designated as an attainment area for lead.

TOXIC AIR CONTAMINANTS AND LOCAL HEALTH RISKS AND HAZARDS

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

Concentrations of TACs are also used as indicators of air quality conditions. Air pollutant human exposure standards are identified for many TACs, including the following common TACs relevant to development projects: particulate matter, fugitive dust, lead, and asbestos. These air pollutants are called TACs because they are air pollutants that may cause or contribute to an increase in mortality or serious illness or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health impact may pose a threat to public health even at low concentrations. TACs can cause long-term health effects (such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage) or short-term acute affects (such as eye watering, respiratory irritation, runny nose, throat pain, or headaches).

TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to a particular TAC. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. Cancer risk is typically expressed as excess cancer cases per million exposed individuals, typically over a lifetime exposure or other prolonged duration. For noncarcinogenic substances, there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels may vary depending on the specific pollutant.

Unlike criteria air pollutants, TACs do not have ambient air quality standards but are regulated by the air district using a risk-based approach to determine which sources and pollutants to control as well as the degree of control. A health risk assessment is an analysis in which human health

exposure to toxic substances is estimated, and considered together with information regarding the toxic potency of the substances, to provide quantitative estimates of health risks.

Diesel particulate matter (diesel PM) is the solid material in diesel exhaust. Diesel PM was identified as a TAC by ARB in 1998.[6] Federal and state efforts to reduce diesel PM emissions have focused on the use of improved fuels, adding particulate filters to engines, and requiring the production of new-technology engines that emit fewer exhaust particulates. $PM_{2.5}$ poses an increased health risk because the particles can deposit deep in the lungs and contain substances that are particularly harmful to human health. Exposures to $PM_{2.5}$ are strongly associated with mortality, respiratory diseases, and lung development in children, and other endpoints such as hospitalization for cardiopulmonary disease.[7]

ARB identifies substances as TACs as defined in California Health and Safety Code section 39655 and listed in Title 17, section 93000 of the California Code of Regulations, "Substances Identified As Toxic Air Contaminants." ARB also collects ambient TAC emissions data at the San Francisco–Arkansas Street monitoring station. **Table 4.4.3: Carcinogenic Toxic Air Contaminants—Annual Average Ambient Concentrations at the San Francisco–Arkansas St. Monitoring Station (2017)** shows ambient concentrations of carcinogenic TACs measured at the San Francisco–Arkansas Street monitoring station and the estimated cancer risks from exposure to these substances.

When TAC measurements at the San Francisco–Arkansas Street monitoring station are compared to ambient concentrations of various TACs for the Bay Area as a whole, the estimated average lifetime cancer risk resulting from TAC concentrations monitored at the San Francisco – Arkansas Street station does not appear to be substantially greater or less than that for the Bay Area as whole.

Air Pollution Exposure Zone

The City and air district conducted a citywide health risk assessment based on an inventory and assessment of air pollution and exposures from mobile, stationary, and area sources in San Francisco to identify areas of the City most adversely affected by sources of TACs.

[6] California Air Resources Board, "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-fueled Engines," fact sheet, October 1998.

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

Table 4.4.3: Carcinogenic Toxic Air Contaminants—Annual Average Ambient Concentrations at the San Francisco–Arkansas St. Monitoring Station (2017)

Substance	Mean Concentration	Cancer Risk per Million[a]
Gaseous Toxic Air Contaminants (ppb)		
Acetaldehyde	0.69	10
Benzene	0.216	56
1,3-butadiene	0.036	41
Carbon tetrachloride	*	*
Chloroform	0.028	2
Para-dichlorobenzene	*	*
cis-1,3-dichloropropene	0.05	10
trans-1,3-dichloropropene	0.05	10
Ethyl benzene	0.11	3
Ethylene dibromide	*	*
Ethylene dichloride	*	*
Formaldehyde	1.64	35
Perchloroethylene	0.009	1
Methylene chloride	0.114	1
Methyl tertiary-butyl ether (MBTE)	*	*
Trichloroethylene	0.010	0.3
Polycyclic Aromatic Hyrocarbons (ng/m^3)		
Benzo(a)pyrene	*	*
Benzo(b)fluoranthene	*	*
Benzo(k)fluoranthene	*	*
Dibenz(a,h)anthracene)	*	*
Indeno(1,2,3-cd)pyrene	*	*
Particulate TACs (ng/m^3)		
Arsenic	0.92	9
Beryllium	0.150	1
Cadmium	0.70	9
Lead	*	*
Nickel	3.2	2
Hexavalent chromium	*	*
Total Risk for All TACs		**188**

Notes:
ppb = parts per billion; TAC = toxic air contaminant; ng/m^3 = nanograms per cubic meter; * indicates that insufficient or no data were available to determine the value.

a. The potential cancer risk estimates reflect the risk assessment methodology finalized by the Office of Environmental Health Hazard Assessment on March 6, 2015. Information on the agency's risk assessment methodology can be found at http://www.oehha.ca.gov/air/hot_spots/hotspots2015.html.

Source: ARB, Annual Toxics Summaries by Monitoring Site, 2017

Citywide air dispersion modeling was conducted using AERMOD[8] to assess emissions from roadways, permitted stationary sources, port and maritime sources, and Caltrain. Emissions of diesel PM, $PM_{2.5}$ (including brake and tire wear), organic gases, and other TACs from stationary sources were modeled on a 20-by-20-meter receptor grid over the entire City. The results represent existing exposure to $PM_{2.5}$ concentrations and excess lifetime cancer risk across San Francisco. The procedures used to conduct the modeling are available in The San Francisco Community Risk Reduction Plan: Technical Support Documentation.[9]

The modeling results were used to identify areas of the City with poor air quality, identified as the Air Pollutant Exposure Zone (APEZ). The APEZ identifies areas that meet any of the criteria described below.

- **Excess cancer risk of 100 per 1 million persons.** This criterion is based on EPA guidance for conducting air toxic analyses and making risk management decisions at the facility and community-scale levels.[10] As described by BAAQMD, EPA considers a cancer risk of 100 per million to be within the "acceptable" range of cancer risk. Furthermore, in the 1989 preamble to the benzene National Emissions Standards for Hazardous Air Pollutants rulemaking (54 *Federal Register* 38044, September 14, 1989), EPA states that it

  > …strives to provide maximum feasible protection against risks to health from hazardous air pollutants by (1) protecting the greatest number of persons possible to an individual lifetime risk level no higher than approximately one in one million and (2) limiting to no higher than approximately one in ten thousand [100 in one million] the estimated risk that a person living near a plant would have if he or she were exposed to the maximum pollutant concentrations for 70 years.

  The 100 per one million excess cancer cases is also consistent with the ambient cancer risk in the most pristine portions of the Bay Area based on BAAQMD regional modeling.[11]

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[8] AERMOD is the EPA's recommended steady-state air dispersion plume model. Dispersion modeling uses mathematical formulations to characterize the atmospheric processes that disperse a pollutant emitted by a source. Based on emissions and meteorological inputs, a dispersion model can be used to predict concentrations at selected downwind receptor locations. For more information on AERMOD and to download the AERMOD Implementation Guide, see https://www.epa.gov/scram/air-quality-dispersion-modeling-preferred-and-recommended-models, accessed September 24, 2018.

[9] Bay Area Air Quality Management District, San Francisco Department of Public Health, and San Francisco Planning Department, *The San Francisco Community Risk Reduction Plan: Technical Support Documentation,* December 2012.

[10] Bay Area Air Quality Management District, *Revised Draft Options and Justification Report*, *California Environmental Quality Act Thresholds of Significance*, October 2009, (hereinafter "BAAQMD *Revised Draft Options and Justification Report,* 2009"), p. 67. Available at http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/revised-draft-ceqa-thresholds-justification-report-oct-2009.pdf?la=en, accessed September 2018.

[11] BAAQMD, *Revised Draft Options and Justification Report,* 2009.

- **Fine particulate matter of 2.5 µg/m^3**. In April 2011, EPA published *Policy Assessment for the Particulate Matter Review of the National Ambient Air Quality Standards*, "Particulate Matter Policy Assessment."[12] In this document, EPA staff concludes that the then-current federal annual $PM_{2.5}$ standard of 15 µg/m^3 should be revised to a level within the range of 13 to 11 µg/m^3, with evidence strongly supporting a standard within the range of 12 to 11 µg/m^3. The APEZ for San Francisco[13] is based on the health protective $PM_{2.5}$ standard of 11 µg/m^3, as supported by EPA's Particulate Matter Policy Assessment, although lowered to 10 µg/m^3 to account for uncertainty in accurately predicting air pollutant concentrations using emissions modeling programs.
- **Proximity to freeways.** According to ARB, studies have shown an association between the proximity of sensitive land uses to freeways/other major transportation thoroughfares and a variety of respiratory symptoms, asthma exacerbations, and decreases in lung function in children. Siting sensitive uses in close proximity to freeways/other major transportation thoroughfares increases both exposure to air pollution and the potential for adverse health effects. As evidence shows that sensitive uses in an area within a 500-foot buffer of any freeway are at an increased health risk from air pollution,[14] lots that are within 500 feet of freeways are included in the APEZ. The project site is located in the APEZ.
- **Location in a health-vulnerable zip code**. In addition to the lots included in the APEZ, zip codes in the lowest 20 percent of Bay Area Health Vulnerability scores (zip codes 94102, 94103, 94105, 94124, and 94130) are identified as health-vulnerable zip codes. For health- vulnerable zip codes, the standard for being within the APEZ was lowered to an excess cancer risk from the contribution of emissions from all modeled sources greater than 90 per one million persons, and/or cumulative $PM_{2.5}$ concentrations greater than 9 µg/m^3. The project site is located in a health-vulnerable zip code (94102).

The above citywide health risk modeling was also used as the basis in approving amendments to the San Francisco Building and Health codes, generally referred to as the Enhanced Ventilation Required for Urban Infill Sensitive Use Developments or Health Code, article 38 (Ordinance 224-14, effective December 8, 2014) (article 38). Article 38 is discussed further below.

Sensitive Receptors

Air pollution does not affect every individual in the population in the same way, and some groups are more sensitive to adverse health effects than others. Land uses such as residences, schools, day care centers, hospitals, and nursing and convalescent homes are considered to be the most sensitive to poor air quality, because the population groups associated with these uses have increased susceptibility to respiratory distress or, as in the case of residential receptors, their

[12] U.S. Environmental Protection Agency, *Policy Assessment for the Review of the Particulate Matter National Ambient Air Quality Standards*, April 2011, EPA/452/R-11-003, Office of Air Quality Planning and Standards.
[13] San Francisco Department of Public Health, *Air Pollutant Exposure Zone Map*, 2014.
[14] California Air Resources Board, *Air Quality and Land Use Handbook: A Community Health Perspective*, April 2005.

exposure time is greater than that for other land uses. Therefore, these groups are referred to as sensitive receptors. Exposure assessment guidance typically assumes that residences would be exposed to air pollution 24 hours per day, 350 days per year, for 30 years.

The air district defines sensitive receptors as children, adults, and seniors occupying or residing in residential dwellings, schools, day care centers, hospitals, and senior-care facilities.[15] Figure 4.3.1, Noise Measurement Locations and Sensitive Receptors Site Locations, p. 4.3.9 in Section 4.3, Noise, shows representative nearby existing sensitive receptors. The nearest sensitive receptors are residential units (i.e., multifamily unit) located across Market Street to the north (1580 Market Street, approximately 120 feet from the edge of the project site), and the residential hotel located across 12th Street to the west (1601 Market Street, approximately 80 feet from the edge of the project site). The 1500 Mission Street project located to the east, across South Van Ness Avenue, will include residential receptors and a daycare center when it is completed. Once the proposed project or variant is operational, the onsite residents would also be considered sensitive receptors.

Existing Emission Sources

STATIONARY SOURCES

While there are no existing stationary sources on the project site, there are several buildings within 1,000 feet of the project site that include stationary sources such as boilers, diesel hydraulic starters, and emergency generators.

MOBILE SOURCES

The existing auto dealership generates mobile vehicle emissions from employee and customer trips, vehicle starts associated with movement of cars for parking and storage, test drives, and vehicle service and maintenance. In addition to trips associated with the existing site, mobile vehicle emissions from public transportation, resident, employee, and visitor trips occur on adjacent roadways.

Regulatory Framework

Air quality in the SFBAAB is regulated by EPA, ARB, BAAQMD, and the City. Each of these agencies develops rules, regulations, policies, and/or goals to attain the directives imposed

[15] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, May 2017, (hereafter "BAAQMD *CEQA Guidelines*, May 2017"), Glossary, p. E-4. available at http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed May 2017

through legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent.

FEDERAL

EPA is charged with implementing national air quality programs. EPA's air quality mandates are drawn primarily from the federal Clean Air Act, which was enacted in 1970. The most recent major Clean Air Act amendments were made by Congress in 1990.

Federal Clean Air Act

The Clean Air Act required EPA to establish national ambient air quality standards. EPA has established primary and secondary national standards for the following criteria air pollutants: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and lead. The primary standards protect public health and the secondary standards protect public welfare. The primary standards are shown in Table 4.4.1. The Clean Air Act also requires each state to prepare an air quality control plan referred to as a state implementation plan (SIP). A SIP is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The federal Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies.

Emission Standards for New Off-Road Equipment

Before 1994, there were no standards to limit the amount of emissions from off-road equipment (which includes construction equipment). In 1994, EPA established emission standards for hydrocarbons, NO_X, CO, and PM to regulate new pieces of off-road equipment. These emission standards came to be known as tier 1. Since that time, increasingly more stringent tier 2, tier 3, and tier 4 (interim and final) standards were adopted by EPA, as well as by ARB. Each adopted emission standard was phased in over time. New engines built in and after 2015 across all horsepower (hp) sizes must meet tier 4 final emission standards. In other words, new manufactured engines cannot exceed the emissions established for tier 4 final emissions standards.

STATE

The SIP for the State of California is administered by ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's SIP incorporates individual federal attainment plans for regional air districts. The air district prepares its federal attainment plan, which is sent to ARB to be approved and incorporated into the California SIP. Federal attainment plans include the technical foundation for understanding air quality (e.g.,

emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms.

California Clean Air Act and California Ambient Air Quality Standards

ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act. The California Clean Air Act was adopted in 1988; it requires ARB to establish California air quality standards (Table 4.4.1). ARB has established California standards for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the federal criteria air pollutants. In most cases, the California standards are more stringent than the national standards.

Other ARB responsibilities include but are not limited to overseeing local air district compliance with California and federal laws; approving local air quality plans; submitting SIPs to EPA; monitoring air quality; determining and updating area designations and maps; and setting emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

California Air Resources Board In-Use Off-Road Diesel Vehicle Regulation

In 2007, ARB adopted a regulation to reduce diesel PM and NO_X emissions from in-use off-road heavy-duty diesel vehicles in California. The regulation imposes limits on vehicle idling and requires fleets to reduce emissions by retiring, replacing, repowering, or installing exhaust retrofits to older engines.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California are primarily regulated through the Tanner Air Toxics Act (Assembly Bill 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (Assembly Bill 2588), also known as the Hot Spots Act. To date, ARB has identified more than 21 TACs, and has adopted EPA's list of hazardous air pollutants as TACs.

California Air Resources Board Airborne Toxics Control Measures

ARB has adopted Airborne Toxics Control Measures for sources that emit a particular TAC. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If there is no safe threshold, the measure must incorporate Best Available Control Technology to minimize emissions.

California Air Resources Board Diesel Risk Reduction Plan

The ARB-adopted Diesel Risk Reduction Plan recommends control measures to achieve a diesel PM reduction of 85 percent by 2020 from year 2000 levels. Recent regulations and programs include the low-sulfur diesel fuel requirement and more stringent emission standards for heavy-duty diesel trucks and off-road in-use diesel equipment. As emissions are reduced, it is expected that the risks associated with exposure to the emissions will also be reduced.

REGIONAL

Bay Area Air Quality Management District Air Quality Planning

The air district is the primary agency responsible for ensuring that air quality standards (both national and California ambient air quality standards) are attained and maintained in the SFBAAB through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The air district prepares ozone attainment plans to meet the national ozone standard, clean air plans for the California standard, and PM plans to fulfill federal air quality planning requirements for the SFBAAB. The air district also inspects stationary sources of air pollution; responds to citizen complaints; monitors ambient air quality and meteorological conditions; and implements programs and regulations required by the Clean Air Act, the Clean Air Act Amendments of 1990, and the California Clean Air Act.

Bay Area Air Quality Management District 2017 Bay Area Clean Air Plan

The air district has the responsibility to monitor ambient air pollutant levels throughout the SFBAAB and to develop and implement strategies to attain the applicable federal and state standards.[16] The federal and state clean air acts require plans to be developed for areas that do not meet air quality standards. The air district adopted the *Bay Area Clean Air Plan: Spare the Air, Cool the Climate* (Bay Area Clean Air Plan) on April 19, 2017, to provide a regional strategy to improve Bay Area air quality and meet public health goals.[17] The control strategy described in the Bay Area Clean Air Plan includes a wide range of control measures designed to reduce emissions and lower ambient concentrations of harmful pollutants, safeguard public health by reducing exposure to air pollutants that pose the greatest health risk, and reduce greenhouse gas emissions to protect the climate.

[16] The nearest monitoring station to the project site is at 10 Arkansas Street, 1.25 miles southeast of the project site on the east side of San Francisco.

[17] Bay Area Air Quality Management District, Bay Area 2017 Clean Air Plan: Spare the Air, Cool the Climate—A Blueprint for Clean Air and Climate Protection in the Bay Area, Final, April 19, 2017, available at http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1-pdf.pdf?la=en, accessed September 2018.

The Bay Area Clean Air Plan addresses four categories of pollutants: ground-level ozone and its key precursors, ROG and NO_X; PM, primarily $PM_{2.5}$, and precursors to secondary $PM_{2.5}$; air toxics; and greenhouse gases. The control measures are categorized based on economic sectors including stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, and water measures.[18]

The 2017 Bay Area Clean Air Plan updates the most recent Bay Area ozone plan, the 2010 Clean Air Plan, in accordance with the requirements of the state Clean Air Act to implement all feasible measures to reduce ozone; provide a control strategy to reduce particulate matter, air toxics, and greenhouse gases in a single, integrated plan; and establish emission control measures to be adopted or implemented. The 2017 Clean Air Plan contains the following primary goals:

- **Protect air quality and health at the regional and local scale:** Attain all state and national air quality standards, and eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants.
- **Protect the climate:** Reduce Bay Area greenhouse gas emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050.

Bay Area Air Quality Management District Particulate Matter Plan

To fulfill federal air quality planning requirements, the air district adopted a $PM_{2.5}$ emissions inventory for year 2010 at a public hearing on November 7, 2012. The Bay Area Clean Air Plan also includes several measures for reducing PM emissions from stationary sources and wood burning. On January 9, 2013, EPA issued a final rule determining that the Bay Area has attained the national 24-hour $PM_{2.5}$ standard, suspending federal SIP planning requirements for the SFBAAB. Despite this EPA action, the SFBAAB will continue to be designated as nonattainment for the national 24-hour $PM_{2.5}$ standard until the air district submits a redesignation request and a maintenance plan to EPA, and EPA approves the proposed redesignation.

Bay Area Air Quality Management District 2001 Ozone Attainment Plan

The air district adopted the Bay Area Ozone Attainment Plan in 2001 in response to EPA's finding that the Bay Area had failed to attain the national standard for ozone. The plan includes a control strategy for ozone and its precursors to ensure a reduction in emissions from stationary sources, mobile sources, and the transportation sector.[19]

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[18] Ibid.

[19] Bay Area Air Quality Management District, *Revised San Francisco Bay Area Ozone Attainment Plan for the 1-Hour National Ozone Standard*, adopted October 24, 2001, Planning and Research Division, San Francisco, CA. Available at http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2001-ozone- attainment-plan/oap_2001.pdf, accessed May 2017.

Bay Area Air Quality Management District Regulation 2, Rule 5

The air district regulates backup emergency generators, fire pumps, and other sources of TACs through its New Source Review (regulation 2, rule 5) permitting process.[20] Although emergency generators are intended to be used only during periods of power outages, monthly testing of each generator is required; however, the air district limits testing to no more than 50 hours per year. Each emergency generator installed is assumed to meet a minimum of tier 2 emission standards (before control measures).

Bay Area Air Quality Management District Regulations Pertaining to Odorous Emissions

Several BAAQMD regulations and rules apply to odorous emissions. Regulation 1, rule 301 is a nuisance provision that states that sources cannot emit air contaminants that cause nuisance to a considerable number of persons. Regulation 7 specifies limits for the discharge of odorous substances where the air district receives complaints from 10 or more complainants within a 90-day period.

Association of Bay Area Governments and Metropolitan Transportation Commission Plan Bay Area

On July 26, 2017, the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG) approved the *Plan Bay Area 2040*. The *Plan Bay Area* includes integrated land use and transportation strategies for the region and was developed through OneBayArea, a joint initiative between ABAG, BAAQMD, MTC, and the San Francisco Bay Conservation and Development Commission. The plan's transportation policies focus on maintaining the extensive existing transportation network and utilizing these systems more efficiently to handle the density of land uses in Bay Area transportation cores.[21] Assumptions for land use development in the plan are based on local and regional planning documents. Emission forecasts in the Bay Area Clean Air Plan rely on projections of vehicle miles traveled, population, employment, and land use made by local jurisdictions during development of *Plan Bay Area 2040*.

[20] Bay Area Air Quality Management District, Regulation 2, Permits; Rule 5, New Source Review of Toxic Air Contaminants, December 7, 2016, http://www.baaqmd.gov/~/media/files/planning-and-research/rules-and-regs/reg-02/rg0205_120716-pdf.pdf?la=en, accessed May 2017.

[21] Association of Bay Area Governments and Metropolitan Transportation Commission, Plan Bay Area 2040, adopted July 26, 2017, https://mtc.ca.gov/our- work/plans-projects/plan-bay-area-2040, accessed February 6, 2018.

LOCAL

San Francisco General Plan Air Quality Element

San Francisco has a number of policies and regulations related to air quality, including those within the Air Quality Element of the *San Francisco General Plan*[22] and the City's Building and Health codes. The objectives specified by the City in the general plan include the following:

- **Objective 1:** Adhere to State and Federal air quality standards and regional programs.
- **Objective 2:** Reduce mobile sources of air pollution through implementation of the Transportation Element of the General Plan.
- **Objective 3:** Decrease the air quality impacts of development by coordination of land use and transportation decisions.
- **Objective 4:** Improve air quality by increasing public awareness regarding the negative health effects of pollutants generated by stationary and mobile sources.
- **Objective 5:** Minimize particulate matter emissions from road and construction sites.
- **Objective 6:** Link the positive effects of energy conservation and waste management to emission reductions.

San Francisco Health and Building Codes

Construction Dust Control Ordinance

San Francisco Health Code article 22B and San Francisco Building Code section 106A.3.2.6 collectively constitute the Construction Dust Control Ordinance (adopted in July 2008). The ordinance requires that all site preparation work, demolition, or other construction activities in San Francisco that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil comply with specific dust control measures whether or not the activity requires a permit from the Department of Building Inspection (DBI). For projects on sites larger than 0.5 acre, the Construction Dust Control Ordinance requires that the project sponsor submit a dust control plan for approval by the San Francisco Department of Public Health before DBI issues a building permit. The project site is over 1 acre and therefore the project sponsor would be required to prepare a construction dust control plan. The Construction Dust Control Ordinance requires project sponsors and contractors responsible for construction activities to control construction dust on the site or implement other practices that result in equivalent dust control that are acceptable to the director of public health.

[22] San Francisco Planning Department, *San Francisco General Plan*, amended by Resolution No. 14149, adopted on June 27, 1996, Air Quality Element, http://generalplan.sfplanning.org/ I10_Air_Quality.htm, accessed May 2017.

Protection of Sensitive Uses from Air Pollutants

The City adopted article 38 of the San Francisco Health Code in 2008, and amended it in 2014, to protect new sensitive uses from existing sources of air pollution by requiring enhanced ventilation and filtration systems in certain areas of the City. The amendments make the health code and building code consistent with the results of the air quality modeling undertaken to identify the City's APEZ, discussed above.

As revised in 2014, article 38 of the health code applies to all development that includes "sensitive uses," as defined in the code, including all residential units; adult, child and infant care centers; schools; and nursing homes. Article 38 considers all existing known sources of TACs and $PM_{2.5}$, and requires "enhanced ventilation," including filtration of outdoor air, for all sensitive use projects, such as the proposed project, located in the APEZ. The filtration requirement of article 38 specifies Minimum Efficiency Reporting Value 13 or equivalent, based on American Society of Heating, Refrigerating and Air-Conditioning Engineers Standard 52.2, and requires the health department to confer with other City departments and report to the board of supervisors regarding technologies it has identified or evaluated that may comply with the requirements of the health code.

Article 38 also requires periodic updating of the APEZ Map (about every five years) to account for changes in sources of TACs and $PM_{2.5}$ emissions or updated health risk quantification methodologies.

Impacts and Mitigation Measures

Significance Thresholds

The thresholds for determining the significance of impacts in this analysis are consistent with the environmental checklist in Appendix G of the CEQA Guidelines, which has been modified by the San Francisco Planning Department. For the purpose of this analysis, the following thresholds were used to determine whether implementing the proposed project or the variant would result in a significant impact related to air quality.

Implementation would have a significant effect on air quality if the proposed project or variant would do any of the following:

- Violate any air quality standard or contribute substantially to an existing or projected air quality violation or result in a cumulatively considerable net increase in criteria pollutants;
- Conflict with or obstruct implementation of the applicable air quality plan;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

Approach to Analysis

In general, the proposed project or variant would generate emissions of criteria air pollutants, ozone precursors, and TACs during construction and operation. The *10 South Van Ness Project Final Criteria Air Pollutant Analysis*[23] and *10 South Van Ness Final Health Risk Assessment*[24] analyzed regional criteria air pollutants and health risks, respectively, associated with construction and operations of the proposed project and variant. The following discusses the approach used to analyze the significance thresholds above.

CONSISTENCY WITH AIR QUALITY PLAN

The proposed project or variant would be consistent with the Bay Area Clean Air Plan if it would support the plan's goals, include applicable control measures from the Bay Area Clean Air Plan, and would not disrupt or hinder implementation of any control measures from the plan. Consistency with this plan is the basis for determining whether the proposed project or variant would conflict with or obstruct implementation of an applicable air quality plan.

CRITERIA AIR POLLUTANT IMPACTS

The construction and operational phases of land use projects may contribute to regional emissions of criteria air pollutants. **Table 4.4.4: Thresholds of Significance for Criteria Air Pollutants** identifies significance thresholds for criteria air pollutants as provided by the air district, followed by a discussion of each threshold.[25] Projects that would result in emissions of criteria air

Table 4.4.4: Thresholds of Significance for Criteria Air Pollutants

	Construction Thresholds	Operational Thresholds	
Pollutant	**Average Daily Emissions (lb/day)**	**Average Daily Emissions (lb/day)**	**Maximum Annual Emissions (tpy)**
ROG	54	54	10
NO_X	54	54	10
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive Dust	Construction Dust Ordinance or other best management practices	Not Applicable	

Notes: lb/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; PM_{10} = particulate matter with aerodynamic diameter less than 10 microns; ROG = reactive organic gases; tpy = tons per year

Source: BAAQMD *CEQA Guidelines*, May 2017, available at http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, accessed May 2017.

[23] AECOM, *Criteria Air Pollutant Analysis*.
[24] AECOM, HRA.
[25] BAAQMD *CEQA Guidelines,* May 2017.

pollutants less than these significance thresholds would not violate an air quality standard, contribute substantially to an air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants within the SFBAAB.

The potential for a project to result in a net increase in criteria air pollutants that may contribute to an existing or projected air quality violation is based on the Clean Air Act and California Clean Air Act emissions limits for stationary sources, as explained below.

Ozone Precursors

To ensure that new stationary sources do not cause or contribute to a violation of an air quality standard, the air district's Regulation 2, Rule 2 requires that any new source that emits criteria air pollutants above a specified emissions limit must offset those emissions. For ozone precursors ROG and NO_X, the offset emissions level is an annual average of 10 tons per year (or 54 pounds per day).[26] These levels represent emissions below which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants.

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

Particulate Matter (PM_{10} and $PM_{2.5}$)

The air district has not established an offset limit for $PM_{2.5}$. However, the emissions limit in the federal New Source Review for stationary sources in nonattainment areas is an appropriate significance threshold. For PM_{10} and $PM_{2.5}$, the emissions limits under New Source Review are 15 tons per year (or 82 pounds per day) and 10 tons per year (or 54 pounds per day), respectively. These emissions limits represent the levels below which a source is not expected to have an impact on air quality.[27] Similar to the ozone precursor thresholds identified above, land use development projects typically generate PM emissions as a result of increases in vehicle trips, space heating and natural gas combustion, landscape maintenance, and construction activities. Therefore, the above thresholds can be applied to the construction and operational phases of a

[26] BAAQMD, *Revised Draft Options and Justification Report*, 2009, p. 17.
[27] Ibid., p. 16.

land use project. Again, because construction activities are temporary, only the average daily thresholds are applicable to construction-phase emissions.

Fugitive Dust

Fugitive dust emissions are typically generated during construction phases. Studies have shown that applying best management practices at construction sites significantly controls fugitive dust[28] and individual measures have been shown to reduce fugitive dust by anywhere from 30 to 90 percent.[29] The air district has identified best management practices to control fugitive dust emissions from construction activities.[30] The City's Construction Dust Control Ordinance (Ordinance 176-08) requires measures to control fugitive dust. Best management practices employed in compliance with this ordinance are an effective strategy for controlling construction-related fugitive dust. The proposed project and variant would be subject to the requirements of the ordinance.

Other Criteria Pollutants

Regional concentrations of CO in the Bay Area have not exceeded state standards in the past 11 years and SO_2 concentrations have never exceeded the standards. The primary source of CO emissions from development projects is vehicle traffic. Construction-related SO_2 emissions represent a negligible portion of the total basinwide emissions and construction-related CO emissions represent less than 5 percent of the Bay Area's total basinwide CO emissions. Given the Bay Area's attainment status and the limited CO and SO_2 emissions that could result from development projects, such projects would not result in a cumulatively considerable net increase in CO or SO_2, and quantitative analysis is not required.

LOCAL AIR QUALITY HEALTH RISKS/HAZARDS IMPACTS

The thresholds of significance used to evaluate health risks from new sources of TACs are based on the potential for a proposed project to substantially affect the geography and severity of the APEZ at the locations of sensitive receptors. The project site is located in an APEZ and adjacent to a major transportation thoroughfare. The proposed project or variant would result in a significant impact if the project's or variant's contribution to an excess cancer risk would exceed

[28] Western Regional Air Partnership, WRAP Fugitive Dust Handbook, September 7, 2006, available at http://www.wrapair.org/forums/dejf/fdh/content/FDHandbook_Rev_06.pdf, accessed February 16, 2012.
[29] BAAQMD, *Revised Draft Options and Justification Report*, 2009, p. 27.
[30] Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines,* May 2011, available at http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20CEQA%20Guidelines%20May%202011.ashx?la=en, accessed May 2017.

7 in 1 million or the contribution to the annual average $PM_{2.5}$ concentrations would exceed 0.2 $\mu g/m^3$).[31]

ODOR IMPACTS

The odor impact analysis evaluates the types of land uses proposed to determine whether major sources of odors would be anticipated.

CUMULATIVE ANALYSIS

Criteria Air Pollutants

The contribution of a project's individual air pollutant emissions to regional air quality impacts is, by its nature, a cumulative effect. Emissions from past, present, and future projects in the vicinity also have or will contribute to adverse regional air quality impacts on a cumulative basis. No single project by itself would be sufficient in size to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative air quality conditions.

The project-level thresholds for criteria air pollutants are based on levels by which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Therefore, if a project's emissions are below the project-level thresholds, the project would not be considered to result in a considerable contribution to cumulative regional air quality impacts.

Cumulative Health Risk Analysis

The cumulative health risk assessment takes into account the contribution of localized health risks to sensitive receptors from sources included in the citywide modeling (the citywide health risk assessment) in addition to the project's sources and other cumulative project sources within 1,000 feet of the project site per air district guidance.[32] The analysis considers whether there would be a significant adverse cumulative impact associated with project implementation in combination with past, present, and probable future projects, and if so, whether the project's incremental contribution to the cumulative impact would be considerable. Both conditions must apply for a project's contribution to cumulative effects to be deemed cumulatively considerable (significant).

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[31] A 0.2 $\mu g/m^3$ increase in $PM_{2.5}$ would result in a 0.28 percent increase in non-injury mortality or an increase of about twenty-one excess deaths per 1,000,000 population per year from non-injury causes in San Francisco. This information is based on Jerrett M et al., Spatial Analysis of Air Pollution and Mortality in Los Angeles, *Epidemiology* 16 (2005): 727–736, as cited in Bhatia & Rivard, *Assessment and Mitigation of Air Pollutant Health Effects from Intra-urban Roadways*, May 2008, p. 16. The excess cancer risk has been proportionally reduced from 10 per million persons exposed (the threshold for projects not located within the APEZ that would affect the geography and severity of the APEZ) to result in a significance criteria of 7 per million persons exposed.

[32] BAAQMD, *CEQA Air Quality Guidelines*, May 2017, p. 5-2.

If so, then mitigation measures are identified to reduce the project's contribution to the extent feasible.

Project Features

Both the proposed project and the variant would involve demolishing the existing building on the project site and constructing a mixed-use development that would include residential, commercial, and open space uses. The proposed project and variant would seek *Leadership in Energy and Environmental Design* (LEED) Gold certification, including measures applicable to both construction and operation, and would incorporate a number of sustainability features. The proposed project or variant would also include a total of 33 net new street trees along the project site frontage(s), one 1,500-kilowatt diesel-powered emergency generator and other mechanical equipment in the garage/basement, and approximately 3,000 gross square feet of the roof area would be reserved for heating, ventilation, and air conditioning mechanical equipment. An elevator providing access to the Muni station may be included near the corner of Market Street and South Van Ness Avenue.

The proposed project or the variant could include a straight-shot streetscape option for 12th Street that would replace the proposed streetscape improvements. The straight-shot streetscape option for the proposed project would have more freight and passenger loading areas than the option for the variant, and the driveway accessing the basement would be further from the intersection of 12th Street/South Van Ness Avenue than would the driveway for the variant. Other features of the straight-shot streetscape options would be the same. With these options, the sidewalk on the east side of 12th Street would be wider than the 21-foot-wide sidewalks that would be provided under the proposed project or variant and would feature a "shared street" configuration, with two 11-foot travel lanes, and more limited truck and passenger loading areas on both sides of the street with no on-street automobile parking spaces. Construction activities for the straight-shot streetscape options are expected to be essentially the same as those for the proposed project or variant streetscape improvements. Therefore, a separate analysis of the proposed project or variant together with one of the straight-shot streetscape options is not presented.

Construction of the proposed project would occur in several overlapping phases and is anticipated to occur over approximately 36 months. Construction would include the following phases: demolition; shoring and excavation; foundation and podium construction; tower/superstructure/skin; and interior work. Construction hours would typically be from 7 a.m. to 8 p.m., Monday through Thursday, and 7 a.m. to 5 p.m. on Fridays and Saturdays. Limited evening work (between 8 p.m. to 7 a.m.) and work on weekends (7 a.m. to 5 p.m.) would be required for the third and fourth phases.

Construction activities that relate particularly to air emissions would involve demolition of existing onsite structures and site preparation, and new construction activities would include

grading, shoring and excavation, foundations, structural work to construct the podium and the tower or towers, exterior skin, interior finishes, and paving. During construction, heavy-duty trucks would haul soil and materials on and off site during the entire construction period. The proposed project or variant would generate from a minimum of 8 haul truck trips per day to a maximum of 50 haul truck trips per day, which equates to an approximate range of one to six truck round trips per hour, depending on the construction phase.

Analytic Methodology

Quantitative analysis of the proposed project and project variant's criteria air pollutant, ozone precursor, and TAC emissions resulting from construction and operation was conducted consistent with guidance and methodologies from local, regional, state, and federal agencies, including the BAAQMD,[33] ARB, the California Office of Environmental Health Hazard Assessment, and EPA. Pursuant to the air district's guidance, California Emissions Estimator Model (CalEEMod) Version 2016.3.1 was used to estimate emissions associated with construction and operational activities.

Construction activities, equipment, phasing, and duration would be the same for the proposed project and the variant; therefore, the criteria air pollutant analysis discusses only the impacts related to the proposed project, and the results of this analysis would be the same for both the proposed project and the variant.

The actual timing of construction would be dependent on approval and funding considerations. As a result, actual construction activities may occur over a less-concentrated time period than the assumed three years. Total construction emissions were calculated and then converted from total tons to average pounds per day for each construction phase. If the duration of construction activities were to extend beyond three years, the total amount of construction emissions would not increase; rather, the average daily emissions would decrease commensurate with the extended duration of construction. Therefore, assuming a concentrated three-year construction period results in higher (worst-case) average daily emissions than would occur if construction were to extend beyond three years.

Operation of the proposed project or variant would result in emissions from area, energy, stationary, and mobile sources, and estimates were made for each of these sources.

[33] BAAQMD *CEQA Guidelines*, May 2017.

Criteria Air Pollutants

CONSTRUCTION EMISSIONS SOURCES AND METHODOLOGY

Off-Road Equipment

Off-road construction equipment would generate exhaust-related emissions of criteria air pollutants, ozone precursors, and TACs. To calculate emissions, the number and types of construction equipment required for each construction phase were identified. Other parameters used to quantify emissions from construction equipment were hours of operation per day, horsepower, and load factor for each respective piece of equipment.

CalEEMod contains emission factors from ARB's off-road equipment emissions estimator model, OFFROAD2011. The emission factors for off-road engines were based on the fleet average for the calendar year of the analysis. Default assumptions for the parameters noted above contained in CalEEMod were used to quantify off-road emissions. Default assumptions typically are conservative, providing a reasonable upper boundary of potential construction emissions.[34]

On-Road Vehicles

On-road construction sources include construction-worker vehicles, haul trucks, material delivery trucks, and onsite work trucks. CalEEMod was used to estimate emissions from on-road vehicles (running exhaust, brake wear, tire wear, and running losses). Haul trips were estimated based on the total volume of soil, estimated at 100,000 cubic yards, exported from the project site. Default assumptions for parameters such as other vehicles, construction worker trips, trip distance, and vehicle type were obtained from CalEEMod. CalEEMod incorporates emission factors from ARB's on-road emissions inventory model, EMission FACtors (EMFAC) 2014 (EMFAC2014) and were used to quantify emissions.[35]

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[34] Some equipment, including cranes and lifts, would be electric powered. CalEEMod only allows for equipment to be modeled with alternative powered engines as mitigation measures. Therefore, although the use of electric equipment is a project design feature and not a mitigation measure, the "mitigated emissions" in the CalEEMod outputs for construction emissions from these types of equipment were used to model the impacts of the unmitigated project.

[35] California Air Resources Board, EMFAC2014 Volume III—Technical Documentation v1.0.7, May 2015, https://www.arb.ca.gov/msei/downloads/emfac2014/emfac2014-vol3-technical-documentation-052015.pdf, accessed May 2017. EMFAC2017 was released in December 2017 after publication of the Notice of Preparation for the EIR on the proposed project and variant, which establishes the project baseline. Differences among EMFAC2014 and 2017 were reviewed and show that, in general EMFAC 2017 emissions factors are not likely to change the calculated project emissions, except for NO_x emissions, which would likely decrease. Therefore, use of EMFAC2014 presents the same or more conservative (i.e., higher) results than using EMFAC2017.

Off-Gassing Materials

Architectural coating materials used during construction would generate off-gas emissions of ROGs, which were estimated in CalEEMod. CalEEMod contains assumptions for application of architectural coatings that are based on the land use type and square footage of the buildings to be constructed.

OPERATIONAL EMISSIONS SOURCES AND METHODOLOGY

Area Sources

Area-source emissions include consumer products, landscape maintenance equipment, and natural gas combustion. Emissions from landscape maintenance equipment and natural gas combustion were estimated using CalEEMod default values based on the size and type of land uses to be developed. Based on consultation between the San Francisco Planning Department and the air district, emissions from consumer products were estimated using an ROG emission factor of 0.0000151 pound per square foot per day. This emission factor is based on San Francisco ROG emissions data and land use data.[36]

On-Road Vehicles

Mobile-source emissions were estimated using trip-generation rates from the transportation impact study conducted for the proposed project.[37] The proposed project would generate 2,904 daily vehicle trips. As described for construction on-road vehicles, CalEEMod Version 2016.3.1 incorporates EMFAC2014 mobile-source emission factors.

Stationary Sources

Stationary-source emissions were calculated based on project-specific information, assuming one 1,500-kilowatt backup diesel emergency generator that would operate approximately 48 hours per year and would be located in the underground parking garage. The emergency generator would generate emissions of criteria pollutants and TACs. Emission factors and methods prescribed by ARB and EPA (e.g., AP 42 Compilation of Air Pollutant Emission Factors) were used to estimate emissions from the generator. The emergency generator would meet a minimum of tier 2 emission standards when it is installed in the year 2022, and would comply with BAAQMD regulation 2, rule 5, New Source Review for Toxic Air Contaminants, and the BAAQMD testing limits of no more than 50 hours per year.

[36] Bay Area Air Quality Management District, "RE: ROG Calculations and Mitigation," email communication between Allison Kirk and Sigalle Michael, BAAQMD, and Wade Wietgrefe, San Francisco Planning Department, March 24, 2014.

[37] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study*, December 2017, Case Number 2015-004568ENV.

Health Risks

A health risk assessment of construction-related and operational emissions was completed to evaluate potential health risks to sensitive receptors. Emissions of $PM_{2.5}$ (from vehicle exhaust, tire and brake wear, road dust, and fugitive dust) are assessed on an annual basis; whereas excess cancer risk (from diesel vehicle exhaust, diesel generator exhaust, and ROG from gasoline vehicle exhaust) is based on a longer term exposure, 30 years.

Typically, construction projects generate diesel PM in a single area for a short period of time. The dose of TACs to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period to a fixed amount of emissions results in a higher exposure level and higher health risks for the maximally exposed individual.

EXISTING HEALTH RISK CONDITIONS

Existing health risk conditions are derived from the citywide health risk assessment that was conducted using AERMOD and includes emissions from the following primary sources:

- Vehicles on local roadways; and
- Permitted stationary sources including gasoline dispensing stations, prime and standby diesel generators, recycling facilities, dry cleaners, large boilers, and other industrial facilities; and
- Maritime emissions.

$PM_{2.5}$ concentrations and excess cancer risk from the proposed project are added to the citywide health risk assessment to determine existing plus project $PM_{2.5}$ concentrations and excess cancer risks. The results of this analysis are used to determine whether the proposed project would substantially affect the geography or severity of the APEZ.

HEALTH RISK ASSESSMENT METHODOLOGY

Consistent with the San Francisco citywide health risk assessment[38] the air toxics analysis evaluated health risks and $PM_{2.5}$ concentrations resulting from the proposed project and variant on the surrounding community per year of construction. The American Meteorological Society/EPA Regulatory Model (AERMOD) dispersion model (version 16216r) (Code of Federal Regulations title 40, part 51) was used to estimate pollutant concentrations at specific distances from emission

[38] San Francisco Department of Public Health, San Francisco Planning Department, and Bay Area Air Quality Management District, *The San Francisco Community Risk Reduction Plan: Technical Support Documentation,* December 2012.

sources using one year (2008) of hourly meteorological data from the Mission Bay station, consistent with the citywide health risk assessment.

As discussed above, construction emissions were calculated for each year. For the health risk assessment, these emissions were converted from total tons per year to grams per second for the $PM_{2.5}$ analysis and pounds per year for the excess cancer risk analysis for each construction phase. The $PM_{2.5}$ and diesel PM emissions from off-road construction equipment were represented in the AERMOD model by area sources.

Operational emission sources evaluated in the dispersion modeling include emissions from on-road vehicles and the emergency generator. On-road emissions from operation of vehicles associated with the proposed project were modeled as adjacent volume sources. It was assumed that operational emissions would include the use of one emergency generator that would be located in the basement of the building. The generator was modeled as a point source, and the exhaust was assumed to exit the side of the building and turn to exhaust vertically.

Maximum annual $PM_{2.5}$ concentrations and excess cancer risk plot files generated by AERMOD were input to the Hotspots Analysis and Reporting Program version 2 (HARP2), an air dispersion modeling and risk assessment tool, with corresponding TAC emission rates for each phase of construction and the project's operational emissions to calculate TAC concentrations generated by the proposed project. These concentrations were then used to estimate the long-term effects of TACs on nearby offsite and future onsite residential locations. The project-level $PM_{2.5}$ concentrations and excess cancer risk values were then added to the existing cancer risk and $PM_{2.5}$ concentrations in the citywide health risk assessment database. The citywide health risk assessment was conducted in 2012 and HARP2 is based on 2015 guidance from the California Office of Environmental Health Hazard Assessment.[39] Therefore, the risk values in the citywide health risk assessment database were adjusted to reflect the changes in health risk assessment methodology consistent with the 2015 guidance from the California Office of Environmental Health Hazard Assessment.[40] The locations of existing offsite and proposed onsite sensitive receptors included in the health risk assessment modeling are discussed above in the subsection entitled "Sensitive Receptors" on pp. 4.4.13–4.4.14. Consistent with the project description, the analysis assumes that there are no onsite receptors before operation of the building.

[39] California Office of Environmental Health Hazard Assessment, *Air Toxics Hot Spots Program Guidance Manual*, February 2015.

[40] The citywide health risk assessment analysis was conducted in 2012. The 2015 Office of Environmental Health Hazard Assessment guidance updated cancer risk calculations and age sensitivity factors. A scaling factor was developed comparing the 2015 cancer risk methodology to that in the original 2003 Office of Environmental Health Hazard Assessment guidance. The calculated residential lifetime excess cancer risk is 1.3744 times higher than residential cancer risk as calculated using the original 2003 Office of Environmental Health Hazard Assessment guidance, which was used in developing the citywide health risk assessment. This scaling factor has been reviewed and approved by BAAQMD and was applied to the citywide health risk assessment.

Impact Analysis

CRITERIA AIR POLLUTANT ANALYSIS

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

Construction of the proposed project or variant would generate emissions associated with heavy-duty construction equipment, material-hauling trucks, and construction-worker vehicles. **Table 4.4.5: Project Construction Criteria Air Pollutant Emissions** shows the proposed project's average daily emissions during construction. Pursuant to BAAQMD guidance, only exhaust-related PM_{10} and $PM_{2.5}$ emissions are presented with the project's construction emissions because the air district recommends that fugitive PM_{10} and $PM_{2.5}$ emissions be addressed through implementation of best management practices. Projects that would result in emissions of criteria air pollutants less than the significance thresholds in Table 4.4.4 on p. 4.4.22 would not violate an air quality standard or contribute substantially to an air quality violation.

As shown in Table 4.4.5, construction-generated emissions of ROG, NO_X, PM_{10} exhaust, and $PM_{2.5}$ exhaust would not exceed applicable mass emission thresholds of significance. Therefore, construction period criteria air pollutant impacts for the proposed project and variant would be less than significant.

The air district recommends that all projects, regardless of the level of average daily emissions, implement best management practices to reduce construction-related fugitive dust emissions.[41]

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

[41] BAAQMD *CEQA Guidelines,* May 2017

Table 4.4.5: Project Construction Criteria Air Pollutant Emissions

Construction Year/Phase	ROG	NO_X	PM_{10} (exhaust)	$PM_{2.5}$ (exhaust)
2019	1.48 tons	12.98 tons[1]	0.71 tons	0.70 tons
2020	0.58 tons	4.64 tons	0.17 tons	0.17 tons
2021	5.00 tons	2.19 tons	0.05 tons	0.04 tons
2022	2.38 tons	0.51 tons	0.01 tons	0.01 tons
Total Construction Emissions	9.44 tons	20.33 tons	0.94 tons	0.93 tons
Average Daily Construction Emissions [2]	20.2 lb/day	43.4 lb/day	2.0 lb/day	2.0 lb/day
Threshold	54	54	82	54
Exceed Threshold?	No	No	No	No

Notes:
lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = particulate matter with aerodynamic diameter less than 10 microns; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; ROG = reactive organic gases

[1] The *Criteria Air Pollutant Analysis* prepared for the 10 South Van Ness Mixed-use Project shows that controlled emissions with the use of Tier 4 engines during construction, as required in Mitigation Measure M-AQ-3a, would reduce NOx emissions during construction to approximately 1.83 tons in 2019.

[2] Average daily construction emissions were calculated assuming a total construction duration of 36 months, 26 days per month.

Source: Data compiled by AECOM in 2017

The site-specific Dust Control Plan would 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 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 off adjacent streets to reduce particulate emissions.

The project sponsor would be required to designate an individual to monitor compliance with these dust control requirements. San Francisco ordinance 175-91 restricts the use of potable water for soil compaction and dust control activities undertaken in conjunction with any construction or demolition project occurring within the boundaries of San Francisco, unless permission is obtained from the San Francisco Public Utilities Commission. Non-potable water must be used for soil compaction and dust control activities during project construction and demolition. The San Francisco Public Utilities Commission operates a recycled water truck-fill station at the Southeast Water Pollution Control Plant that provides recycled water for these activities at no charge. Because the proposed project would be required to comply with the regulations and procedures set forth by the Dust Control Ordinance, potential dust-related air quality impacts from the proposed project or variant would be reduced to a less-than-significant level.

In summary, construction of the proposed project or variant would not violate or contribute substantially to an existing or projected air quality violation. Therefore, construction-related criteria air pollutant impacts from the proposed project and variant would be less than significant, and no mitigation is necessary.

Impact AQ-2: During project operations, the proposed project or variant would result in emissions of criteria air pollutants, but not at levels that would violate an air quality standard, contribute to an existing or projected air quality violation, or result in a cumulatively considerable net increase in criteria air pollutants. *(Less than Significant)*

Operation of the proposed project or variant would result in emissions from area, energy, stationary, and mobile sources. The air quality analysis evaluated the proposed project's and variant's daily operational air quality emissions from these sources. **Table 4.4.6: Project Operational Criteria Air Pollutant Emissions** shows the proposed project's annual and daily operational emissions relative to the air district's operational significance thresholds. Because the number of vehicle trips resulting from the variant would be comparable to those resulting from the proposed project (within 1 percent),[42] mobile-source pollutant emissions for the variant would be similar to those shown in Table 4.4.6.

As summarized in Table 4.4.6, the long-term operational emissions attributable to the proposed project or variant would generate emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ that would not

[42] CHS Consulting Group, *10 South Van Ness Avenue Mixed-Use Residential Project Final Transportation Impact Study*, December 2017, Case Number 2015-004568ENV.

exceed the thresholds of significance. Therefore, the proposed project or variant would not violate or contribute substantially to an existing or projected air quality violation. This impact would be less than significant for the proposed project and variant, and no mitigation is necessary.

Table 4.4.6: Project Operational Criteria Air Pollutant Emissions

Operational Emissions Source	ROG	NO_X	PM_{10} (total)	$PM_{2.5}$ (total)
Annual Emissions (tpy)				
Area Sources	3.58	0.08	0.04	0.04
Energy Sources	0.05	0.41	0.03	0.03
Mobile Sources	0.69	2.72	2.33	0.65
Stationary Sources [1]	0.08	0.35	0.01	0.01
Annual Operational Emissions	4.40	3.57	2.42	0.73
Threshold	10	10	15	10
Daily Emissions (lb/day)				
Daily Operational Emissions	24.1	19.6	13.2	4.0
Threshold	54	54	82	54
Exceed Threshold?	No	No	No	No

Notes:
lb/day = pounds per day; NO_X = oxides of nitrogen; PM_{10} = particulate matter with aerodynamic diameter less than 10 microns; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; ROG = reactive organic gases; tpy = tons per year
Totals may not appear to add exactly because of rounding.
[1] Stationary sources represent the emergency diesel generator emissions.
Source: Data compiled by AECOM in 2017

HEALTH RISK ANALYSIS

Impact AQ-3: Construction and operation of the proposed project or variant would generate toxic air contaminants, including diesel particulate matter, at levels which would expose sensitive receptors to substantial air pollutant concentrations. *(Less than Significant with Mitigation)*

Construction activities, such as demolition, excavation, building construction and interior and exterior finishing, would affect local air quality during the construction phases of the proposed project or variant. During construction, emissions of TACs and $PM_{2.5}$ would expose nearby sensitive receptors to substantial pollutant concentrations. Off-road diesel equipment used for clearing and grading, materials handling and installation, and other construction activities would generate diesel PM and TAC emissions. Consistent with the citywide health risk assessment, this analysis evaluated health risks and $PM_{2.5}$ concentrations resulting from the proposed project or variant on the surrounding community.

Because construction of the proposed project would not overlap with its operation, this discussion presents construction $PM_{2.5}$ concentrations followed by operational $PM_{2.5}$ concentrations. However, because excess cancer risk is evaluated over a 30-year period, the cancer risk analysis below presents the risk that would result when exposed to both construction and operational emissions together when assessing the cancer risk impact to offsite sensitive receptors.

Construction-Related $PM_{2.5}$ Concentrations

The project site is located in an area defined as an APEZ. Within the APEZ, the significance threshold for annual average $PM_{2.5}$ concentrations is a project contribution of 0.2 microgram per cubic meter ($\mu g/m^3$) or greater. **Table 4.4.7: Existing plus Project (Unmitigated) Modeled Annual Average $PM_{2.5}$ Concentration during Construction at the Maximally Exposed Individual Off-Site Receptor** shows the results of the baseline (existing) plus project-conditions $PM_{2.5}$ modeling analyses at offsite sensitive receptor locations.

Table 4.4.7: Existing plus Project (Unmitigated) Modeled Annual Average $PM_{2.5}$ Concentration during Construction at the Maximally Exposed Individual Offsite Receptor

Emissions Source	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Existing Conditions (CRRP-HRA [2014])[1, 3]	9.038
Project Construction[2]	2.025
Total $PM_{2.5}$	11.063
Significance threshold for project $PM_{2.5}$ contribution within an APEZ	0.2
Significant?	Yes

Notes: $\mu g/m^3$ = micrograms per cubic meter; APEZ = Air Pollutant Exposure Zone; CRRP = Community Risk Reduction Plan; HRA = health risk assessment; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; UTM = Universal Transverse Mercator

[1] Community Risk Reduction Plan health risk assessment for Year 2014 (Existing Conditions) plus nearby existing stationary sources that were permitted by the BAAQMD after the CRRP-HRA was completed (see *10 South Van Ness Project Final Health Risk Assessment*, Section 2.0, pp. 11-12).

[2] Based on 2019 construction $PM_{2.5}$ annual concentrations using unmitigated construction equipment at an offsite receptor. Receptor location: X (UTM) = 551,200, Y (UTM) = 4,180,220. Note that the maximally exposed individual receptor would be in different locations for $PM_{2.5}$ than for cancer risk (discussed below) and would be in a different location in the mitigated scenario for each source.

[3] The existing conditions do not account for operations of the 1500 Mission Street project, which is expected to be near completion once the proposed project begins construction. The 1500 Mission Street project is expected to result in $PM_{2.5}$ concentrations of 0.01 $\mu g/m^3$, which if added to the existing conditions would result in a total $PM_{2.5}$ concentration of 11.07 $\mu g/m^3$ at most. Because the significance threshold is based on the project contribution to existing health risks, the inclusion of the 1500 Mission Street project under either the existing or cumulative conditions does not affect the project's health risk analysis.

Source: Data compiled by AECOM in 2017

As shown in Table 4.4.7, the maximum $PM_{2.5}$ concentration due to construction of the project would be approximately 2.0 $\mu g/m^3$, which would occur in year 2019; this level exceeds the APEZ threshold of 0.2 $\mu g/m^3$. Therefore, construction of the project would generate emissions that would expose sensitive receptors to substantial pollutant concentrations. Thus, this impact would be significant. Implementation of **Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions**, shown below, would be required to reduce annual $PM_{2.5}$ concentrations.

Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions

The project sponsor shall comply with the following requirements:

A. **Construction Emissions Minimization Plan.** Before a construction permit is issued, the project sponsor shall submit a construction emissions minimization plan to the environmental review officer (ERO) or the ERO's designated representative for review and approval. The construction emissions minimization plan shall detail project compliance with the following requirements:

(1) All off-road equipment greater than 25 hp and operating for more than 20 total hours over the entire duration of construction activities shall meet the following requirements:

(a) Where access to alternative sources of power is reasonably available, portable diesel engines shall be prohibited. Where portable diesel engines are required because alternative sources of power are not reasonably available, the portable diesel engine shall meet the requirements of section (A)(1)(b), below.

(b) All off-road equipment shall have engines that meet either EPA or ARB tier 4 final off-road emission standards. If engines that comply with tier 4 final off-road emission standards are not commercially available, then the project sponsor shall seek a waiver from this requirement from the ERO and provide the next cleanest piece of off-road equipment as provided by the step-down schedule in Table M-AQ-3-1.

i. If seeking a waiver from this requirement, the project sponsor shall demonstrate that the resulting emissions would not result in the following:

- Annual average construction-related $PM_{2.5}$ emissions in excess of 0.2 $\mu g/m^3$ at off-site sensitive receptor locations and
- The combined cancer risk from construction and operational emissions generated by the project do not exceed an excess cancer risk of 7 per one million persons exposed at off-site sensitive receptor locations

ii. For purposes of this mitigation measure, "commercially available" shall mean the availability of tier 4 final engines taking into consideration factors such as critical-path timing of construction; (ii) geographic proximity to the project site of equipment; and (iii) geographic proximity of access to off-haul deposit sites.

Table M-AQ-3-1: Off-Road Equipment Compliance Step-Down Schedule

Compliance Alternative	Engine Emissions Standard	Emissions Control
1	Tier 4 Interim	N/A
2	Tier 3	ARB verified diesel emissions control strategy
3	Tier 2	ARB verified diesel emissions control strategy

How to use the table: If the requirements of (A)(1)(b) cannot be met, then the project sponsor would need to meet Compliance Alternative 1. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 1, then Compliance Alternative 2 would need to be met. Should the project sponsor not be able to supply off-road equipment meeting Compliance Alternative 2, then Compliance Alternative 3 would need to be met.

(c) Renewable diesel shall be used to fuel all diesel engines unless it can be demonstrated to the environmental review officer that such fuel is: (1) not compatible with on-road or off-road engines, (2) that emissions from the transport of fuel to the project site will offset its emissions reduction potential, or (3) the fuel is not commercially available.

(2) The project sponsor shall require in its construction contracts that the idling time for off-road and on-road equipment be limited to no more than 2 minutes, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment. Legible and visible signs shall be posted in multiple languages (English, Spanish, and Chinese) in designated queuing areas and at the construction site to remind operators of the 2-minute idling limit.

(3) The project sponsor shall require that construction operators properly maintain and tune equipment in accordance with manufacturer's specifications.

(4) The construction emissions minimization plan shall include estimates of the construction timeline by phase with a description of each piece of off-road equipment required for every construction phase. Off-road equipment descriptions and information may include but are not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. For verified diesel emissions control strategy installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date.

(5) The project sponsor shall keep the construction emissions minimization plan available for public review onsite during working hours. The project sponsor shall post at the perimeter of the project site a legible and visible

sign summarizing the requirements of the plan. The sign shall also state that the public may ask to inspect the construction emissions minimization plan at any time during working hours, and shall explain how to request inspection of the plan. Signs shall be posted on all sides of the construction site that face a public right-of-way. The project sponsor shall provide copies of the construction emissions minimization plan to members of the public as requested.

B. **Reporting.** Quarterly reports shall be submitted to the ERO or the ERO's designated representative indicating the construction phase and off-road equipment information used during each phase, including the information required in A(4).

(1) Within six months of the completion of construction activities, the project sponsor shall submit to the ERO or the ERO's designated representative a final report summarizing construction activities. The final report shall indicate the start and end dates and duration of each construction phase. For each phase, the report shall include detailed information required in A(4).

C. **Certification Statement and Onsite Requirements.** Before the start of construction activities, the project sponsor must certify that it is in compliance with the construction emissions minimization plan, and that all applicable requirements of the plan have been incorporated into contract specifications.

Table 4.4.8: Existing plus Project (Mitigated) Modeled Annual Average $PM_{2.5}$ Concentration during Construction at Maximally Exposed Individual Off-Site Receptor shows that the maximum $PM_{2.5}$ concentration due to construction at the project maximally exposed individual resident, assuming use of Tier 4 construction equipment per Mitigation Measure M-AQ-3a. This table shows that when added to existing conditions, the project would result in a total $PM_{2.5}$ concentration of 9.137µg/m³ in the worst year of construction (2019). As shown in Table 4.4.8, with mitigation, the maximum $PM_{2.5}$ concentration due to construction of the project at offsite sensitive receptor locations would be 0.1 µg/m³. These results are below the significance threshold of 0.2 µg/m³. Therefore, the proposed project or variant's construction-related $PM_{2.5}$ emissions impact would be less than significant with mitigation.

Operational $PM_{2.5}$ Concentrations

Table 4.4.9: Existing plus Project (Unmitigated) Modeled Annual Average Operational $PM_{2.5}$ Concentration at the Maximally Exposed Individual Receptor show the results of the baseline plus project-conditions $PM_{2.5}$ concentration from the modeling analyses at both offsite and onsite sensitive receptors.

Table 4.4.8: Existing plus Project (Mitigated) Modeled Annual Average $PM_{2.5}$ Concentration during Construction at Maximally Exposed Individual Off-Site Receptor

Emissions Source	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Offsite Receptors Using Tier 4 Final Construction Engines	
Existing Conditions (CRRP-HRA [2014])[1,3]	9.038
Project Construction[2]	0.099
Existing plus Project $PM_{2.5}$ Concentration	9.137
Significance threshold for project $PM_{2.5}$ contribution within an APEZ	0.2
Significant?	No

Notes: $\mu g/m^3$ = micrograms per cubic meter; CRRP = Community Risk Reduction Plan; HRA = health risk assessment; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; UTM = Universal Transverse Mercator

[1] Community Risk Reduction Plan health risk assessment for Year 2014 (Existing Conditions) plus nearby existing sources that were permitted by the BAAQMD after the CRRP-HRA was completed (see *10 South Van Ness Project Final Health Risk Assessment,* Section 2.0, pp. 11-12).

[2] Based on 2019 construction $PM_{2.5}$ annual concentrations using mitigated construction equipment at an offsite receptor. Receptor location: X (UTM) = 551,200, Y (UTM) = 4,180,920

[3] The existing conditions do not account for operations of the 1500 Mission Street project, which is expected to be near completion once the proposed project begins construction. The 1500 Mission Street project is expected to result in $PM_{2.5}$ concentrations of 0.01 $\mu g/m^3$, which if added to the existing conditions would result in a total $PM_{2.5}$ concentration of 9.15 $\mu g/m^3$ at most. Because the significance threshold is based on the project contribution to existing health risks, the inclusion of the 1500 Mission Street project under either the existing or cumulative conditions does not affect the project's health risk analysis.

Source: Data compiled by AECOM in 2017

As shown in Table 4.4.9, the maximum $PM_{2.5}$ concentration due to project operations when added to existing conditions would result in a total $PM_{2.5}$ concentration of 9.21 $\mu g/m^3$ at the project (offsite) maximally exposed individual resident and 9.08 at the onsite maximally exposed individual resident. The maximum $PM_{2.5}$ contribution from the proposed project or variant would be 0.18 $\mu g/m^3$ at offsite receptors and 0.08 $\mu g/m^3$ at onsite receptors. The unmitigated offsite operational $PM_{2.5}$ concentrations for the proposed project and variant would be less than 0.2 $\mu g/m^3$, a less-than-significant impact. No mitigation is necessary.

Cancer Risk

Cancer risks to existing offsite receptors were calculated assuming exposure during the entire construction period through operations. Cancer risks from project operations only are calculated for onsite receptors as these receptors would not be exposed to construction period emissions resulting from the proposed project.

A total 30-year cancer risk is presented by adding the construction risks to the operational risk at each offsite receptor location. Existing plus Project excess cancer risk was estimated by adding these project contributions to the existing background excess cancer risk. The excess cancer risk attributable to unmitigated construction and operational emissions resulting from the project at

Table 4.4.9: Existing plus Project (Unmitigated) Modeled Annual Average Operational $PM_{2.5}$ Concentration at the Maximally Exposed Individual Receptor

Emissions Source	$PM_{2.5}$ Concentration ($\mu g/m^3$)
Offsite Receptors–Operations	
Existing Conditions[1,4]	9.03
Project Operations[2]	0.18
Total $PM_{2.5}$	9.21
Significance threshold for project $PM_{2.5}$ contribution within an APEZ	0.2
Significant?	No
Onsite Receptors–Operations	
Existing Conditions[1,4]	9.0
Project Operations[3]	0.08
Total $PM_{2.5}$	9.08
Significance threshold for project $PM_{2.5}$ contribution within an APEZ	0.2
Significant?	No

Notes: $\mu g/m^3$ = micrograms per cubic meter; CRRP = Community Risk Reduction Plan; HRA = health risk assessment; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; UTM = Universal Transverse Mercator

1. Community Risk Reduction Plan health risk assessment for Year 2014 plus nearby existing stationary sources that were permitted after the CRRP-HRA was prepared, explained in the *10 South Van Ness Final Health Risk Assessment*, Section 2.0, pp. 11-12.
2. Based on operational $PM_{2.5}$ concentrations using unmitigated stationary source equipment and project vehicle trips. Receptor location: X (UTM) = 551,180, Y (UTM) = 4,180,900.
3. Based on operational $PM_{2.5}$ concentrations using unmitigated stationary source equipment. Receptor location: X (UTM) = 551,120, Y(UTM)=4,180,900.
4. The existing conditions do not account for operations of the 1500 Mission Street project, which is expected to be near completion once the proposed project begins construction. The 1500 Mission Street project is expected to result in $PM_{2.5}$ concentrations of 0.01 $\mu g/m^3$, which if added to the existing conditions would result in a total $PM_{2.5}$ concentration of 9.22 $\mu g/m^3$ at most at offsite receptors and 9.09 $\mu g/m^3$ at most at onsite receptors. Because the significance threshold is based on the project contribution to existing health risks, the inclusion of the 1500 Mission Street project under either the existing or cumulative conditions does not affect the project's health risk analysis.

Source: Data compiled by AECOM in 2017

the offsite maximally exposed individual residential receptor is presented in **Table 4.4.10: Maximum Unmitigated Excess Cancer Risk at Existing Offsite Residential Receptors**. As shown in Table 4.4.10, construction and operation of the proposed project or variant would result in a maximum excess cancer risk of approximately 133 in a million (rounded) at an offsite receptor, mostly due to emissions that would occur during the first two years of construction.

Table 4.4.11: Maximum Unmitigated Modeled Operational Excess Cancer Risk at Onsite Residential Receptors summarizes the excess cancer risk attributable to unmitigated operational project sources at onsite receptor locations. As shown in Table 4.4.11, operation of the proposed project or variant would result in an excess cancer risk of 15.8 in a million at an onsite receptor, mostly due to emissions from the project's emergency generator.

The results presented in Tables 4.4.10 and 4.4.11 both exceed the significance threshold of 7 in a million. Thus, this impact of the proposed project and variant would be significant.

Table 4.4.10: Maximum Unmitigated Excess Cancer Risk at Existing Offsite Residential Receptors

Emissions Source	Excess Cancer Risk (in a million)[4]
Existing Conditions (CRRP-HRA [2014])[1, 5]	93.57
Project Construction	
2019[2]	95.69
2020	32.18
2021	1.19
2022	0.12
Project Operations[3]	3.48
Project Excess Cancer Risk	132.66
Existing plus Project Excess Cancer Risk	226.23

Notes: CRRP = Community Risk Reduction Plan; HRA = health risk assessment

[1] Community Risk Reduction Plan health risk assessment for Year 2014 plus nearby existing stationary sources that were permitted by the BAAQMD after the CRRP-HRA was completed (see *10 South Van Ness Project Final Health Risk Assessment,* Section 2.0, pp. 11-12).

[2] Maximum cancer risk is attributable primarily to excavation construction equipment and haul truck trips.

[3] Maximum concentrations attributable primarily (approximately 2/3) to the project's emergency generator.

[4] Receptor location: X (UTM) = 551,200, Y (UTM) = 4,180,920.

[5] The existing conditions do not account for operations of the 1500 Mission Street project, which is expected to be near completion once the proposed project begins construction. The 1500 Mission Street project is expected to result in a cancer risk of 5.7 per one million persons exposed at that project's maximum exposed receptor. If this value is added to the existing conditions, total cancer risks at an offsite receptor would be 231.91per one million persons exposed at most. Because the significance threshold is based on the project contribution to existing health risks, the inclusion of the 1500 Mission Street project under either the existing or cumulative conditions does not affect the project's health risk analysis.

Source: Data compiled by AECOM in 2017.

Table 4.4.11: Maximum Unmitigated Modeled Operational Excess Cancer Risk at Onsite Residential Receptors

Emissions Source	Excess Cancer Risk (in a million)[3]
Existing Conditions (CRRP-HRA [2014])[1]	93.68
Project Operations[2]	15.8
Total Excess Cancer Risk	109.48

Notes: CRRP = Community Risk Reduction Plan; HRA = health risk assessment; UTM = Universal Transverse Mercator

[1] Community Risk Reduction Plan health risk assessment for Year 2014 plus nearby existing stationary sources that were permitted by the BAAQMD after the CRRP-HRA was completed (see *10 South Van Ness Project Final Health Risk Assessment,* Section 2.0, pp. 11-12).

[2] Maximum concentrations attributable primarily to the project's emergency generator and vehicle traffic.

[3] Receptor location: X (UTM) = 551,120, Y (UTM) = 4,180,900.

[4] The existing conditions do not account for operations of the 1500 Mission Street project, which is expected to be near completion once the proposed project begins construction. The 1500 Mission Street project is expected to result in a cancer risk of 5.7 per one million persons exposed at that project's maximum exposed receptor. If this value is added to the existing conditions, total cancer risks at an onsite receptor would be 115.48 per on million persons exposed at most. Because the significance threshold is based on the project contribution to existing health risks, the inclusion of the 1500 Mission Street project under either the existing or cumulative conditions does not affect the project's health risk analysis.

Source: Data compiled by AECOM in 2017.

As shown in the tables above, the project's contribution to cancer risk at onsite and offsite receptors would exceed the significance threshold of seven in one million persons exposed, resulting in a significant impact. Implementation of Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions, pp. 4.4.37–4.4.38 above, and **Mitigation Measure M-AQ-3b: Implement Best Available Control Technology for Diesel Equipment,** presented below, would be required to reduce the excess cancer risk.

> **Mitigation Measure M-AQ-3b: Implement Best Available Control Technology for Operational Diesel Generators**
>
> The project sponsor shall require in applicable contracts that the operational backup diesel generator:
>
> (1) Comply with ARB Airborne Toxic Control Measure emissions standards for model year 2008 or newer engines; and
>
> (2) Meet tier 4 final emissions standards; and
>
> (3) Be fueled with renewable diesel.
>
> The project sponsor shall submit documentation of compliance with the BAAQMD New Source Review permitting process (regulation 2, rule 2, and regulation 2, rule 5) and the emissions standard requirement of this measure to the San Francisco Planning Department for review and approval before a permit for a backup diesel generator is issued by any City agency.
>
> Once operational, the diesel backup generator shall be maintained in good working order for the life of the equipment and any future replacement of any diesel backup generators shall be required to be consistent with these emissions specifications. The operator of the facility at which the generator is located shall maintain records of the testing schedule for each diesel backup generator for the life of that diesel backup generator. The facility operator shall provide this information for review to the San Francisco Planning Department within three months of a request for such information.

Table 4.4.12: Maximum Mitigated Modeled Excess Cancer Risk at Existing Offsite Residential Receptors and **Table 4.4.13: Maximum Mitigated Modeled Excess Cancer Risk at Onsite Residential Receptors** summarize the excess cancer risk attributable to Existing plus Project Conditions, accounting for Mitigation Measures M-AQ-3a and M-AQ-3b at offsite and onsite receptor locations. Because onsite receptors would not be exposed to construction-period emissions, only operational emissions from the proposed project are shown for onsite residential receptors in Table 4.4.13.

Table 4.4.12: Maximum Mitigated Modeled Excess Cancer Risk at Existing Offsite Residential Receptors

Emissions Source	Excess Cancer Risk (in a million)[4]
Existing Conditions (CRRP-HRA [2014])[1,5]	93.57
Project Construction[2]	
2019	4.17
2020	1.43
2021	0.05
2022	0.01
Project Operations[3]	0.73
Total Project Excess Cancer Risk	6.39
Existing plus Project Excess Cancer Risk	99.96

Notes: CRRP = Community Risk Reduction Plan; HRA = health risk assessment; UTM = Universal Transverse Mercator

[1] Community Risk Reduction Plan health risk assessment for Year 2014 (Existing Conditions) plus nearby stationary sources that were permitted by the BAAQMD after the CRRP-HRA was completed (see *10 South Van Ness Project Final Health Risk Assessment,* Section 2.0, pp. 11-12).

[2] Maximum concentrations attributable primarily to the project's excavation construction sources and haul truck trips.

[3] Maximum concentrations attributable primarily to the project's emergency generator and vehicle traffic.

[4] Receptor location: X (UTM) = 551,200, Y (UTM) = 4,180,920.

[5] The existing conditions do not account for operations of the 1500 Mission Street project, which is expected to be near completion once the proposed project begins construction. The 1500 Mission Street project is expected to result in a cancer risk of 5.7 per one million persons exposed at that project's maximum exposed receptor. If this value is added to the existing conditions, total cancer risks at an offsite receptor would be 105.66 per on million persons exposed at most. Because the significance threshold is based on the project contribution to existing health risks, the inclusion of the 1500 Mission Street project under either the existing or cumulative conditions does not affect the project's health risk analysis.

Source: Data compiled by AECOM in 2017.

Table 4.4.13: Maximum Mitigated Modeled Excess Cancer Risk at Onsite Residential Receptors

Emission Source	Excess Cancer Risk (in a million)[3,4]
Existing Conditions (CRRP-HRA [2014])[1]	93.68
Project Operations[2]	2.43
Existing plus Project Excess Cancer Risk	96.11

Notes: CRRP = Community Risk Reduction Plan; HRA = health risk assessment; UTM = Universal Transverse Mercator

[1] Community Risk Reduction Plan health risk assessment for Year 2014 (Existing Conditions) and nearby stationary sources.

[2] Maximum concentrations attributable primarily to the project's emergency generator, and vehicle traffic.

[3] Receptor location: X (UTM) = 551,120, Y (UTM) = 4,180,900.

[4] The existing conditions do not account for operations of the 1500 Mission Street project, which is expected to be near completion once the proposed project begins construction. The 1500 Mission Street project is expected to result in a cancer risk of 5.7 per one million persons exposed at that project's maximum exposed receptor. If this value is added to the existing conditions, total cancer risks at an onsite receptor would be 101.81 per on million persons exposed at most. Because the significance threshold is based on the project contribution to existing health risks, the inclusion of the 1500 Mission Street project under either the existing or cumulative conditions does not affect the project's health risk analysis.

Source: Data compiled by AECOM in 2017.

As shown in Table 4.4.12, with mitigation, construction and operation of the proposed project or variant would result in an excess cancer risk of 6.39 in a million at the offsite maximally exposed individual residential receptor, mostly due to construction emissions occurring during the first two years of construction. As shown in Table 4.4.13, operation of the proposed project or variant would result in an excess cancer risk of 2.43 in a million at an onsite receptor, mostly due to emissions from traffic traveling on 12th Street and emissions from the emergency generator. These results are below the significance threshold of 7 in a million excess cancer risk. Therefore, the operational TAC emission impact of the proposed project or variant would be less than significant with mitigation.

In addition to the mitigation measures outlined above, Article 38 requires that the project sponsor submit an Enhanced Ventilation Proposal for approval by the Director of Public Health that achieves protection from $PM_{2.5}$ equivalent to that associated with a Minimum Efficiency Reporting Value 13 filtration because the project is located within the APEZ. DBI will not issue a building permit without written notification from the Director of Public Health that the applicant has an approved Enhanced Ventilation Proposal. This requirement would further reduce indoor exposure to air pollutants for the proposed project's or variant's residents.

Impact AQ-4: The proposed project or variant would not generate emissions that create objectionable odors affecting a substantial number of people. ***(Less than Significant)***

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of the receptors. Although offensive odors do not cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and can cause citizens to submit complaints to local governments and regulatory agencies.

Projects with the potential to expose a substantial number of people to objectionable odors are deemed to have a significant impact. Facilities that may generate objectionable odors affecting a substantial number of people include wastewater treatment facilities, sanitary landfills, composting facilities, petroleum refineries, chemical manufacturing plants, and food processing facilities.

Construction

Project construction under the proposed project or variant would include minor sources of odors. Exhaust odors from diesel engines, as well as ROG emissions from asphalt paving and the application of architectural coatings, may be considered offensive by some individuals. Odors from these sources would be localized and generally confined to the immediately surrounding area. Additionally, odors from diesel fumes, asphalt paving, and architectural coatings would be temporary and would disperse rapidly with distance from the source.

Therefore, construction-generated odors would not result in frequent exposure of sensitive receptors to objectionable odor emissions. Construction-related odor impacts for the proposed project and variant would be less than significant, and no mitigation is necessary.

Operation

Operational land uses associated with the proposed project or variant would be primarily residential, and typical urban retail and commercial uses, which are not typically generators of substantial odor emissions. Therefore, operational odor impacts for the proposed project and variant would be less than significant and no mitigation is necessary.

Impact AQ-5: The proposed project or variant would not conflict with or obstruct implementation of the 2017 Bay Area Clean Air Plan. *(Less than Significant*)

Air quality plans describe air pollution control strategies to be implemented by a city, county, or region. The primary goals of the 2017 Bay Area Clean Air Plan are to protect public health and protect the climate by reducing emissions, concentrations of harmful air pollutants, and exposure to the pollutants that pose the greatest health risk. To meet the primary goals, the 2017 Bay Area Clean Air Plan includes individual control measures that describe specific actions to reduce emissions of air pollutants with measures assigned into categories such as mobile-source, stationary-source, and land use and local impacts measures.

The proposed project or variant would be consistent with the 2017 Clean Air Plan if it would support the plan's goals, include applicable control measures from the 2017 Clean Air Plan, and would not disrupt or hinder implementation of any control measures from the plan. Consistency with this plan is the basis for determining whether the proposed project or variant would conflict with or obstruct implementation of an applicable air quality plan.

The 2017 Bay Area Clean Air Plan includes Transportation Control Measure (TCM) D3, "Local Land Use Strategies." TCM D3 calls for promoting and supporting land use patterns, policies, and infrastructure investments that support high-density mixed-use, residential, and employment development to facilitate walking, bicycling, and transit use. The compact, dense mixed-use development of the proposed project or variant, and its location in an area that has multiple transportation options that encourage residents to bicycle, walk and use transit to and from the project site instead of using private automobiles, would ensure consistency with the goals of this Clean Air Plan control measure. In addition, Planning Code section 169 requires that the project sponsor develop a TDM plan to reduce the use of single-occupancy vehicles and encourage the use of transit and nonmotorized travel modes (see Chapter 2.0, Project Description, pp. 2.22-2.25). Thus, the proposed project or variant would include the applicable control measures identified in the 2017 Bay Area Clean Air Plan.

Examples of a project that could cause the disruption or delay of 2017 Bay Area Clean Air Plan are projects that would preclude the extension of a transit line or bike path, or projects that propose excessive parking beyond City parking requirements. The proposed project would include about 984 dwelling units with 491 parking spaces unbundled from the units, and therefore would not provide excessive parking. The proposed development (under either the proposed project or the variant) would be a high-density urban infill development located in a neighborhood well-served by local and regional transit. The proposed project or variant would improve walking conditions by widening sidewalks on 12th Street in coordination with other local development projects, and by providing a mid-block alley. The proposed project or variant would not preclude the extension of a transit line or a bike path or any other transit improvement and, thus, would not disrupt or hinder implementation of control measures identified in the 2017 Bay Area Clean Air Plan.

Based on this analysis, the proposed project or variant would not interfere with implementation of the 2017 Bay Area Clean Air Plan, and this impact would be less than significant.

Mitigation measures identified in Impact AQ-3 would reduce emissions during construction and operation to less-than-significant levels. Mitigation Measure M-AQ-3a, pp. 4.4.37–4.4.39, which requires use of cleaner, tier 4 construction equipment, is consistent with the 2017 Bay Area Clean Air Plan Mobile Source Measure C-1, "Construction and Farming Equipment," which calls for incentives to retrofit construction equipment with diesel PM filters or upgrade to tier 3 or 4 engines and use renewable alternative fuels in applicable equipment. Mitigation Measure M-AQ-3b, p. 4.4.43, which requires the proposed emergency generator to meet more restrictive emissions standards, would be consistent with the 2017 Bay Area Clean Air Plan stationary-source control measure SSM-21, "Revise Regulation 2, Rule 5: New Source Review for Air Toxics," which supports implementing more stringent requirements for stationary sources like the project's or variant's emergency generator.

Cumulative Impacts

Impact C-AQ-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not contribute considerably to cumulative regional air quality impacts. *(Less than Significant)*

By its very nature, air pollution is largely a cumulative impact. Emissions from past, present, and future projects contribute to the region's adverse air quality on a cumulative basis. No single project by itself would be sufficient in size to result in regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts.

The SFBAAB is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards. In developing thresholds

of significance for air pollutants, the air district considered the emission levels for which a project's individual emissions would be cumulatively considerable. If the proposed project's or variant's construction and operational emissions would not exceed the project-level thresholds for criteria air pollutants, the proposed project or variant would not be considered to result in a cumulatively considerable contribution to regional air quality impacts. As shown in Tables 4.4.5 and 4.4.6, construction and operational emissions from the project or variant would not exceed the criteria air pollutant thresholds of significance. Therefore, emissions associated with the proposed project or variant would not result in a significant cumulative impact related to regional air quality. This impact would be less than significant.

Impact C-AQ-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would contribute to cumulative health risk impacts on sensitive receptors. *(Less than Significant with Mitigation*)

This analysis includes an evaluation of cumulative $PM_{2.5}$ concentrations and excess cancer risk at offsite and onsite sensitive receptors that could result from existing sources, project sources, and other nearby projects.

There are 21 projects located within 1,000 feet of the project site (area of influence as determined by air district guidance in the BAAQMD CEQA Air Quality Guidelines).[43] These projects are listed in Table 19 in the Health Risk Assessment.[44] Air quality analyses have been completed for only a few of these projects, and others are still under way. The 1500 Mission Street Project is located across South Van Ness Avenue and will be close to completion at the time construction begins at the project site;[45] therefore, the highest modeled $PM_{2.5}$ concentration due to operational emissions from that project was conservatively added to all modeled receptors for the cumulative analysis presented in this section. The 1629 Market Street project is located across 12th Street from the project site and is scheduled to be constructed between March 2018 and November 2021, overlapping with construction of the proposed project or variant. The highest modeled $PM_{2.5}$ concentration due to construction and operational emissions from the 1629 Market Street project was added to all modeled receptors for the cumulative analysis presented in this section. The other nearby projects are smaller in scope and size and further away from the project site; therefore, since construction impacts are localized, contributions from those projects would be minimal. These projects would contribute additional $PM_{2.5}$ emissions and excess cancer risk to

[43] BAAQMD, *CEQA Guidelines*, May 2017, Section 5.1.3, pp. 5-2 – 5-3. The guidance recommends use of a 1,000-foot radius, taking into account the proposed project plus foreseeable future projects within that radius.

[44] AECOM, *10 South Van Ness Project, Final Health Risk Assessment*, January 2018, revised September 2018, p. 43.

[45] The project identified as "1500 Mission Street" includes both 49 South Van Ness Avenue and 1500 Mission Street. Since the 1500 Mission Street project's construction would be essentially completed before the proposed project's or variant's construction begins, the proposed project's health risk impact would not have the potential to combine with the health risk impact of construction of the 1500 Mission Street project.

both offsite and onsite sensitive receptors. The $PM_{2.5}$ concentration and excess cancer risk from operation of the 1500 Mission Street project and construction and operation of the 1629 Market Street project are summarized in **Table 4.4.14: Cumulative Projects within the Immediate Vicinity of the Proposed Project with Known Health Risk Effects**.

As stated above, the maximum cancer risk and annual $PM_{2.5}$ values at the respective project's or variant's maximally exposed individual receptors calculated in these analyses were conservatively added to all receptors within the modeling domain for this project. Offsite sensitive receptors would be exposed to simultaneous construction emissions associated with the proposed project, existing sources, and construction emissions from the 1629 Market Street Project. Offsite receptors would also be exposed to the operational emissions from the proposed project and the 1500 Mission Street and 1629 Market Street projects and other past, present and reasonably foreseeable projects for which cancer risk information is not known. Onsite sensitive receptors, however, would only be exposed to operational emissions from existing sources, project sources, and the operational emissions from the 1500 Mission Street and 1629 Market Street projects. Therefore, this cumulative analysis presents results for offsite sensitive receptors, followed by onsite sensitive receptors.

Table 4.4.14: Cumulative Projects within the Immediate Vicinity of the Proposed Project with Known Health Risk Effects

Address	$PM_{2.5}$ (µg/m³)	Excess Cancer Risk (in a million)
1629 Market Street Construction Impact	0.18	3.9
1629 Market Street Operational Impact	0.02	
1500 Mission Street Operational Impact	0.01	5.7
Total Construction	**0.18**	**9.6**
Total Operational	**0.03**	

Notes:
$PM_{2.5}$ = particulate matter less than 2.5 microns, µg/m³ = micrograms per cubic meter.
Source: Data provided by Ramboll Environ in 2016 and 2017

Cumulative $PM_{2.5}$ Construction Analysis

As shown in **Table 4.4.15: Cumulative plus Project Annual $PM_{2.5}$ Concentrations at Offsite Receptors during Project Construction**, the $PM_{2.5}$ concentrations due to existing conditions (2014) in the project area are 9.038 µg/m³. Existing 2014 conditions are used for the analysis of cumulative construction phase impacts because construction of the proposed project or variant and the other nearby projects would be completed well before year 2040 (the cumulative horizon year). Table 4.4.15 summarizes the Cumulative Plus Project Conditions annual $PM_{2.5}$ concentrations at offsite sensitive receptor locations without and with implementation of Mitigation Measure M-AQ-3a. As shown in this table, under both existing and cumulative conditions, the project would meet the APEZ criteria indicating that a significant cumulative

impact exists. In the unmitigated scenario, the proposed project would contribute approximately 2 µg/m^3 of $PM_{2.5}$ at offsite receptors, exceeding the 0.2 µg/m^3 significance threshold. Therefore, the proposed project would result in a significant contribution to cumulative $PM_{2.5}$ concentrations, and implementation of Mitigation Measure M-AQ-3a would be necessary to reduce or eliminate the significant effect.

Table 4.4.15: Cumulative plus Project Annual $PM_{2.5}$ Concentrations at Offsite Receptors during Project Construction

Cumulative Construction Scenario	Annual Average $PM_{2.5}$ Concentration Unmitigated (µg/m^3)	Annual Average $PM_{2.5}$ Concentration Mitigated (µg/m^3)
Existing conditions (CRRP-HRA [2014])[1]	9.038	9.038
Project construction[2]	2.025	0.099
Other cumulative projects[3]	0.19	0.19
Cumulative construction $PM_{2.5}$ concentration	11.25	9.327

Notes: µg/m^3 = micrograms per cubic meter; CRRP = Community Risk Reduction Plan; HRA = health risk assessment; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; UTM = Universal Transverse Mercator

[1] Community Risk Reduction Plan health risk assessment for Year 2014 (Existing Conditions) plus nearby existing sources permitted since the CRRP HRA was prepared in 2012.

[2] Based on 2019 construction $PM_{2.5}$ annual concentrations at an offsite receptor. Receptor location: X (UTM) = 551,200, Y (UTM) = 4,180,920.

[3] Includes operational effects from the 1500 Mission Street Project, and construction effects from the 1629 Market Street project as this project could be under construction concurrently with the proposed project.

Source: Data compiled by AECOM in 2017

Table 4.4.15 shows that with implementation of Mitigation Measure M-AQ-3a, construction-related $PM_{2.5}$ concentrations at offsite receptor locations would be reduced to 0.099 µg/m³, or 0.01 µg/m³ rounded, which is below the 0.2 µg/m³ threshold for determining whether a project's contribution to $PM_{2.5}$ concentrations would be cumulatively considerable. Therefore, with implementation of Mitigation Measure M-AQ-3a the contribution of the proposed project or variant to cumulative construction-related $PM_{2.5}$ impacts would be less than significant.

Cumulative $PM_{2.5}$ Operational Analysis

In the project area, the 2040 background cumulative conditions show similar $PM_{2.5}$ concentrations as the existing 2014 conditions. Although the 2040 baseline scenario accounts for an increase in vehicle trips, vehicle emissions are expected to decrease due to more stringent emissions standards. Background $PM_{2.5}$ concentrations under existing 2014 conditions are greater than baseline 2040 concentrations. Therefore, in order to provide a worst case cumulative assessment of operational $PM_{2.5}$ concentrations, the analysis uses existing 2014 conditions from the citywide health risk assessment. **Table 4.4.16: Cumulative plus Project Annual $PM_{2.5}$ at Offsite and Onsite Receptors during Project Operation** presents the $PM_{2.5}$ concentration at the proposed project's and variant's offsite and onsite maximally exposed individual residential receptors during operation of the proposed project in addition to $PM_{2.5}$ concentrations from the existing

2014 condition and operation of the 1500 Mission Street and 1629 Market Street projects. Cumulative $PM_{2.5}$ emissions would exceed the APEZ criterion of 9.0 µg/m³ for health vulnerable locations, resulting in a significant cumulative impact. However, the evaluation of whether the proposed project or variant would result in a cumulatively considerable contribution to a significant impact is based on whether the individual project would contribute 0.2 µg/m³ or more to this cumulative impact.

Table 4.4.16: Cumulative plus Project Annual $PM_{2.5}$ at Offsite and Onsite Receptors during Project Operation

Cumulative Operational Scenario	Annual Average $PM_{2.5}$ Concentration Unmitigated (µg/m³)
Offsite Receptor	
Baseline Conditions (CRRP-HRA [2014][3]	9.06
Project Operations[1]	0.18
Other Cumulative Projects[2]	0.03
Cumulative Operational $PM_{2.5}$ Concentration	9.27
Onsite Receptor	
Baseline Conditions (CRRP-HRA [2014])[3]	9.04
Project Operations[4]	0.07
Other Cumulative Projects[2]	0.03
Cumulative Operational $PM_{2.5}$ Concentration	9.14

Notes:
µg/m³ = micrograms per cubic meter; CRRP = Community Risk Reduction Plan; HRA = health risk assessment; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; UTM = Universal Transverse Mercator

[1] Maximum concentrations attributable to emergency generator and vehicle traffic at an offsite receptor. Receptor location: X (UTM) = 551,080, Y (UTM) = 4,180,900.

[2] Includes operational effects from both the 1500 Mission Street project and the 1629 Market Street project.

[3] Community Risk Reduction Plan health risk assessment for Year 2014 plus nearby sources permitted since 2012. Year 2040 emissions (typically used for future Baseline Conditions) plus nearby existing sources are projected to be lower than 2014 conditions; therefore Year 2014 emissions present a more conservative result when added to project or variant and other cumulative projects emissions.

[4] Maximum concentrations attributable to emergency generator and vehicle traffic (tire and brake wear) at an onsite receptor. Receptor location: X (UTM) = 551,120, Y (UTM) = 4,180,900.

Source: Data compiled by AECOM in 2017

As shown in Table 4.4.16, operation of the proposed project or variant would result in an annual $PM_{2.5}$ concentration of approximately 0.18 µg/m³ at an offsite receptor, with a total $PM_{2.5}$ concentration of approximately 9.27 µg/m³ when cumulative conditions and nearby projects are added. This would be a significant cumulative impact. However, emissions from the proposed project or variant would not reach the significance threshold of 0.2 ug/m³. Therefore, the proposed project or variant would not result in a considerable contribution to the cumulative $PM_{2.5}$ impact.

Operation of the proposed project or variant would result in an annual $PM_{2.5}$ concentration of 0.07 µg/m³ at an onsite receptor as shown in Table 4.4.16, with a total $PM_{2.5}$ concentration of approximately 9.14 µg/m³ under cumulative conditions. The total $PM_{2.5}$ concentration would

result in a significant cumulative impact. As noted above, the evaluation of whether a project would result in a cumulatively considerable contribution to a significant impact is based on the individual project threshold of 0.2 $\mu g/m^3$. The proposed project or variant would not reach the significance threshold of 0.2 $\mu g/m^3$, and therefore would not contribute considerably to the significant cumulative $PM_{2.5}$ impact on an onsite receptor.

Excess Cancer Risk

The cumulative health risk assessment takes into account the contribution of localized health risks to sensitive receptors from sources included in the citywide modeling (citywide health risk assessment) in addition to the proposed project's or variant's sources and other cumulative project sources within 1,000 feet of the project site per air district guidance. In the project area, the 2040 background cancer risk values versus existing baseline conditions decrease from approximately 94 in 1 million to 55 in a million at offsite receptor locations and from approximately 94 in a million to 52 in a million at onsite receptor locations. To present a more conservative (i.e. worst-case) analysis, therefore, the existing conditions 2014 cancer risk of 93.57 in 1 million for offsite receptors and 93.68 in 1 million for onsite receptors have been used as the baseline conditions in the cumulative cancer risk analysis.

As shown in **Table 4.4.17: Cumulative plus Project Excess Cancer Risk at Offsite Sensitive Receptors** and **Table 4.4.18: Cumulative plus Project Conditions at Onsite Receptors**, cancer risks due to cumulative conditions are anticipated to exceed the APEZ criterion of 90 in 1 million for health vulnerable locations. This would be a significant cumulative impact. However, the evaluation of whether the project would result in a considerable contribution to the significant cumulative impact is based on the individual project threshold of 7 in 1 million cancer risk.

As shown in Table 4.4.17, operation of the proposed project or variant without mitigation would result in a cancer risk of 132.66 in 1 million at an offsite sensitive receptor, which in combination with existing conditions and other cumulative projects would result in a total cumulative excess cancer risk of 235.83. This would be a significant cumulative impact.

Operation of the proposed project or variant with implementation of Mitigation Measures M-AQ-3a and M-AQ-3b would result in an excess cancer risk of 6.39 in a million at an offsite receptor, with a cumulative excess cancer risk of 109.56, or approximately 110 in 1 million when nearby projects are accounted for. The proposed project or variant would not exceed the significance threshold of 7 in 1 million excess cancer risk with implementation of mitigation measures M-AQ-3a and M-AQ-3b. Therefore, the proposed project or variant's contribution to significant cancer risk impacts at offsite sensitive receptors would not be considerable with mitigation.

Table 4.4.17: Cumulative plus Project Excess Cancer Risk at Offsite Sensitive Receptors

Cumulative Cancer Risk Scenario	Excess Cancer Risk Unmitigated (in a million)	Excess Cancer Risk Mitigated (in a million)
Baseline Conditions (CRRP-HRA [2014])[1]	93.57	93.57
Project Total Cancer Risk[2]	132.66	6.39
Other Cumulative Projects Cancer Risk[3]	9.6	9.6
Cumulative Excess Cancer Risk	235.83	109.56
APEZ Criterion	90	90

Notes: CRRP = Community Risk Reduction Plan; HRA = health risk assessment; UTM = Universal Transverse Mercator

[1] Community Risk Reduction Plan health risk assessment for Year 2014 (Existing Conditions).

[2] Maximum operational concentrations attributable primarily to emergency generator and vehicle traffic. Receptor location for project cancer risk: X (UTM) = 551,200, Y (UTM) = 4,180,920.

[3] Operational effects from 1500 Mission Street, and construction and operational effects from 1629 Market Street.

Source: Data compiled by AECOM in 2017

Table 4.4.18: Cumulative plus Project Excess Cancer Risk at Onsite Receptors

Cumulative Scenario	Excess Cancer Risk Unmitigated (in-a-million)[3]	Excess Cancer Risk Mitigated (in-a-million)[3]
Cumulative Conditions (CRRP-HRA [2014])	93.68	93.68
Project Operations[1]	15.8	2.43
Other Cumulative Projects[2]	9.6	9.6
Cumulative Excess Cancer Risk	119.48	105.71
APEZ Criterion	90	90

Notes: $\mu g/m^3$ = micrograms per cubic meter; APEZ = Air Pollutant Exposure Zone; CRRP = Community Risk Reduction Plan; HRA = health risk assessment; $PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns; UTM = Universal Transverse Mercator

[1] Maximum operational excess cancer risk attributable primarily to emergency generator at an onsite receptor and vehicle traffic. Receptor location X (UTM) = 551,120 Y (UTM) = 4,180,900.

[2] Concurrent project excess cancer risk.

Source: Data compiled by AECOM in 2017

Table 4.4.18 shows that operation of the proposed project or variant without mitigation would result in an excess cancer risk of 15.8 in 1 million at an onsite sensitive receptor, with a cumulative excess cancer risk of 119.48, or approximately 120 in 1 million. This would be a significant cumulative impact. The proposed project or variant would exceed the significance threshold of 7 in 1 million cancer risk at an onsite sensitive receptor. Therefore, the proposed project or variant's contribution to this significant cumulative impact would be considerable.

Operation of the proposed project or variant with implementation of Mitigation Measure M-AQ-3b would result in a cancer risk of 2.43 in 1 million at an onsite receptor, with a cumulative cancer risk of 105.71, or approximately 106 in 1 million when nearby projects are accounted for. The proposed project or variant would not exceed the significance threshold of 7 in 1 million cancer risk with implementation of Mitigation Measure M-AQ-3b. Therefore, the proposed project or variant's contribution to significant cumulative cancer risk impacts to onsite sensitive

receptors would not be considerable with mitigation. The project or variant would result in a less-than-significant cumulative impact with mitigation.

4.5 WIND

Introduction

Section 4.5, Wind, describes the proposed project's and variant's impacts on ground-level wind currents at various publicly accessible locations on and near the project site. The Environmental Setting describes the general wind characteristics in San Francisco, provides details of the wind environment near the project site, and discusses the regulations that define the criteria used by the city to determine whether the wind impacts of a proposed project would be significant. The evaluation of potential wind impacts considers the results of wind tunnel testing for three test scenarios under both the proposed project and variant: an existing scenario, which establishes the baseline wind conditions at and around the project site; a project scenario, which evaluates the project's and variant's effects on ground-level winds; and a cumulative scenario, which evaluates the effects of the project and variant in combination with other reasonably foreseeable projects.

The wind data cited in this section are based on the results of the *Wind Microclimate Wind Study* prepared for the proposed project by the engineering firm BMT Fluid Mechanics (BMT).[1]

Environmental Setting

San Francisco's Existing Wind Environment

The difference in atmospheric pressure between two points on the earth causes air masses to move from the area of higher pressure to the area of lower pressure. This movement of air masses results in wind currents. In San Francisco, average winds speeds are the highest in the summer and lowest in the winter. However, the strongest peak wind speeds occur in the winter. The highest average wind speeds occur in mid-afternoon and the lowest in the early morning. Average wind speeds are highest during the summer and lowest during the winter. Winds exhibit certain characteristics over the course of a day in San Francisco: the highest wind speeds generally occur during the mid-afternoon hours, while the lowest wind speeds often occur during early mornings.

Wind directions are reported as directions from which the winds blow. Meteorological data collected at the old San Francisco Federal Building at 50 United Nations Plaza over a six-year period between 1945 and 1950 show that westerly through northwesterly winds are the most frequent and strongest winds during all seasons.[2] Of the 16 primary wind directions, four have the greatest frequency of occurrence: northwest, west-northwest, west, and west-southwest. These wind conditions reflect the persistence of sea breezes.

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[1] BMT Fluid Mechanics. 10 South Van Ness Avenue Project, *Wind Microclimate Study*, August 24, 2018.

[2] Arens, E. et al., "Developing the San Francisco Wind Ordinance and its Guidelines for Compliance," Building and Environment, Vol. 24, No. 4, pp. 297–303, 1989.

Wind Effects on People

The comfort of pedestrians varies under different conditions of sun exposure, temperature, clothing, and wind speed.[3] Winds up to about 4 miles per hour (mph) have no noticeable effect on pedestrian comfort. With speeds from 4 to 8 mph, wind is felt on the face. Winds from 8 mph to 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds from 13 to 19 mph will raise loose paper, dust, and dry soil, and will disarrange hair. With winds from 19 to 26 mph, the force of the wind will be felt on the body. With winds from 26 to 34 mph, umbrellas are used with difficulty, hair is blown straight, there is difficulty in walking steadily, and wind noise is unpleasant. Winds over 34 mph can result in loss of balance, and gusts can blow people over.[4]

Wind Effects from Buildings

The direction and speed of wind currents can be altered by natural features of the land or by buildings and structures. Groups of buildings clustered together tend to act as obstacles that reduce wind speeds; building height, massing, and orientation or profiles of buildings may also be factors that can affect wind speeds. Tall buildings and exposed structures can strongly affect the wind environment for pedestrians. A building that stands alone or is much taller than the surrounding buildings can intercept and redirect winds that might otherwise flow overhead and bring them down the vertical face of the building to ground level, where they create ground-level wind and turbulence. These redirected winds can be relatively strong and turbulent, and may in some instances be incompatible with the intended uses of nearby ground-level pedestrian spaces.

Moreover, slab-shaped buildings have the greatest potential to cause wind acceleration; buildings with a geometrically complex shape or setbacks have a lesser effect. Buildings oriented with a wide axis perpendicular to prevailing winds will also generally cause greater ground-level wind acceleration than buildings oriented with a narrow axis perpendicular to prevailing winds. Thus, wind impacts are generally caused by large building masses that are substantially taller than their surroundings, and by buildings oriented so that a large wall catches a prevailing wind, particularly if such a wall includes little or no articulation.

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[3] Lawson, T. V., and A. D. Penwarden, "The Effects of Wind on People in the Vicinity of Buildings," Proceedings of the Fourth International Conference on Wind Effects on Buildings and Structures, London, 1975, Cambridge University Press, Cambridge, U.K., pp. 605–622, 1976.

[4] National Oceanic and Atmospheric Administration, Beaufort Wind Scale, https://www.weather.gov/mfl/beaufort, accessed February 4, 2018.

Wind Conditions in the Project Vicinity

The proposed project is located south of Market Street on the east side of 12th Street at the intersection of Market Street, 12th Street, and South Van Ness Avenue, in San Francisco's South of Market (SoMa) neighborhood. The north-of-Market Street grid is oriented within nine degrees of the four cardinal directions (north, south, east, and west); however, the street grid south of Market Street is oriented approximately northwest/southeast and southwest/northeast. This orientation typically results in a less predictable pattern of wind variation at the pedestrian level.

South Van Ness Avenue, which forms the eastern project site boundary, runs generally north-south, parallel to the north-of-Market Street grid. The area just north of the intersection of Market Street and Van Ness Avenue—north of and upwind from the project site—is one of the windiest areas in San Francisco. The general openness and lack of buildings taller than 80 feet in the upwind areas west of Van Ness Avenue, along with the width of Van Ness Avenue itself, allows the prevailing northwesterly, west-northwesterly, and westerly winds direct access to this area, with relatively little disruption from intervening buildings. These approaching winds, and the combined presence of existing tall buildings, including 100 Van Ness Avenue (at Fell Street), Fox Plaza (at Hayes, Polk, and Market streets), 1455 Market Street (at 11th Street), and the NEMA apartment tower at 8 10th Street (at Market Street), result in strong, turbulent winds at and near ground level within the triangular area roughly defined by Van Ness Avenue and Hayes and Market streets, including at the intersection of 12th and Market streets.

Recent wind tunnel testing for the proposed project and other projects in the vicinity of the intersection of Market Street and Van Ness Avenue has shown that the windy conditions on Van Ness Avenue north of Market Street also exist on South Van Ness Avenue between Market and Mission streets. These conditions exist for the reason noted above: little obstruction of prevailing winds by buildings to the west. Furthermore, the width of South Van Ness Avenue offers an unobstructed path for northwesterly to westerly winds to be redirected downward and channeled to the south at ground level.

Regulatory Framework

SAN FRANCISCO PLANNING CODE SECTION 148

The San Francisco Planning Code (planning code) section 148 establishes wind comfort and wind hazard criteria for the Downtown (C-3) Use Districts in which the project site is located.[5] Section 148 defines "equivalent wind speed" as "an hourly mean wind speed adjusted to incorporate the effect of gustiness or turbulence on pedestrians" and is used to evaluate wind speeds. Section 148

[5] Other sections of the planning code apply comparable standards in the Downtown Residential (DTR) Districts, the Folsom and Main Residential/Commercial Special Use District, the Van Ness Special Use District, and certain zoning districts in the SoMa neighborhood.

establishes the wind hazard criterion as wind speed that exceeds 26 mph for a single hour of the year.[6] Under section 148, new buildings and additions to buildings may not cause wind speeds that meet or exceed this hazard criterion. Under section 148, no exception may be granted for buildings that result in winds that exceed the hazard criterion.

Planning code section 148 also establishes pedestrian comfort wind speed criteria, which are 7 mph for seating areas and 11 mph for areas of substantial pedestrian use.[7] The comfort criteria require that wind speeds not exceed these levels more than 10 percent of the time year-round between 7 a.m. and 6 p.m.

Impacts and Mitigation Measures

Significance Thresholds

The proposed project or variant would have a significant impact related to wind if it would alter wind in a manner that substantially affects public areas.

To assess whether a project would result in a significant impact under the CEQA significance threshold, the city uses the planning code's hazard criterion. That is, the city determines whether a project would cause equivalent wind speeds to reach or exceed the wind hazard criterion of 26 mph for a single hour of the year. If a project would cause a new wind hazard or exacerbate an existing wind hazard in a public area, it may result in a significant impact under CEQA. The San Francisco Planning Department (planning department) does not consider exceedances of the comfort criteria to be a significant impact for CEQA purposes. However, the wind study assessed wind conditions related to the comfort criteria and the results of this assessment are summarized at the end of this section for informational purposes.

[6] The wind hazard criterion is derived from the wind condition that would generate a three-second gust of wind at 20 meters per second, a commonly used guideline for wind safety. This wind speed, on an hourly basis, is a 26 mph average for a full hour. Because the original Federal Building wind data were collected at one-minute averages, the 26 mph hourly average is converted to a one-minute average of 36 mph, which is used to determine compliance with the 26 mph one-hour hazard criterion in the planning code. (Arens, E. et al., "Developing the San Francisco Wind Ordinance and its Guidelines for Compliance," Building and Environment, Vol. 24, No. 4, pp. 297–303, 1989.)

[7] The wind comfort criteria are defined in terms of equivalent wind speed, which is an average wind speed (mean velocity), adjusted to include the level of gustiness and turbulence. Equivalent wind speed is defined as the mean wind velocity, multiplied by the quantity (1 plus 3 times the turbulence intensity) divided by 1.45. This calculation magnifies the reported wind speed when turbulence intensity is greater than 15 percent.

Approach to Analysis

BMT conducted a wind tunnel test to characterize the existing pedestrian wind environment and to assess future wind conditions on sidewalks and open spaces around the project site with construction of the proposed project or variant.[8] A 1-inch-to-25-foot scale (1:300) model of the project site and surrounding buildings within a 1,500-foot radius was constructed to assess existing, existing-plus-project, and existing-plus-variant conditions.

The mean speed profile and turbulence of the natural wind approaching the modeled area were simulated in the wind tunnel, and pedestrian-level wind speeds were measured using sensors at 64 locations for 16 wind directions at a 5-foot (pedestrian) height above grade. Locations for wind speed sensors, or study test points, were selected to indicate how the general flow of winds would be directed around the project buildings. Consistent with section 148, most test points were located within public sidewalks, which are assumed for the purpose of this analysis to be areas of substantial pedestrian use. Two test points were located along new sidewalk spaces under the proposed project and variant, and one test point was located in the center of the proposed mid-block alley under the proposed project (i.e., these three test points are not included in the existing scenario).

Cumulative Wind Analysis

For the cumulative scenarios, the wind study model included nearby cumulative projects that are either approved but unbuilt, or are under review with the planning department and that could meaningfully affect wind conditions in the project vicinity. The model used project plans where available; however, for some cumulative projects, final plans were not available and simplified massing models were used.

Project Features

The proposed project would involve the demolition of the existing building and the construction of two 41-story towers. The project sponsor is considering a variant to the proposed project that would involve construction of a single 55-story tower over a podium structure. These proposed development scenarios have the potential to affect ground-level wind conditions in the project vicinity. This analysis considers the wind hazard effects of each scenario separately.

PROPOSED PROJECT

The proposed building would consist of two 41-story building volumes on the triangle-shaped project site. The towers would be 400 feet tall (420 feet total, including roof screens and elevator penthouses). These structures would also include podium levels: the north tower podium would

[8] BMT Fluid Mechanics. 10 South Van Ness Project, Wind Microclimate Study, August 24, 2018.

be 114 feet in height, and the south tower podium would be 120 feet in height. New publicly accessible open space would be provided in the form of a new pedestrian-oriented right-of-way (or alley) that would run through the block from South Van Ness Avenue to 12th Street. The proposed project would include expansion of the eastern and western sidewalks along 12th Street from a width of 15 feet to 21 feet. Eight-foot-wide bulb-outs would be installed at the intersection of 12th and Market streets. The "pedestrian island" at the intersection of 12th Street and South Van Ness Avenue would be removed and replaced by bulb-outs on both sides of 12th Street and a pedestrian plaza on the southwest side of the intersection. In addition, 33 net new street trees would be planted along the perimeter of the project site frontage, in compliance with the city's Better Streets Plan.

The proposed project would also include additional building elements that would serve as wind abatement features, specifically 25-foot-tall evergreen street trees adjacent to the project site, a 35-foot-tall wind canopy (varying in width between 10 and 20 feet) around the perimeter of the building's podium, and a 20-foot-tall free-standing wind screen (approximately 30 feet in diameter) at the 12th Street entrance to the mid-block passage under the proposed project.

In addition, this testing scenario includes 25-foot-tall evergreen trees that would be planted along the east side of South Van Ness Avenue as part of the proposed project (along the 1 South Van Ness Avenue frontage), as well as those to be planted as part of the 1500 Mission Street Project that is currently under construction.

VARIANT

The variant would consist of a single, taller tower and a podium. With the variant, the building would be 590 feet tall and would have 55 stories. The podium would range from 13 stories (139 feet, 9 inches) at the north end to 15 stories (164 feet, 10 inches) at the south end.

New publicly accessible open space would be provided in the form of a new pedestrian-oriented right-of-way (or alley) that would run through the block from Market Street to 12th Street. The proposed variant would include substantially the same streetscape improvements and on-street parking and loading as the proposed project, as described above.

The variant would also include a 35-foot-tall wind canopy (varying in width between 10 and 45 feet) around the perimeter of the building's podium that would serve as a wind abatement feature.

In addition, this testing scenario includes 25-foot-tall evergreen trees that would be planted along the east side of South Van Ness Avenue as part of the variant (along the 1 South Van Ness Avenue frontage), as well as those to be planted as part of the 1500 Mission Street Project that is currently under construction.

Project Impacts

Impact WI-1: The proposed project or variant would not alter wind in a manner that would substantially affect public areas in the vicinity of the project site. ***(Less than Significant)***

Under existing conditions, 5 of the 64 test points exceed the hazard criterion, with the total number of hours exceeding the hazard criterion reaching 53 hours per year. The test points at which the hazard criterion is exceeded are as follows: on the southeastern sidewalk of Mission Street near the intersection with South Van Ness Avenue; on the eastern sidewalk of Van Ness Avenue near the Fell Street intersection with Van Ness Avenue and between Fell and Market streets; and on the southern sidewalk corner of Market and 10th streets (see test points 22, 34, 35, 56, and 62 on **Figure 4.5.1: Wind Hazard Results – Existing Scenario**).

PROPOSED PROJECT

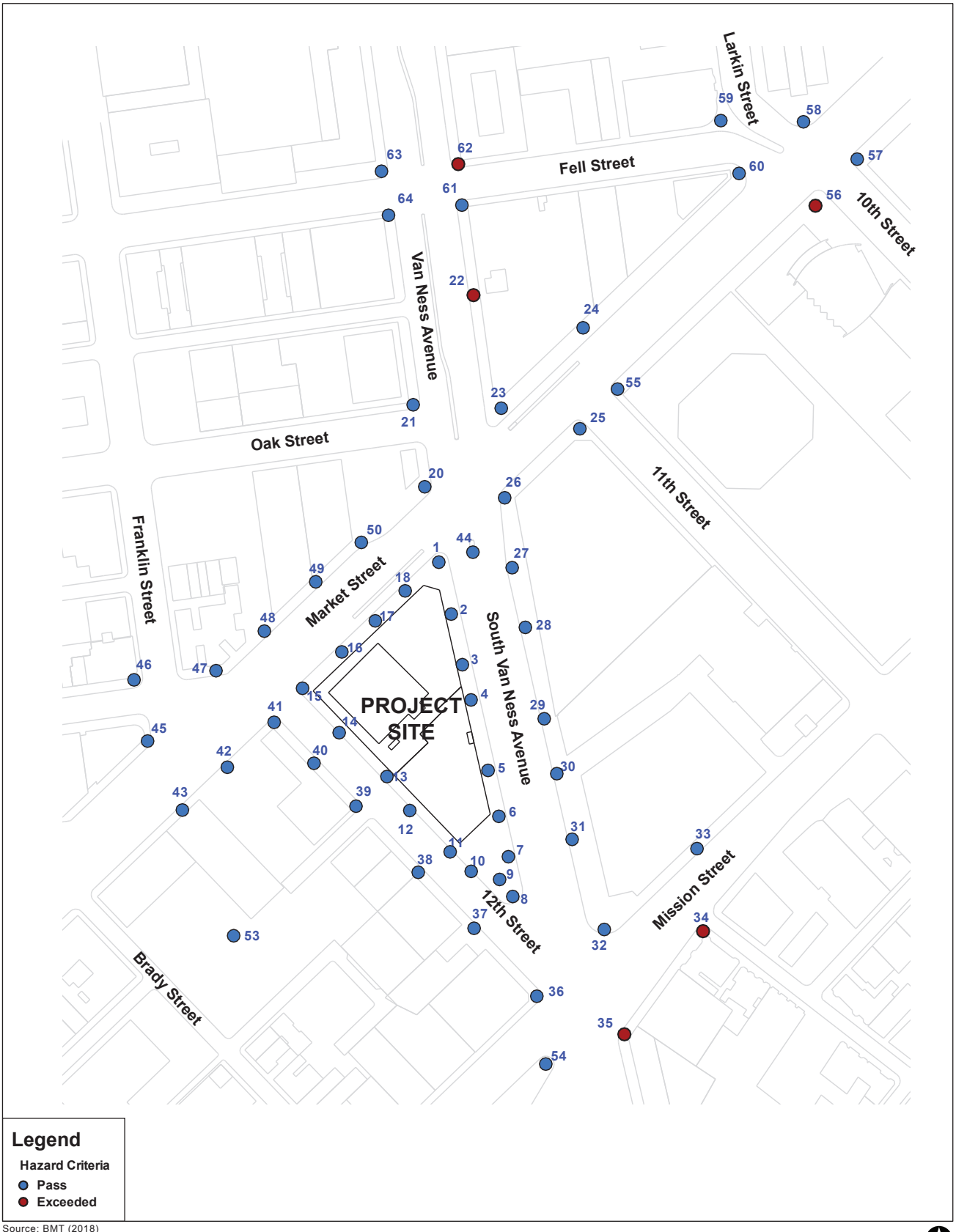
The proposed project would alter wind patterns in the vicinity of the project site. The existing-plus-project scenario would reduce the number of exceedances of the hazard criterion from five test points under existing conditions to four (see test points 22, 34, 56, and 62 on **Figure 4.5.2: Wind Hazard Results – Existing-Plus-Project Scenario**). The total number of exceedance hours per year under the existing-plus-project scenario would remain the same as under existing conditions. **Table 4.5.1: Wind Hazards – Existing-Plus-Project Scenario** summarizes the test results.

Table 4.5.1: Wind Hazards – Existing-Plus-Project Scenario

Scenario	Hours/Year of Hazard Exceedance	Change in Hours/Year Relative to Existing	Number of Hazard Exceedance Locations
Existing	53	N/A	5
Existing-Plus-Project	53	0	4

Source: BMT Fluid Mechanics. *10 South Van Ness Project, Wind Microclimate Study*, August 24, 2018.

Overall, the proposed project would not alter wind conditions in a manner that would substantially affect public areas in the vicinity of the project site because the proposed project would result in no net increase in the number of hours per year that exceed the wind hazard criterion, and the proposed project would result in a net reduction in the number of test locations that exceed the wind criterion. Therefore, the proposed project would result in less-than-significant wind impacts, and no mitigation measures are necessary.

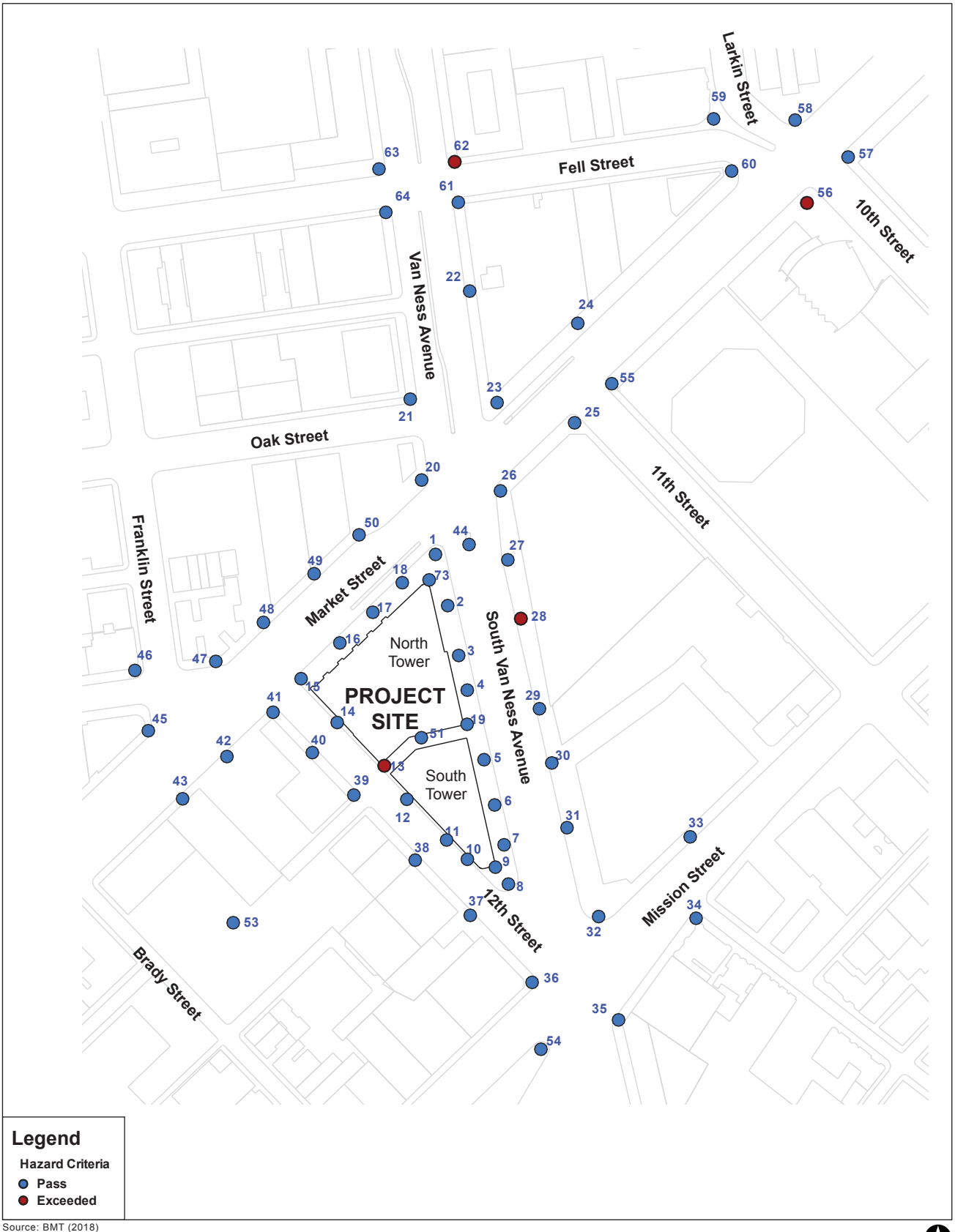


Source: BMT (2018)

10 SOUTH VAN NESS MIXED-USE PROJECT

2015-004568ENV

FIGURE 4.5.1: WIND HAZARD CONDITIONS - EXISTING SCENARIO



Source: BMT (2018)

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2015-004568ENV

FIGURE 4.5.2: WIND HAZARD RESULTS - EXISTING-PLUS-PROJECT SCENARIO

VARIANT

The variant would alter wind patterns in the vicinity of the project site. The existing-plus-variant scenario would reduce the number of exceedances of the hazard criterion from five test points under existing conditions to three (see test point 56, 62 and 73 on **Figure 4.5.3: Wind Hazard Results – Existing-Plus-Variant**). The total number of exceedance hours per year under the existing-plus-variant scenario would remain the same as under existing conditions. **Table 4.5.2: Wind Hazards – Existing-Plus-Variant Scenario** summarizes the test results.

Table 4.5.2: Wind Hazards – Existing-Plus-Variant Scenario

Scenario	Hours/Year of Hazard Exceedance	Change in Hours/Year Relative to Existing	Number of Hazard Exceedance Locations
Existing	53	N/A	5
Existing-Plus-Variant	53	0	3

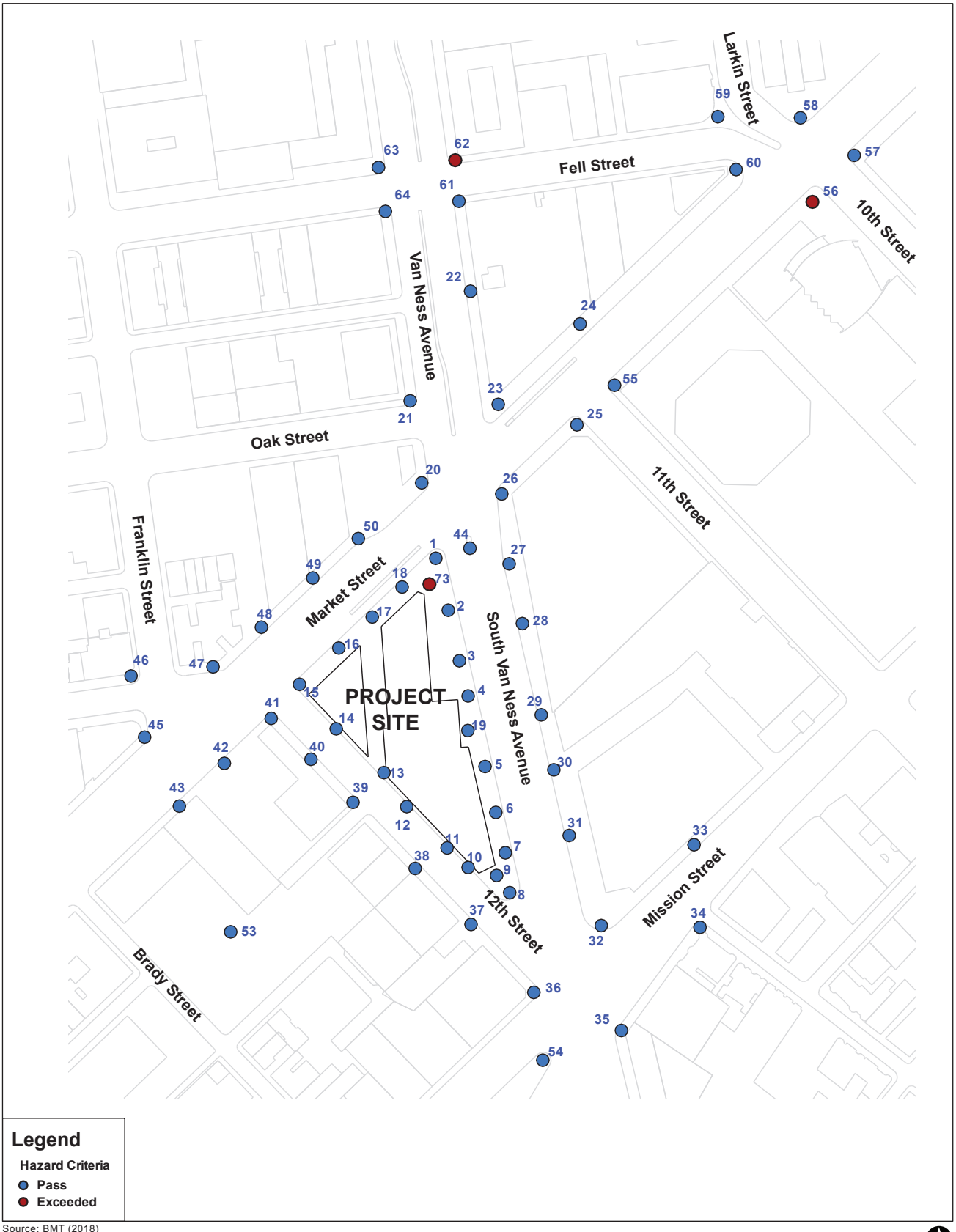
Source: BMT Fluid Mechanics. *10 South Van Ness Project, Wind Microclimate Study*, August 24, 2018.

Overall, the variant would not alter wind conditions in a manner that would substantially affect public areas in the vicinity of the project site because the variant would result in no net increase in the number of hours per year that exceed the wind hazard criterion, and the variant would result in a net reduction in the total number of test locations that exceed the wind criterion. Therefore, the variant would result in less-than-significant wind impacts, and no mitigation measures are necessary.

Cumulative Impacts

Impact C-WI-1: The proposed project or variant, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that would make a cumulatively considerable contribution to a significant cumulative wind impact. ***(Significant and Unavoidable with Mitigation)***

The geographic scope for cumulative wind impacts includes the area within an approximately 1,500-foot radius of the project site. For the purposes of this analysis, the nearby cumulative projects that are currently either approved but unbuilt or are under review include the following:



Source: BMT (2018)

10 SOUTH VAN NESS MIXED-USE PROJECT

2015-004568ENV

FIGURE 4.5.3: WIND HAZARD RESULTS - EXISTING-PLUS-VARIANT SCENARIO

Address	Case File No.	Proposed Building Height (Feet)
1629 Market Street	2015-005848ENV	85
1700 Market Street	2013.1179E	100
1740 Market Street	2014.0409E	101
1601 Mission Street	2014.1121ENV	140
One Oak Street	2009.0159E	420
30 Otis Street	2015-010013ENV	250
42 Otis Street	2016-005406ENV	63
200-214 Van Ness Avenue	2015-012994ENV	135
Parcel T	2014.1509ENV	71
1390 Market Street	2005.0979E	142
98 Franklin Street	2016-014802ENV	390
30 Van Ness Avenue	2015.008571ENV	570
Parcel U	No current case number	71

The cumulative-plus-project and cumulative-plus-variant scenarios also included existing and proposed street trees on the project site, additional street trees under cumulative development, and off-site wind screens or other abatement features identified under cumulative development projects. Those elements were tested to evaluate potential mitigation for adverse wind effects.

The cumulative-plus-project scenario would increase the number of test points that would exceed the hazard criterion and the number of hours per year that winds would exceed the hazard criterion compared to existing conditions. With the cumulative-plus-project scenario, the total number of hazard exceedance hours would increase to 89 hours, compared to the 53 hours per year under existing conditions. Seven test points would exceed the hazard criterion under the cumulative-plus-project scenario, compared to five test points with existing conditions. **Table 4.5.3: Wind Hazards – Cumulative-Plus-Project Scenario** summarizes the test results.

Table 4.5.3: Wind Hazards – Cumulative-Plus-Project Scenario

Scenario	Hours/Year of Hazard Exceedance	Change in Hours/Year Relative to Existing	Number of Hazard Exceedance Locations
Existing	53	N/A	5
Cumulative-Plus-Project	89	36	7

Source: BMT Fluid Mechanics. *10 South Van Ness Project, Wind Microclimate Study*, August 24, 2018.

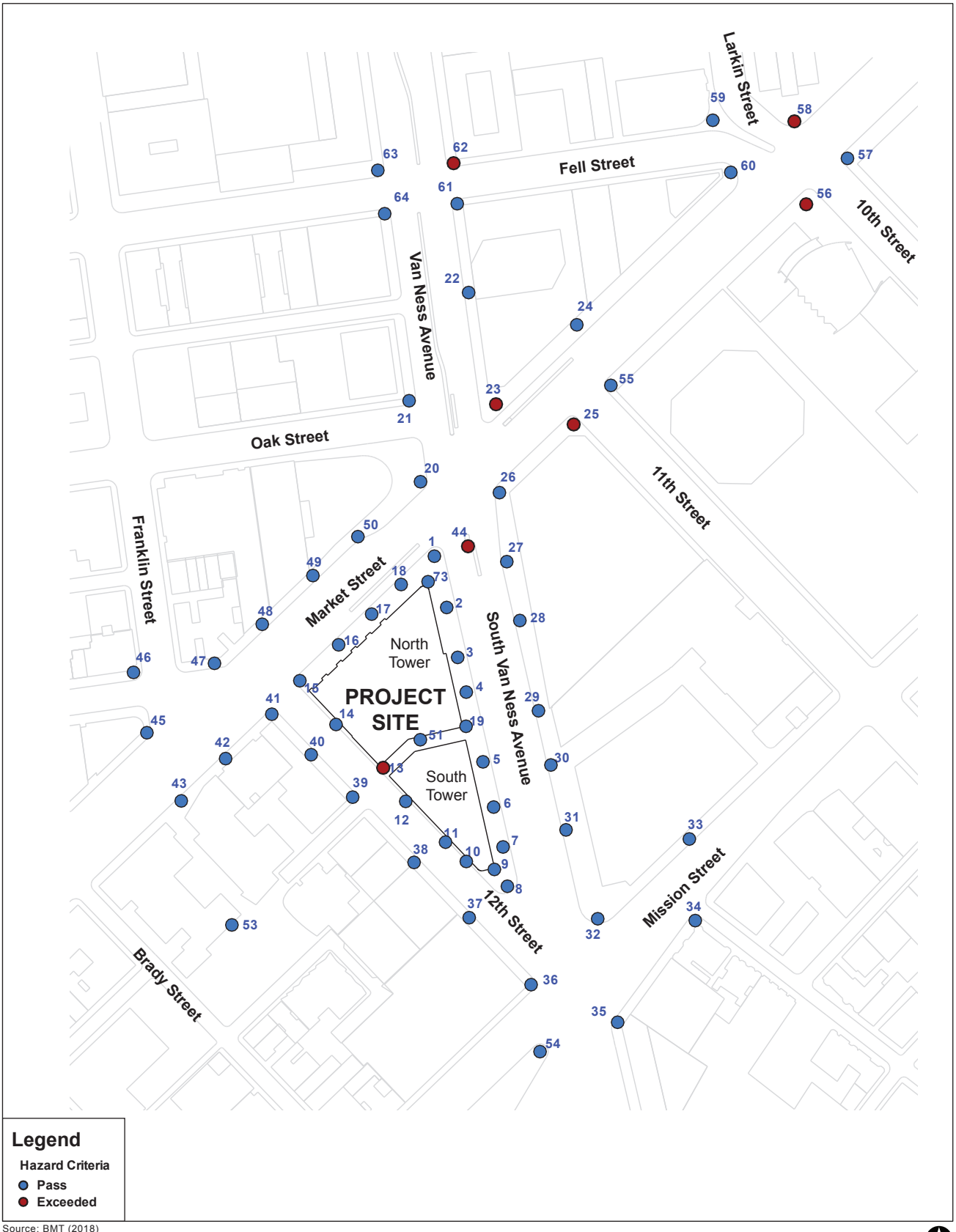
Two test points, 56 and 62, that would exceed the hazard criterion under existing conditions would also exceed the hazard criterion under the cumulative-plus-project scenario. Five new test points (13, 23, 25, 44, and 58) would exceed the hazard criterion with the cumulative-plus-project scenario (see **Figure 4.5.4: Wind Hazard Results – Cumulative-Plus-Project Scenario**). These test points are located at the intersection of Market Street and 10th Street on the northeast and southwest corners of the sidewalk; at the intersection of Market Street and Van Ness Avenue at the northeast corner of the sidewalk and at the southern pedestrian island on South Van Ness Avenue; at the intersection Market Street and 11th Street at the southwest corner of the sidewalk; and at the western entrance to the proposed mid-block pedestrian alleyway on the project site.

One test point (13), which would exceed the hazard criterion under the existing-plus-project scenario, would also exceed the hazard criterion under the cumulative-plus-project scenario. One test point (28), which would exceed the hazard criterion under the existing-plus-project scenario, would no longer exceed the hazard criterion under the cumulative-plus-project scenario. However, four new test point locations (23, 25, 44, and 58) would exceed the hazard criterion under the cumulative-plus-project scenario. Therefore, new locations of wind hazard exceedances would be caused by interactions of the proposed project with cumulative development, as those exceedances of the hazard criterion would not occur in the existing-plus-project scenario. Thus, the project would make a considerable contribution to a significant cumulative impact.

In summary, the cumulative-plus-project scenario would increase the number of hours per year of exceedance under the section 148 wind hazard criterion to 89 hours per year, compared to 53 hours per year under existing conditions. Therefore, the project would make a considerable contribution to a significant cumulative wind impact. Proposed on- and off-site wind reduction measures discussed above (street trees and wind screens) would not reduce the project's contribution to cumulative wind impacts to a less-than-significant level.

The cumulative setting may change for various reasons prior to completion of project construction. For example, there could be design revisions to one or more of the cumulative development projects considered in the wind impact analysis; new development projects may be proposed in the project vicinity; or economic conditions or other factors could delay or halt construction of one or more of the cumulative projects. Potential changes in the number, location, or design of buildings in the cumulative setting could alter the cumulative wind environment, possibly redirecting wind flows to new locations or changing the intensity of wind flows.

Due to the uncertainty regarding cumulative development in the project vicinity and in order to identify measures to reduce cumulative wind impacts based upon the most current available information on cumulative projects, Mitigation Measure M-C-WI-1: Design Measures to Reduce Cumulative Off-Site Wind Impacts, identified below, would be implemented. The measure would require development and implementation of wind reduction measures based on performance standards to reduce off-site wind hazards in the cumulative plus project setting based on best available information. Mitigation Measure M-C-WI-1 would require further wind tunnel testing and refinement of wind reduction measures.



Source: BMT (2018)

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FIGURE 4.5.4: WIND HAZARD RESULTS - CUMULATIVE-PLUS-PROJECT SCENARIO

Mitigation Measure M-C-WI-1: Design Measures to Reduce Cumulative Off-Site Wind Impacts

The project sponsor shall retain a qualified wind consultant to prepare, in consultation with the San Francisco Planning Department (planning department), a wind impact mitigation report that identifies design measures to reduce the project's contribution to off-site wind impacts in the cumulative-plus-project setting, based on best available information ("the wind report"). Prior to the final addenda approval by the Department of Building Inspection (DBI), the project sponsor shall submit the wind report to the planning department for its review and approval. The wind report shall incorporate updated information on cumulative development in the area and shall contain a list of potential wind reduction design measures, along with the estimated effectiveness of each measure to reduce the identified cumulative off-site wind hazards. Such wind reduction design measures may include additional on-site landscaping, or equivalent wind-reducing features; and off-site wind reduction measures such as landscaping, streetscape improvements or other wind-reducing features, such as wind screens.

The project sponsor shall implement as many of the design measures identified in the wind report as needed to reduce the project's contribution to identified cumulative offsite wind hazards. The planning department shall approve the final list of wind reduction measures that the project sponsor shall implement.

However, the effectiveness of Mitigation Measure M-C-WI-1 is considered uncertain because landscaping such as street trees is considered an "impermanent" feature that may change over time or through the seasons and therefore may not consistently perform in the manner assumed in the wind model. In addition, the feasibility of Measure M-C-WI-1 contemplates installation of wind screens on an off-site property not fully under the project sponsor's control. Thus, the impact is conservatively identified as significant and unavoidable with mitigation.

CUMULATIVE-PLUS-VARIANT SCENARIO

The cumulative-plus-variant scenario would increase the number of test points that would exceed the hazard criterion and the number of hours per year that winds would exceed the hazard criterion compared to existing conditions. With the cumulative-plus-variant scenario, the total number of hazard exceedance hours would increase to 101 hours, compared to the 53 hours per year under existing conditions. Seven test points would exceed the hazard criterion with the cumulative-plus-variant scenario, compared to five test points with existing conditions. **Table 4.5.4: Wind Hazards – Cumulative-Plus-Variant Scenario** summarizes the test results.

Table 4.5.4: Wind Hazards – Cumulative-Plus-Variant Scenario

Scenario	Hours/Year of Hazard Exceedance	Change in Hours/Year Relative to Existing	Number of Hazard Exceedance Locations
Existing	53	N/A	5
Cumulative-Plus-Variant	101	48	7

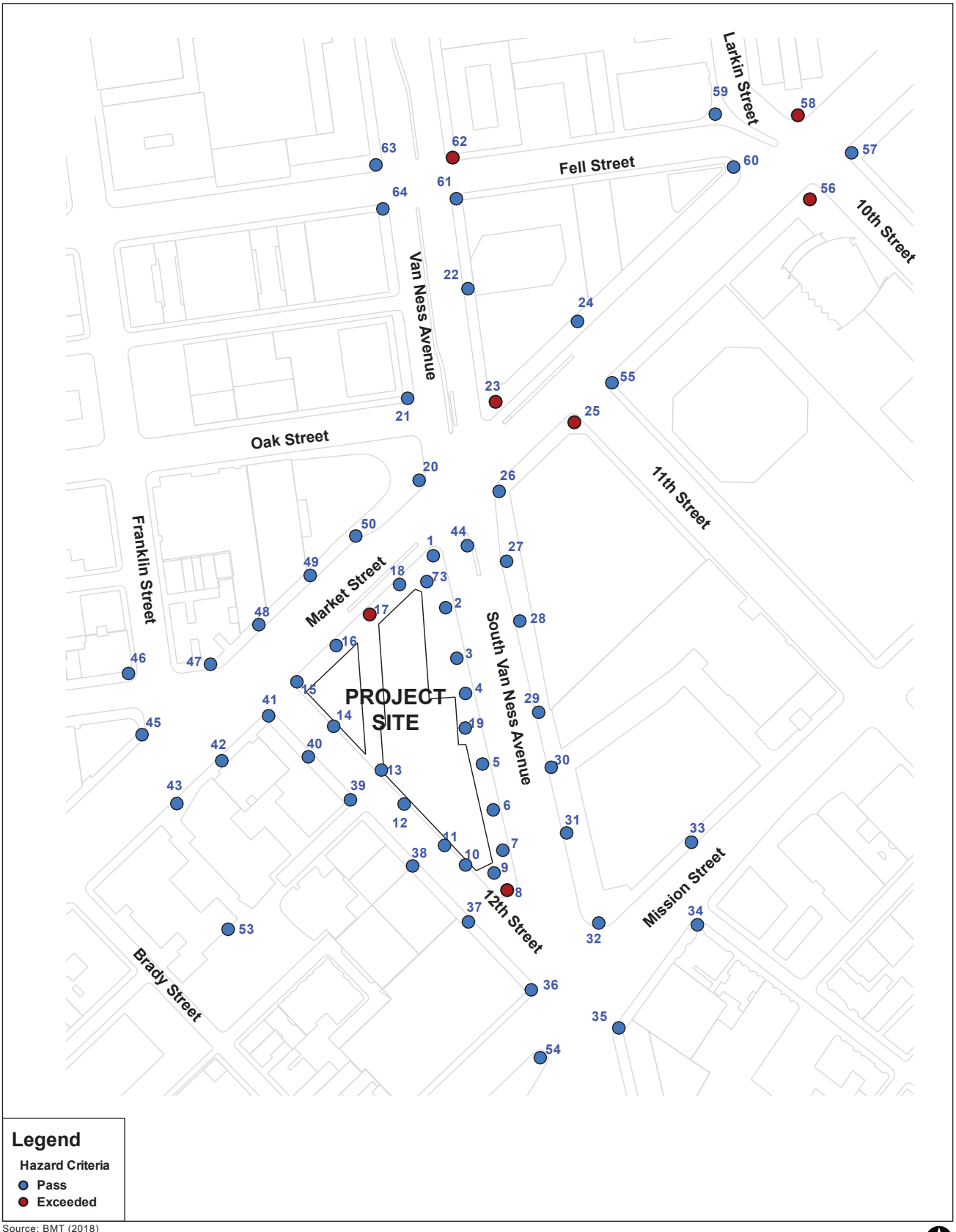
Source: BMT Fluid Mechanics. *10 South Van Ness Project, Wind Microclimate Study*, August 24, 2018.

Two test points, 56 and 62, that would exceed the hazard criterion under existing conditions would also exceed the hazard criterion under the cumulative-plus-variant scenario. Five new test points (8, 17, 23, 25, and 58) would exceed the hazard criterion with the cumulative-plus-variant scenario (see **Figure 4.5.5: Wind Hazard Results – Cumulative-Plus-Variant Scenario**). These test points are located at the intersection of Market Street and 10th Street on the northeast and southwest corners of the sidewalk; the intersection of Market Street and Van Ness Avenue at the northeast corner of the sidewalk; the intersection Market Street and 11th Street at the southwest corner of the sidewalk; at the south corner of the sidewalk adjacent to the project site; and at the northern entrance to the proposed mid-block pedestrian alleyway on the project site.

One test point (73), which would exceed the hazard criterion under the existing-plus-variant scenario, would no longer exceed the hazard criterion under the cumulative-plus-variant scenario. However, five new test point locations (8, 17, 23, 25, and 58) would exceed the hazard criterion under the cumulative-plus-variant scenario. Therefore, new locations of wind hazard exceedances would be caused by interactions of the variant with cumulative development, as those exceedances of the hazard criterion would not occur in the existing-plus-variant scenario. Thus, the variant would make a considerable contribution to a significant cumulative impact.

In summary, the cumulative-plus-variant scenario would increase the number of hours per year of exceedance under the section 148 wind hazard criterion to 101 hours per year, compared to 53 hours per year under existing conditions. Therefore, the variant would make a considerable contribution to a significant cumulative wind impact (a significant impact). Proposed on- and off-site wind reduction measures discussed above (wind canopy) would not reduce the variant's contribution to cumulative wind impacts to a less-than-significant level.

As with the cumulative-plus-project scenario, the cumulative setting may change for various reasons prior to completion of project construction. Due to the uncertainty regarding cumulative development in the project vicinity and in order to identify measures to reduce cumulative wind impacts based upon the most current available information on cumulative projects, Mitigation Measure M-C-WI-1, p. 4.5.15, would be implemented. However, the effectiveness of Mitigation Measure M-C-WI-1 is considered uncertain because landscaping such as street trees is considered



Source: BMT (2018)

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2015-004568ENV

FIGURE 4.5.5: WIND HAZARD RESULTS - CUMULATIVE-PLUS-VARIANT SCENARIO

an "impermanent" feature that may change over time or through the seasons and therefore may not consistently perform in the manner assumed in the wind model. In addition, the feasibility of Measure M-C-WI-1 contemplates installation of wind screens on an off-site property not fully under the project sponsor's control. Thus, the impact is conservatively identified as significant and unavoidable with mitigation.

Supplemental Information

The wind study also assessed the existing and proposed wind environment in terms of a comfort criterion. The planning department considers the wind comfort criteria enumerated in section 148 when assessing the design of buildings in the C-3 zoning area. Section 148 establishes equivalent wind speeds of 7 mph as the comfort criterion for seating areas and 11 mph as the comfort criterion for areas of substantial pedestrian use. As there are no existing public seating areas within the study area, the wind study assessed conditions related to the 11 mph comfort criterion.

The section 148 comfort criteria are not CEQA significance criteria. The results of this assessment are summarized in this section for informational purposes.

Wind Comfort Analysis

Under existing conditions, wind speeds in the vicinity of the project site average 11 mph for all measurement locations. Winds at 24 of the 64 locations exceed the 11 mph comfort criterion for areas of substantial pedestrian use established by planning code section 148. In general, the test points at which the criterion is exceeded are located on Van Ness Avenue, South Van Ness Avenue, and Market, Mission, Hayes, and Larkin streets.

Proposed Project

Under the existing-plus-project conditions, average wind speeds would be similar to existing conditions. The average wind speeds would increase by 1 mph, to 12 mph. The number of locations where the comfort criterion is exceeded would increase by 15, to 39 of the 64 test locations. Implementation of the proposed project would eliminate two existing comfort exceedances, but would result in 17 new comfort exceedances when compared to existing conditions. Under the proposed project, wind speeds at these test points would increase between 1 and 13 mph.

Under the cumulative-plus-project scenario, average wind speeds would be similar to existing conditions. The average wind speeds would increase by 1 mph, to 12 mph. The number of locations where the comfort criterion is exceeded would increase by 17, to 41 of the 64 test locations. Implementation of the proposed project under cumulative conditions would eliminate three existing comfort exceedances, but would result in 20 new comfort exceedances when

compared to existing conditions. Under the cumulative-plus-project scenario, wind speeds at these test points would increase between 1 and 14 mph.

These changes in project-level and cumulative wind comfort conditions would not be considered environmental impacts under CEQA.

Variant

Under the existing-plus-variant conditions, average wind speeds would be similar to existing conditions. The average wind speeds would increase by 2 mph, to 13 mph. The number of locations where the comfort criterion is exceeded would increase by 18, to 42 of the 64 test locations. Implementation of the variant would eliminate one existing comfort exceedance, but would result in 19 new comfort exceedances when compared to existing conditions. Under the variant, wind speeds at these test points would increase between 1 and 13 mph.

Under the cumulative-plus-variant scenario, average wind speeds would be similar to existing conditions. The average wind speeds would increase by 2 mph, to 13 mph. The number of locations where the comfort criterion is exceeded would increase by 23, to 47 of the 64 test locations. Implementation of the variant under cumulative conditions would eliminate one existing comfort exceedance, but would result in 24 new comfort exceedances when compared to existing conditions. Under the cumulative-plus-variant scenario, wind speeds at these test points would increase between 1 and 14 mph.

These changes in variant-level and cumulative wind comfort conditions would not be considered environmental impacts under CEQA.

Wind Effects on Bicyclists

During the scoping period for this environmental impact report, several members of the public expressed concerns regarding the existing and potential future wind conditions for bicyclists in nearby bicycle lanes. For informational purposes, BMT collected wind speeds for the existing, existing-plus-project, existing-plus-variant, cumulative-plus-project, and cumulative-plus-variant scenarios at 20 test points located within the existing bicycle lanes along Market and Mission/Otis streets between Brady and 10th streets.[9] Wind speeds exceeded one hour per year at these test points are shown in **Table 4.5.5: Bicycle Lane Wind Speeds**.

As shown in Table 4.5.5, existing wind speeds exceeded one hour per year at these 20 test points range from a low of 10.4 mph to a high of 27.2 mph, with the highest speeds at test point 114. Test point 114 is near the intersection of Mission Street and South Van Ness Avenue.

[9] BMT Fluid Mechanics. *10 South Van Ness Avenue Project, Bicycle Lane Wind Microclimate Study*, August 28, 2018.

Table 4.5.5: Bicycle Lane Wind Speeds

Test Point	Existing	Existing plus Project	Variant plus Project	Cumulative plus Project	Cumulative plus Variant
	Wind Speed Exceeded 1 hour/year (mph)	Wind Speed Exceeded 1 hour/year (mph)	Wind Speed Exceeded 1 hour/year (mph)	Wind Speed Exceeded 1 hour/year (mph)	Wind Speed Exceeded 1 hour/year (mph)
101	18.1	17.9	18.1	22.9	22.3
102	18.4	17.2	16.9	20.7	20.3
103	15.7	14.9	15.5	25.2	24.2
104	11.3	20.5	19.1	20.5	19.9
105	12.2	20.0	12.7	17.8	19.0
106	11.8	19.1	16.2	20.2	22.3
107	10.4	13.2	12.5	18.6	18.6
108	13.6	16.1	15.9	13.7	13.4
109	14.2	13.6	13.9	17.7	17.1
110	14.2	16.2	16.0	24.0	24.3
111	13.2	14.2	14.5	24.2	24.4
112	10.9	11.4	11.7	20.7	20.3
113	12.4	12.8	12.5	17.2	17.6
114	27.2	20.4	19.6	17.6	16.8
115	16.7	11.5	12.0	11.2	11.5
116	16.8	16.6	16.9	23.9	23.7
117	19.2	18.8	19.1	21.0	20.9
118	22.0	22.3	22.9	17.8	18.4
119	20.7	20.7	21.2	17.9	18.0
120	18.5	18.8	18.7	17.6	17.3

Source: BMT Fluid Mechanics

With project implementation, wind speeds exceeded one hour per year would range from 11.4 mph to 22.3 mph. With implementation of the variant wind speeds would range from 11.7 mph to 22.9 mph. Under both the existing plus project and the existing plus variant scenarios the highest wind speeds would occur at test point 118. Test point 118 is on the north side of Market Street, west of 10th Street.

Under the cumulative plus project conditions, wind speeds exceeded one hour per year would range from 11.2 to 25.2 mph, with the highest speeds at test point 103, on the south side of Market Street within the intersection with South Van Ness Avenue.

Under the cumulative plus variant conditions, wind speeds exceeded one hour per year would range from 11.5 to 24.4 mph, with the highest speeds at test point 111, on the north side of Otis Street just east of Brady Street.

4.6 SHADOW

Section 4.6, Shadow, addresses the shadow impacts of the proposed project and variant on publicly accessible open spaces and recreation facilities in the project area. For the purposes of shadow impact analysis, the project area is typically within 1,500 feet of the project site. The environmental setting discussion identifies existing public and private publicly accessible open spaces and recreation facilities near the project site; specifies applicable City regulations related to shadow and solar access; and describes shadows on existing public and private open spaces and recreation facilities. The impact discussion analyzes whether buildings associated with the proposed project or variant would shade parks and open spaces in a manner that would substantially affect outdoor recreation facilities or other public areas. The impact discussion also evaluates the potential for the proposed project or variant to combine with past, present, and reasonably foreseeable future projects and result in potentially cumulative shadow effects.

The analysis, calculations, and shadow diagrams were prepared by an independent shadow consultant and are the primary sources of the information presented in this section.[1, 2]

Summary of Market and Octavia Neighborhood Plan Final EIR Shadow Section

Market and Octavia Neighborhood Plan Final EIR Setting

The Market and Octavia Neighborhood Plan Final EIR describes neighborhood-oriented parks and open spaces that are under the jurisdiction of the San Francisco Recreation and Park Department (recreation and park department). The San Francisco Planning Code (planning code) contains provisions to ensure that sunlight is present in parks and on sidewalks in the greater downtown area, including the project area. These provisions include section 295 (the Sunlight Ordinance), section 146(a), section 146(c), and section 147. Planning code section 295 does not allow new buildings that would cause significant new shadow between specific hours of the day on open space that is under the jurisdiction of the San Francisco Recreation and Park Commission (recreation and park commission). If a project would result in substantial new shadow on such public open spaces during these specified hours, that would be considered a significant impact.

Market and Octavia Neighborhood Plan Final EIR Impacts and Mitigation Measures

Shadow effects for the project area were analyzed for representative times of day and during specific seasons of the year. The analysis is based on three-dimensional modeling of the project area. Shadows on existing parks and open spaces in the project area would not be expected to

[1] FASTCAST, *10 South Van Ness Shadow Technical Memorandum,* January 17, 2018.
[2] FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

result in significant impacts. However, the Market and Octavia Plan EIR found that with new development, shadows on existing parks and open spaces, such as the War Memorial Open Space and United Nations Plaza, could have potentially significant shadow impacts. As such, implementation of Mitigation Measure 5.5.A2 (Shadow Mitigation Measure—Parks and Open Space Not Subject to Section 295) was required. The Market and Octavia Plan EIR found Mitigation Measure 5.5.A2 would reduce this impact, but may not eliminate the significant shadow impacts. Also, potential shadow impacts on parks that have not yet been constructed have not been identified as significant. If a new park is not under the jurisdiction of the recreation and park department and is only subject to Mitigation Measure 5.5.A2, then shadow impacts would be reduced, but could be potentially significant and unavoidable. As stated in the Market and Octavia Neighborhood Plan Final EIR, Mitigation Measure 5.5.A2 would apply to new buildings and additions to existing buildings in the Market and Octavia Neighborhood Plan Final EIR Project Area where the building height exceeds 50 feet. Mitigation Measure 5.5.A2 would determine the impact of shadows by assessing the amount of area shaded, the duration of the shadow, and the importance of sunlight to the type of open space being shaded. Implementation of this mitigation measure would reduce potentially significant shadow impacts but may not eliminate the impacts entirely.

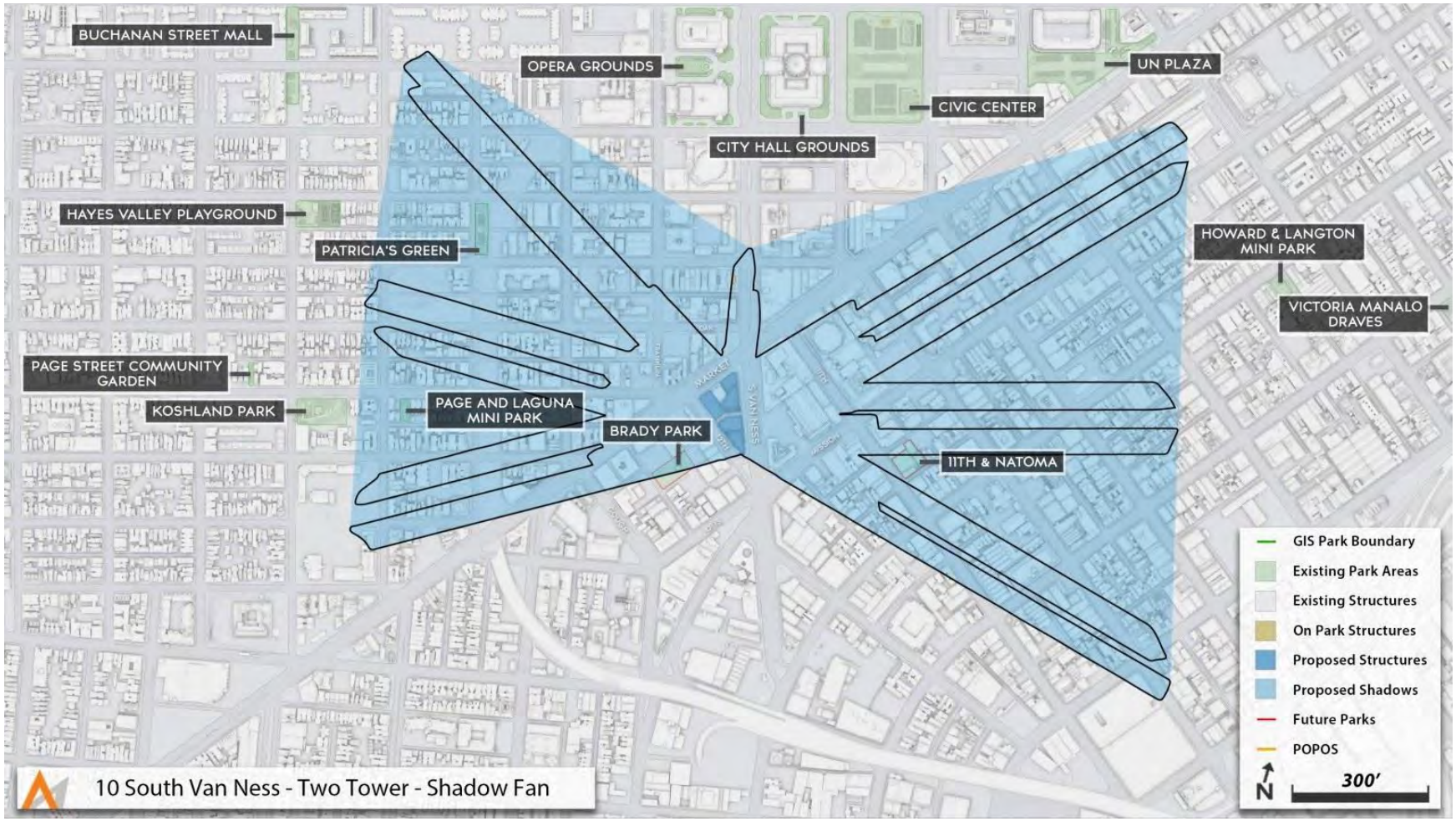
Implementation of Mitigation Measure 5.5.A2 would reduce the potentially significant cumulative shadow impacts, but the impacts may still be potentially significant and unavoidable.

Environmental Setting

Figure 4.6.1: Shadow Fan Analysis for the Proposed Project, and **Figure 4.6.2: Shadow Fan Analysis for the Variant** show that the following publicly accessible, outdoor open spaces may be within the potential reach of shadows that would be cast by the proposed project and variant, respectively:

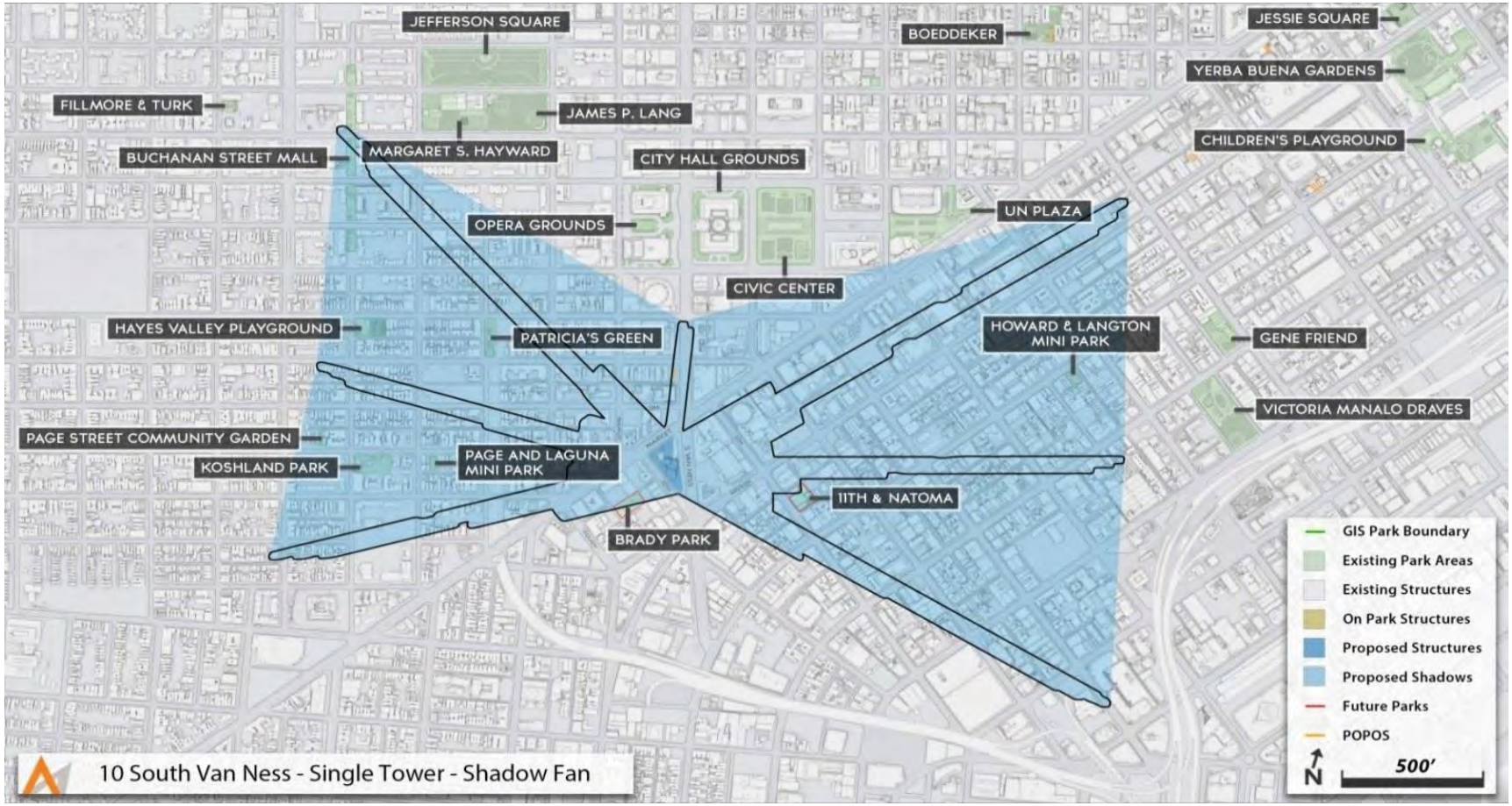
- **Proposed project:** The existing Patricia's Green and Page & Laguna Mini Park, and the proposed 11th & Natoma and Brady parks[3] (see Figure 4.6.1)
- **Variant:** The existing Patricia's Green, Page & Laguna Mini Park, Howard & Langton Mini Park, Hayes Valley Playground, Koshland Community Park and Learning Center, Buchanan Street Mall, Page Street Community Garden, and the proposed 11th & Natoma and Brady parks (see Figure 4.6.2)

[3] Given that the 11th & Natoma and Brady parks are proposed, the discussion of new shading on these parks is not part of the impact analysis under CEQA. Instead, an informational discussion is included at the end of this section.



Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018.

Figure 4.6.1: Shadow Fan Analysis for the Proposed Project



Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.2: Shadow Fan Analysis for the Variant

These open spaces are under the jurisdiction of the recreation and park commission and are subject to the provisions of the Sunlight Ordinance, as articulated in section 295 of the San Francisco Planning Code. (This planning code regulation is discussed under "Section 295/Proposition K" in Section 4.6.3, Regulatory Framework, pp. 4.6.10-4.6.11.)

San Francisco Recreation and Park Commission Properties

PATRICIA'S GREEN

Figure 4.6.3: Aerial Photograph of Patricia's Green shows Patricia's Green, a 17,901-square-foot (0.41-acre) urban park under the jurisdiction of the recreation and park commission. Patricia's Green is located in the Western Addition neighborhood of San Francisco, along the former Central Freeway parcel between Octavia Boulevard's northbound and southbound travel lanes. Patricia's Green is bounded by Hayes Street to the north, Fell Street to the south, and Octavia Boulevard to the east and west.

Sources: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018; and FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

Figure 4.6-3: Aerial Photograph of Patricia's Green

Patricia's Green is divided into three basic sections. In the northern part of the park, a picnic seating area is along Hayes Street. It features a plaza with four picnic tables around a mature tree and a mix of wooden and concrete benches. Two additional picnic tables are on the western side of this area, adjacent to restaurants along Octavia Boulevard. The central section of the park contains a circular plaza with four concrete benches and eight bollards. Lawn areas north and south of the central plaza are used for art exhibitions. The southern section of the park contains a children's play area, featuring a dome structure with ropes and bars for climbing, and rubber safety paving. Low, square concrete pillars delineate the border between the play area and the lawn. Patricia's Green users can sit on the benches that line the outer edges of the sidewalks. The park is not fenced, and it has no public restrooms.

PAGE & LAGUNA MINI PARK

Page & Laguna Mini Park is a 6,576-square-foot (.15-acre) community garden within the block bounded by Page Street to the north, Octavia Boulevard to the east, Rose Street to the south, and Laguna Street to the west. Nestled between two Victorian houses, Page & Laguna Mini Park includes a curving walkway that cuts through the space from the south to the north, 16 flower beds, and apple trees with seating at their bases.

HOWARD & LANGTON MINI PARK

Howard & Langton Mini Park is a 10,218-square-foot (0.23-acre) park and community garden on the northern corner of the block bounded by Howard Street to the northwest, Rausch Street to the southwest, Folsom Street to the southeast, and Langton Street to the northeast. The perimeter of Howard & Langton Mini Park is lined by large trees, and the park is crisscrossed by sandy paths that surround and define the community garden beds.

HAYES VALLEY PLAYGROUND

Hayes Valley Playground is an approximately 32,000-square-foot (0.75-acre) playground, featuring children's play areas, a stage and plaza for community gatherings, community garden plots, outdoor fitness equipment, and a 2,500-square-foot clubhouse. The playground is bounded by Hayes Street to the north, Buchanan Street to the west, and Linden Street to the south. It occupies the western half of the block bounded on the east by Laguna Street, the remainder of which is occupied by restaurants and retailers that front Laguna Street.

KOSHLAND COMMUNITY PARK AND LEARNING CENTER

Koshland Community Park and Learning Center is an approximately 35,000-square-foot (0.82-acre) park in the Lower Haight neighborhood of the City. The northwestern corner of the park features a basketball half-court, and the eastern section contains children's play equipment and community garden plots. These features are connected via a meandering concrete path. Koshland Community Park and Learning Center occupies the northwestern corner of a large block bounded

by Page Street to the north, Buchanan Street to the west, Haight Street to the south, and Laguna Street to the east.

BUCHANAN STREET MALL

Buchanan Street Mall is an approximately 79,000-square-foot (1.81-acre) park that generally runs north to south for five city blocks. The northernmost section, north of Turk Street, includes a lawn and children's play equipment, and forms the eastern boundary of the block bounded by Eddy Street to the north, Webster Street to the west, and Turk Street to the south. The next block to the south, bounded by Turk Street to the north and Golden Gate Avenue to the south, features a large tree, children's play equipment, and a small grass lawn. The following block, bounded by the Ella Hill Hutch Community Center to the west, features a basketball half-court occupying the central portion of the park and large trees on either end. The next block, bounded by McAllister Street to the north and Fulton Street to the south, contains three small grass lawns. The southernmost section of Buchanan Street Mall features two grass lawns on either end of a set of children's play equipment, and terminates at a 26-car parking lot.

OPEN SPACES ELIMINATED FROM FURTHER CONSIDERATION

Although within the potential reach of shadow from the variant, the *10 South Van Ness Shadow Technical Memorandum* eliminated Page Street Community Garden from the need for further analysis, concluding that the single tower project variant would not cast any new shadow on this park. At times when variant shadow would potentially reach this park, the potentially affected areas of the park are already shaded by existing buildings. As such, no further analysis is necessary for this park.

The Market & Octavia Area Plan has identified the center of the *Brady Block* as a location for creating a public park. The future Brady Park is bounded by Market Street to the north, Brady Street to the west, Otis Street to the south, and 12th Street to the east. Brady Park would serve as a public gathering point and would be accessed via a network of mid-block alleys, designed as "living alley" spaces. The City has not yet designed Brady Park or approved funding for park construction.

In addition, there is one San Francisco Unified School District property located at 95 Gough Street. However, the property is occupied by the SFUSD's physical educational department; it is used for administrative purposes, and is not used as a school or a play yard.[4]

[4] Lee, Elizabeth, San Francisco Unified School District. Email communication with Rachel Schuett, San Francisco Planning Department. August 20, 2018.

Privately Owned Public Open Spaces

The nearest *privately owned public open space*[5] is in the front lobby of 77 Van Ness Avenue. Because this space is indoors, it is not considered to be an outdoor recreation facility under CEQA, as it is applied in San Francisco.

Public Sidewalks

The public sidewalks in the project area are shadowed by existing buildings throughout the day as well as throughout the year. In general, the sidewalks are shadowed in the early morning and the late afternoon, and receive the greatest amount of sunlight during the middle of the day.

Regulatory Framework

Federal

No federal plans, policies, regulations, or laws related to shadow are applicable to the proposed project or variant.

State

No state plans, policies, regulations, or laws related to shadow are applicable to the proposed project or variant.

Local

SAN FRANCISCO GENERAL PLAN

The Recreation and Open Space Element and Urban Design Element of the San Francisco General Plan (general plan) contain objectives and policies related to retaining sunlight in open spaces and other public areas.

[5] As defined by the San Francisco Planning Department, privately owned public open spaces are "publicly accessible spaces in forms of plazas, terraces, atriums, small parks, and even snippets which are provided and maintained by private developers." San Francisco Planning Department, "Privately-Owned Public Open Space and Public Art (POPOS)," http://sf-planning.org/privately-owned-public-open-space-and-public-art-popos, accessed August 20, 2018.

Recreation and Open Space Element

Policy 1.9 in the general plan's Recreation and Open Space Element states:

> Solar access to public open space should be protected. In San Francisco, presence of the sun's warming rays is essential to enjoying open space. Climatic factors, including ambient temperature, humidity, and wind, generally combine to create a comfortable climate only when direct sunlight is present. Therefore, the shadows created by new development nearby can critically diminish the utility and comfort of the open space.
>
> Shadows are particularly a problem in downtown districts and in neighborhoods immediately adjacent to the downtown core, where there is a limited amount of open space, where there is pressure for new development, and where zoning controls allow tall buildings. But the problem potentially exists wherever tall buildings near open space are permitted.
>
> Properties under the jurisdiction of the recreation and park department or designated for acquisition are protected by a voter-approved Planning Code amendment. It restricts the construction of any structure exceeding forty feet in height that would cast a shadow that is adverse to the use of the park from between one hour after sunrise to one hour before sunset, unless it is determined that the impact on the use of the space would be insignificant. In determining whether a new shadow cast by a development is adverse to the use of a particular property, the City considers several quantitative and qualitative criteria, including the size of the park property, the amount of existing shadow, and the timing, size, location, and duration of the new shadow and the public good served by the building.
>
> The City should support more specific protections elsewhere to maintain sunlight in these spaces during the hours of their most intensive use while balancing this with the need for new development to accommodate a growing population in the City

Urban Design Element

Policy 3.4 in the general plan's Urban Design Element calls for the promotion of building forms that will respect and improve the integrity of open spaces and other public areas. Buildings to the south, east, and west of parks and plazas are to be limited in height or effectively oriented so as not to prevent the penetration of sunlight to such parks and plazas. Where feasible, large buildings and developments are to have ground-level open space, well situated for public access and sunlight penetration.

Market & Octavia Area Plan

To address shadow effects from new development on public and publicly accessible open spaces, the Market & Octavia Area Plan includes policies to ensure that "tower forms allow adequate light and air to reach dwelling units and minimize shadow to streets and open spaces," and to proportionally relate building podium street wall height to the width of the adjacent streets.[6] For the project site, policy 1.2.8 of the Market & Octavia Area Plan calls for development of slender

[6] City and County of San Francisco, *Market & Octavia Area Plan,* adopted May 30, 2008, p. 14.

residential towers above the building base along the Market Street corridor. Policy 7.12 further encourages use of slender residential towers, whose form and bulk are carefully controlled so that they "are not overly imposing on the skyline and do not produce excessive wind or shadows on public spaces."

SAN FRANCISCO PLANNING CODE

Section 101.1/Proposition M

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added section 101.1 to the San Francisco Planning Code and established eight priority policies. These priority policies are the basis on which inconsistencies in the general plan are resolved. Priority policy number 8 calls for the protection of parks and open space, and their access to sunlight and vistas.

Before issuing a permit for any project that requires an initial study under CEQA, or for any demolition, conversion, or change of use, and before 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 would be consistent with the priority policies.

Section 295/Proposition K

In 1984, San Francisco voters approved an initiative known as Proposition K, the Sunlight Ordinance, which was codified in 1985 as San Francisco Planning Code section 295. Section 295 prohibits the approval of "any structure that would cast any shade or shadow upon any property under the jurisdiction of, or designated for acquisition by" the recreation and park commission unless the San Francisco Planning Commission, with review and comment by the recreation and park commission, has found that the shadows cast by a proposed project would not have an adverse impact on the use of the property. Section 295 does not apply to structures that do not exceed 40 feet in height. The period to be analyzed is from the first hour after sunrise until the last hour before sunset.

On February 7, 1989, pursuant to Proposition K, the planning commission and the recreation and park commission made a joint resolution, adopting criteria for determining significant shadows in 14 downtown parks, as described in a February 3, 1989, memorandum to the commissions regarding Proposition K. These criteria establish an absolute cumulative limit (ACL) for new shadow allowed on these parks and qualitative criteria for allocating the ACL among individual development projects. The ACL for a particular park is expressed as a percentage of the park's theoretically available annual sunlight (TAAS), which is the number of hours of sunlight theoretically available in a year at that location during Proposition K hours—that is, from the first hour after sunrise until the last hour before sunset. The difference between the ACL and the amount of existing shadow on a particular park is commonly referred to as the park's shadow budget. The shadow budget then is allocated to individual projects within the ACL, based on

qualitative criteria established for each park, which vary by park but may include factors such as time of day, time of year, shadow characteristics (size, duration, location), and the public good served by the building casting the shadow.

The planning commission and the recreation and park commission have not established ACLs for new shadow on any of the parks discussed in this section. That is, no quantitative criterion has been established for determining the significance of new shadow. However, these parks are subject to planning code section 295, and thus, would be subject to the qualitative criteria for determining whether new shadow would be significant. This analysis is included in the impact analysis, beginning on p. 4.6.27.

Sections 146 and 147

Because the project site is within a Downtown Commercial (i.e., C-3) district, the proposed project and variant would be subject to San Francisco Planning Code sections 146 and 147. Section 146 requires buildings to be designed in order to maintain direct sunlight on public sidewalks in certain downtown areas during critical periods of use. Section 147 requires that all new development and additions to existing structures where the height exceeds 50 feet be shaped to minimize shadow on public plazas or other publicly accessible open spaces, other than those protected by section 295 (Sunlight Ordinance), "in accordance with the guidelines of good design and without unduly restricting the development potential of the property." The amount of area shadowed, the duration of the shadow, and the importance of sunlight to the type of open space being shadowed are important factors to consider when determining compliance with this criterion.

Impacts and Mitigation Measures

Significance Thresholds

The following significance threshold is from Appendix B of the San Francisco Planning Department's (planning department's) Environmental Review Guidelines and is used to determine the level of impacts related to shadow. Implementation of the proposed project or variant would have a significant effect if it would do the following:

- Create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas

Section 295 prohibits approval of a project that would have an adverse impact on the use of recreation and park commission property, unless it is determined that the impact on the open space would be insignificant. Although ACLs have been established for new cumulative shadow on certain parks, the planning commission and the recreation and park commission have not established ACLs for new shadow on any of the parks discussed in this section. As such, project

impacts on parks would be subject to qualitative considerations for determining whether the impact of project shadow would be significant.

Both the Section 295 review for the proposed project and variant and the review of shadow impacts in this section address a broader array of shadow-related considerations that may include not only quantitative criteria, but also qualitative criteria: open space usage; time of day and/or time of year; physical layout of the affected facilities; duration, size, shape, and location of the shadow; and proportion of open space affected. If the San Francisco Planning Department determines, based on these factors, that the use and enjoyment of the park or public space would be substantially and adversely affected, the impact would be *significant* in the way that the term is used under CEQA. Therefore, in certain situations, the environmental impact of new shadow could be significant under planning code section 295 but not under CEQA, and vice versa.

Compliance with section 295 of the planning code occurs independently of this EIR's analysis and evaluation of shadow impacts. The purpose of this EIR analysis is to provide the public and City decision makers with information that sufficiently describes the shadow associated with the proposed project or variant in terms of the following factors:

- Types of parks and open spaces the shadow would affect
- When and where the shadow would occur
- Anticipated duration of the shadow
- Potential for the shadow to substantially and adversely affect any activities or uses in the subject parks or open spaces

Approach to Analysis

SHADOW FAN

To determine whether any properties under the jurisdiction of the recreation and park commission could potentially be affected by shadow related to the proposed project or variant, the planning department prepared a shadow fan diagram. The shadow fan is a tool that plots the maximum potential reach of project shadow over the course of a year (from one hour after sunrise until one hour before sunset for the spring and fall equinoxes and the summer and spring solstices) relative to the location of nearby open spaces, recreation facilities, and publicly accessible parks. The shadow fan accounts for topographical variation but not shadows cast by existing buildings. The planning department uses the shadow fan as the basis for initially identifying which open spaces, recreation facilities, and parks merit further study. Those that are outside the maximum potential reach of project shadow do not require further study. Figure 4.6.1, p. 4.6.3, and Figure 4.6.2, p. 4.6.4, show the shadow fans prepared for the proposed project and variant, respectively.

SHADOW MODEL

An independent consultant used site survey and project data to create a digital model for evaluation of the proposed project and variant's shadow impacts. Existing buildings adjacent to and in the vicinity of each affected park were identified and modeled using aerial photography and photogrammetric mapping data. The digital model reflects a minimum level of detail and includes only those surrounding buildings that are needed to represent the shadows that could fall on the surface of each park from one hour after sunrise to one hour before sunset, as defined in planning code section 295. Consistent with section 295, where this section describes the timing of shadow impacts on parks, the *beginning of the day* refers to one hour after sunrise on any given day. Correspondingly, the *end of the day* refers to one hour before sunset. The actual times change throughout the year, based on the day and season.

Shadow Calculations

The model quantifies square foot–hours, which account for the amount of shadow cast by existing buildings, the amount of net new shadow cast by the proposed project or variant, and the remaining amount of sunlight on the subject open space over a specific period. The shadow calculations serve as the basis for the quantitative evaluation of shadow impacts.

Shadow Scenarios

To quantitatively evaluate shadow impacts, shadow quantities on the parks described in Section 4.6.2, Environmental Setting, pp. 4.6.5 through 4.6.7, were calculated for the following conditions:

- **Existing Conditions—**Baseline shadow or total shadow coverage (without the proposed project or variant) on the six existing recreation and park commission properties cast by existing buildings
- **Existing plus Proposed Project—**Total shadow coverage on each of the properties cast by the existing buildings plus the proposed project
- **Existing plus Variant—**Total shadow coverage on each of the properties cast by the existing buildings plus the variant
- **Cumulative Project—**Total shadow coverage cast by the existing buildings and foreseeable projects on each property (without the proposed project or variant)
- **Cumulative plus Proposed Project—**Total shadow coverage on each of the properties cast by the existing buildings, foreseeable projects, and the proposed project
- **Cumulative plus Variant—**Total shadow coverage on each of the properties cast by the existing buildings, foreseeable projects, and the variant

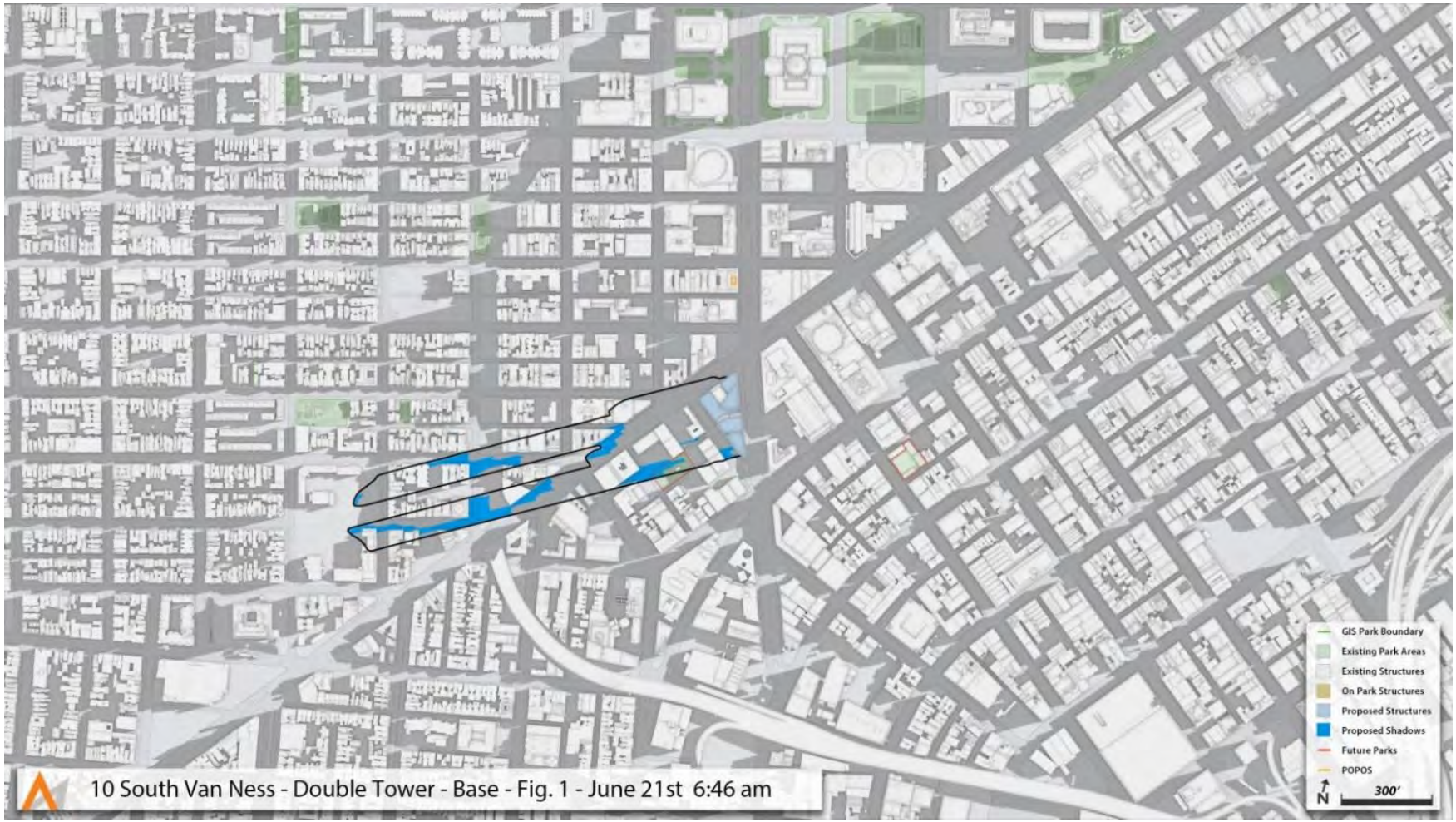
Shadow Diagrams

Using a computer program that accounts for building heights and topography, the consultant prepared shadow diagrams for the open spaces that would be affected by the proposed project or variant. **Figures 4.6.4** through **4.6.9**, pp. 4.6.15 through 4.6.20, show a representative sample of maximum shadows associated with the proposed project under planning code section 295, one hour after sunrise and one hour before sunset on June 21 (summer solstice), September 21 (equinox), and December 21 (winter solstice). **Figures 4.6.10** through **4.6.15**, pp. 4.6.21 through 4.6.26, show the projected shadows associated with the variant at the same times on the same dates.

Fog, rain, overcast days, and shadows from existing or proposed trees are not taken into account when illustrating existing sources of shadow in these diagrams (notwithstanding that shadow from existing trees may be relevant to how visitors use park facilities). Shadow diagrams are snapshots taken at a particular representative time of day and day of the year. They illustrate the extent and location of shadows cast by existing buildings, net new shadow from a proposed building, and areas of sunlight on the subject open space.

A sweep is a series of shadow diagrams from a particular day that demonstrates how shadows move across a specific space within a certain time frame. Shadow diagrams also may serve as the basis for the qualitative analysis of shadow impacts, because they graphically represent where new shadow may affect open spaces. The black line in the following shadow diagrams represents the boundary of new shadow cast by the proposed project or variant.

Proposed Project



Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018

Figure 4.6.4: Shadow for the Proposed Project One Hour after Sunrise on June 21 (6:46 a.m.)

Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.5: Shadow for the Proposed Project One Hour after Sunrise on September 21 (7:57 a.m.)

Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018

Figure 4.6.6: Shadow for the Proposed Project One Hour after Sunrise on December 21 (8:19 a.m.)

Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018

Figure 4.6.7: Shadow for the Proposed Project One Hour before Sunset on June 21 (7:35 p.m.)

Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018

Figure 4.6.8: Shadow for the Proposed Project One Hour before Sunset on September 21 (6:09 p.m.)

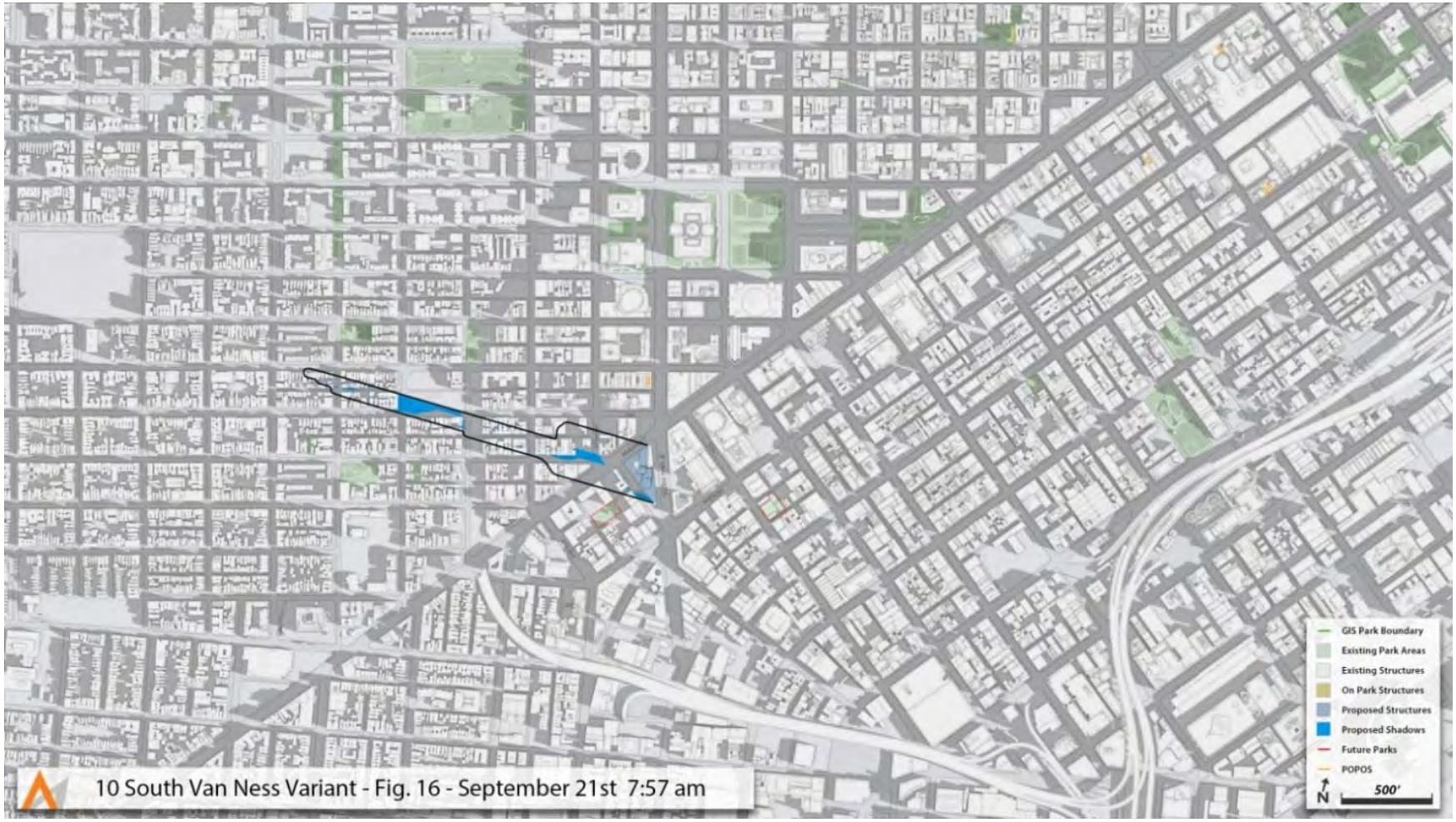
Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018

Figure 4.6.9: Shadow for the Proposed Project One Hour before Sunset on December 21 (3:54 p.m.)

Variant

Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.10: Shadow for the Variant One Hour after Sunrise on June 21 (6:46 a.m.)

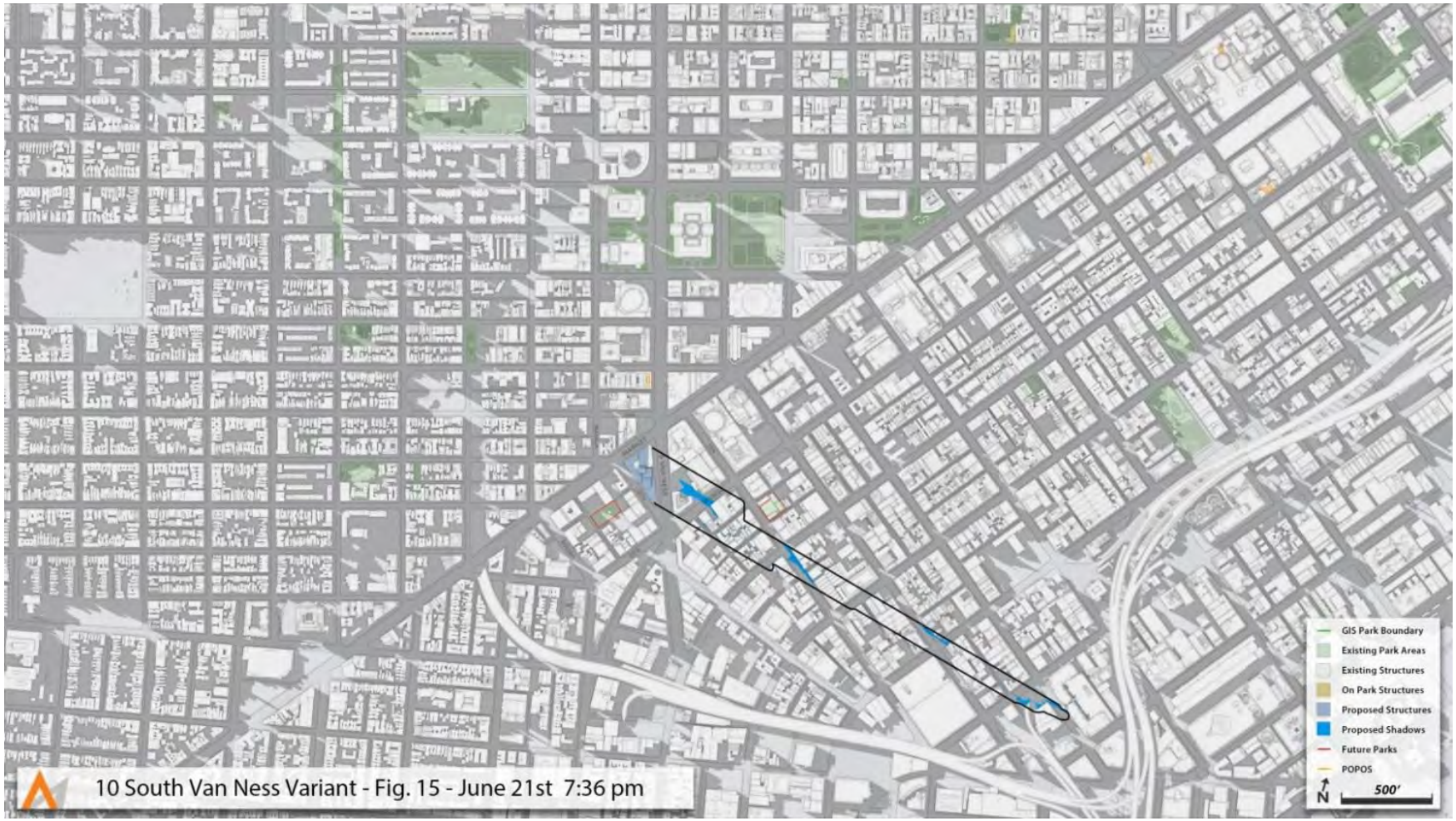


Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.11: Shadow for the Variant One Hour after Sunrise on September 21 (7:57 a.m.)

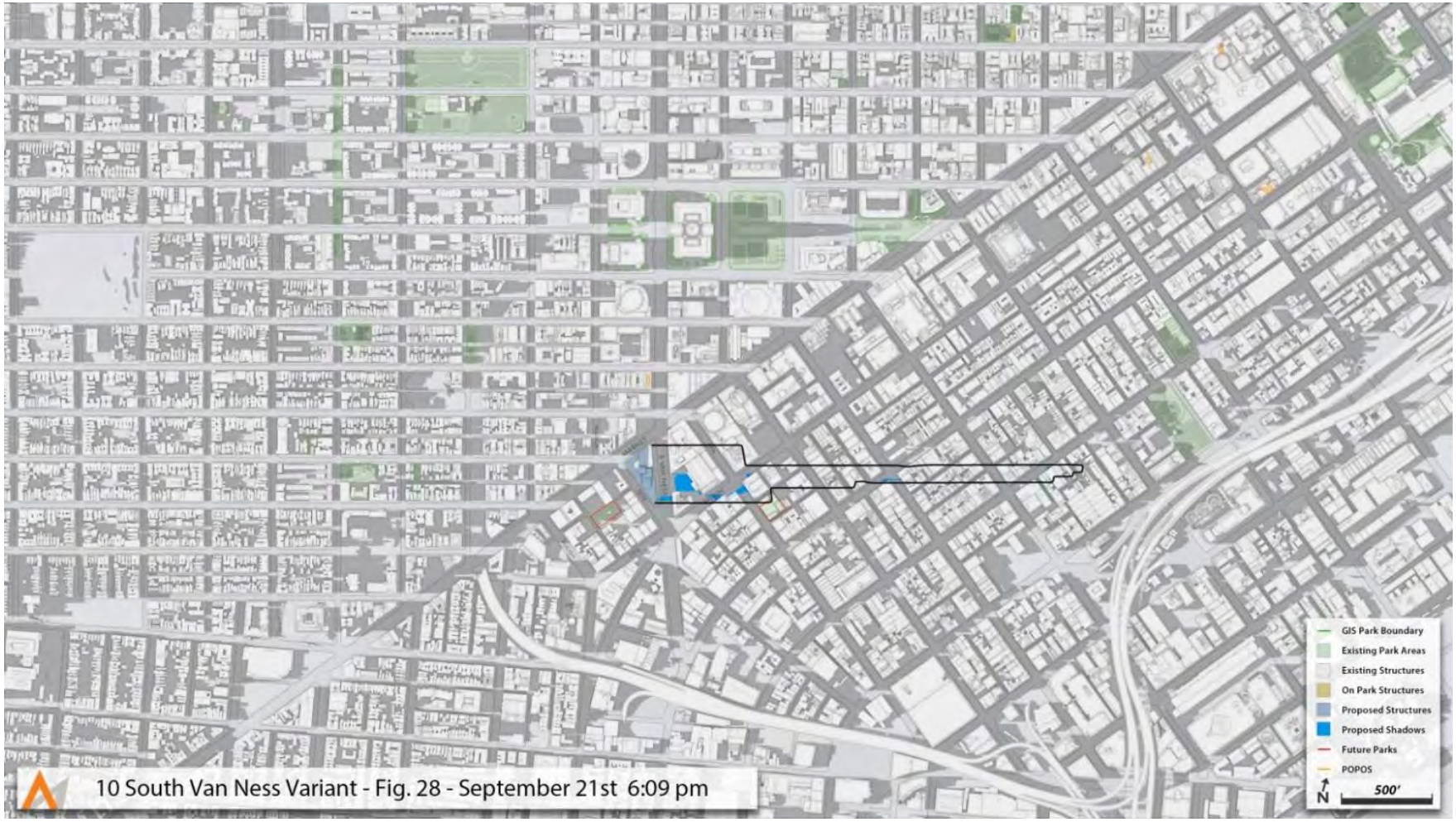
Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.12: Shadow for the Variant One Hour after Sunrise on December 21 (8:19 a.m.)



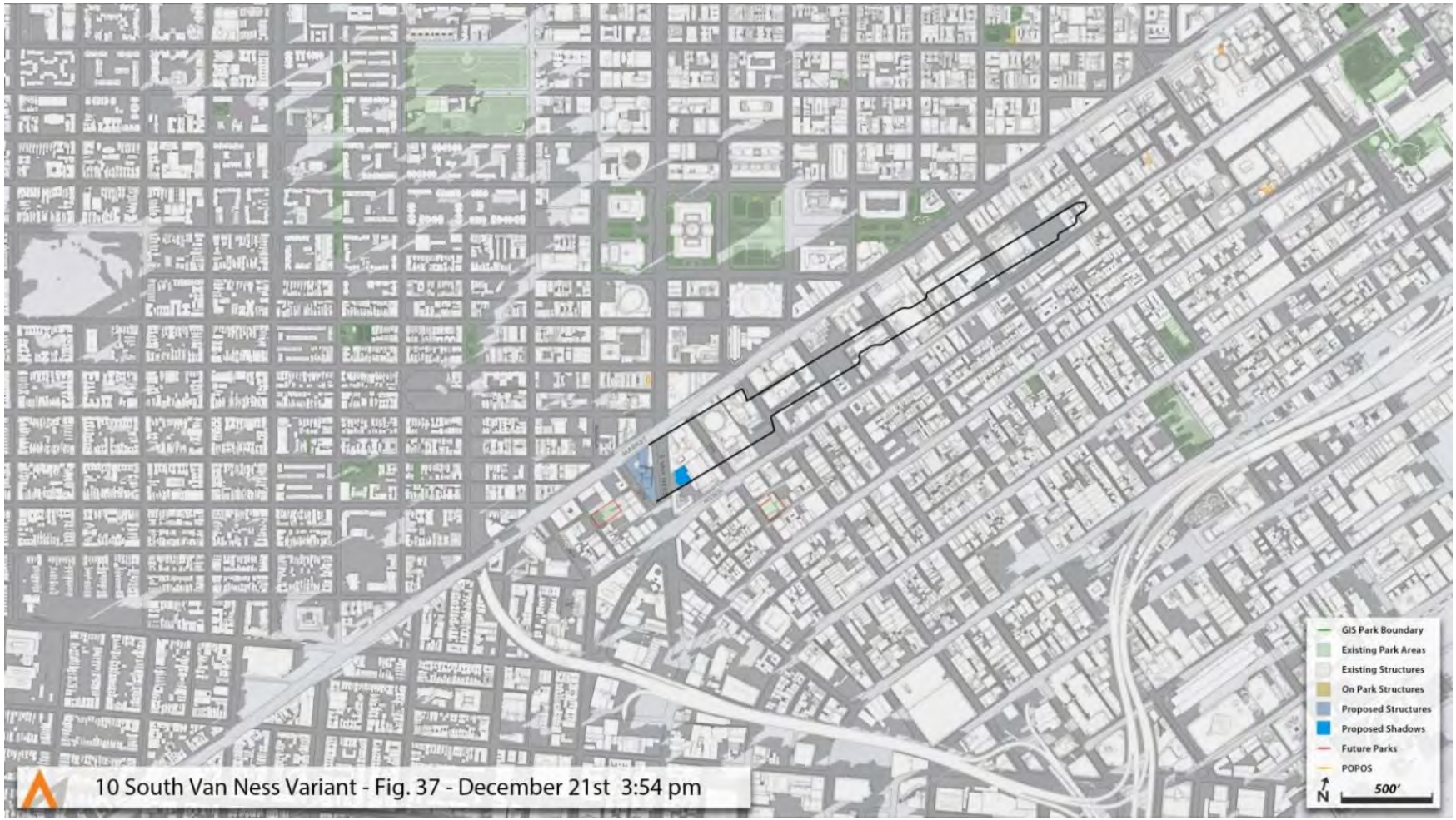
Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.13: Shadow for the Variant One Hour before Sunset on June 21 (7:36 p.m.)



Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.14: Shadow for the Variant One Hour before Sunset on September 21 (6:09 p.m.)



Note: POPOS = privately owned public open space
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.15: Shadow for the Variant One Hour before Sunset on December 21 (3:54 p.m.)

Project Features

The proposed project or variant would demolish the existing building on the project site and construct a mixed-use development that would include residential, commercial, parking, and open space uses. A complete project description is included in Chapter 2, Project Description. This section includes a description of project features that are pertinent to shadow impacts. The proposed project and variant features related to shadow are similar; therefore, they are discussed together.

The proposed project would involve constructing a building with two towers, each 41-stories and 400 feet tall (420 feet total, including roof screens and elevator penthouses) (see **Figure 2.4***:* **Proposed Project – Ground Floor Plan** and **Figure 2.5: Proposed Project – Level 2 Floor Plan**, pp. 2.10 and 2.13, respectively, in Chapter 2, Project Description). Above grade, each structure would consist of a tower on top of a podium. The towers would be separated by a minimum of 115 feet. The north tower podium and south tower podium would be approximately 114 feet and 120 feet tall, respectively. Under the proposed project, 2,975 gross square feet of publicly accessible open space and 45,176 gross square feet of common open space would be provided.

The variant would feature one 55-story tower that would be up to 590 feet tall (610 feet total, including roof screens and elevator penthouses) (see **Figure 2.20: Variant – Building Elevations Along 12th Street, Market Street, and South Van Ness Avenue**, p. 2.39). The tower would be built on top of two podium structures that would be separated at ground level by a mid-block alley, but connected between Levels 3 and 8. The podium would range from 13 stories (139 feet, 9 inches) at the north end to 15 stories (164 feet, 10 inches) at the south end. Under the variant, 12,091 gross square feet of publicly accessible open space, 25,565 gross square feet of common open space, and 9,550 gross square feet of private open space would be provided.

Impact Evaluation

PUBLIC PARKS

Impact SH-1: The proposed project or variant would not alter shadows in a manner that would substantially affect public areas or outdoor recreation facilities. *(Less than Significant)*

Table 4.6.1: Annual Shadow Results—Comparison between the Proposed Project and the Variant compares the annual shadow results under existing conditions to those under existing conditions plus the proposed project and existing conditions plus the variant. As discussed under "Shadow Calculations," p. 4.6.13, annual shadow results are expressed as square foot–hours, which account for the amount of shadow cast by existing buildings, the amount of net new shadow cast by the proposed project or variant, and the remaining amount of sunlight on the subject open space over a specific period. The annual shadow results are also expressed as a

Table 4.6.1: Annual Shadow Results—Comparison between the Proposed Project and the Variant

Park	Measure	Existing Conditions	Existing plus Proposed Project	Existing plus Variant	Difference between Existing plus Variant and Existing plus Project
Patricia's Green	sfh[1]	13,462,755	13,590,616	13,675,423	84,807
	% TAAS[2]	20.208%	20.400%	20.527%	0
Page & Laguna Mini Park	sfh	12,095,949	12,098,870	12,110,036	11,166
	% TAAS	49.427%	49.439%	49.485%	.046%
Howard & Langton Mini Park	sfh	18,575,415	N/A	18,576,228	N/A
	% TAAS	48.850%	N/A	48.852%	N/A
Hayes Valley Playground	sfh	32,458,749	N/A	32,487,917	N/A
	% TAAS	26.588%	N/A	26.612%	N/A
Koshland Community Park and Learning Center	sfh	21,611,520	N/A	21,696,777	N/A
	% TAAS	16.233%	N/A	16.297%	N/A
Buchanan Street Mall	sfh	81,866,060	N/A	81,875,692	N/A
	% TAAS	27.873%	N/A	27.876%	N/A

Notes:
N/A = not applicable; sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] All sfh are rounded to the nearest whole number
[2] All percentages are rounded to the nearest 0.000%
Sources: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018; and FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

percentage of the theoretically available annual sunlight, which is the amount of theoretically available annual sunlight at a property during Proposition K hours, or from the first hour after sunrise until the last hour before sunset, as discussed under "Section 295/Proposition K" in Section 4.6.2, Regulatory Framework, p. 4.6.10. The shadow calculations serve as the basis for the quantitative evaluation of shadow impacts.

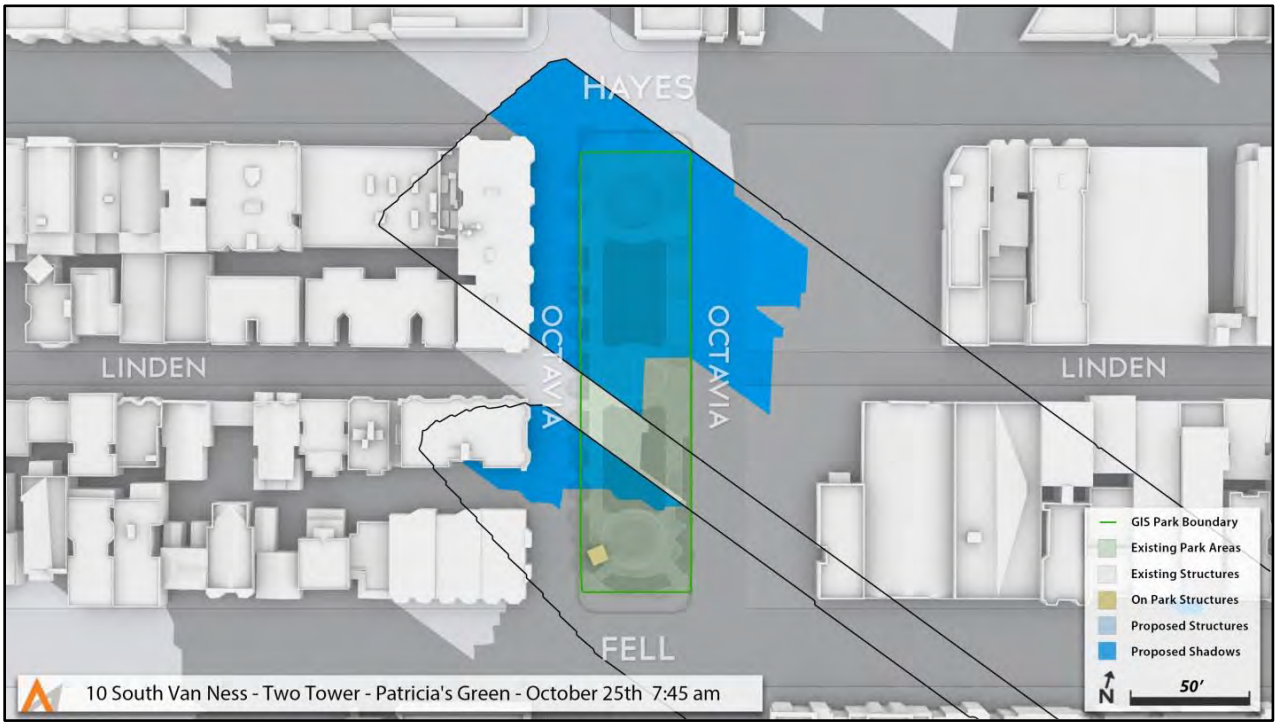
Impacts are discussed separately for each property below, followed by an overall impact conclusion for all properties. As noted, the shadow from the proposed project would not reach several of the properties; in those cases, the impact analysis pertains to the variant only.

Patricia's Green

Patricia's Green has approximately 66,620,502.8 square foot–hours of theoretically available annual sunlight and the existing annual shadow coverage is 13,462,755.35 square foot–hours, which is 20.21 percent of the theoretically available annual sunlight.

Proposed Project

The proposed project would cast new shadow on Patricia's Green between January 18 and March 1, and between October 11 and November 22. No new shadow from the proposed project would reach Patricia's Green after 8:59 a.m. on any day of the year. During the periods when shadows would be cast on this property, the largest new shadow (based on area) would occur on February 15 and October 25 beginning at 7:45 a.m., lasting 15 minutes and covering an area of approximately 10,475 square feet, or 58.5 percent (**Figure 4.6.16: Proposed Project's Largest New Shadow on Patricia's Green (58.5 percent on October 25 at 7:45 a.m.)**) of the area of the park. The proposed project would add 127,861 square foot–hours of shadow annually on Patricia's Green, or 0.192 percent more shadow on the park when calculated as a percentage of theoretically available annual sunlight. Annual shadow results for existing conditions, the proposed project, and the variant are shown in **Table 4.6.2: Annual Shadow Results for Patricia's Green**.



Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum,* January 17, 2018

Figure 4.6.16: Proposed Project's Largest New Shadow on Patricia's Green (58.5 percent on October 25 at 7:45 a.m.)

Table 4.6.2: Annual Shadow Results for Patricia's Green

	Existing Conditions	Existing plus Proposed Project	Existing plus Variant
Theoretically Available Annual Sunlight = 66,620,503 sfh[1]			
Annual shadow (sfh)	13,462,755	13,590,616	13,675,423
Difference		*+127,861*	*+212,668*
Annual Shadow as a Percentage of TAAS	20.208%	20.400%	20.527%
Difference		*+0.192%*	*+0.319%*

Notes:
sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] Based on the City's annualized TAAS factor.
Sources: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018; and FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

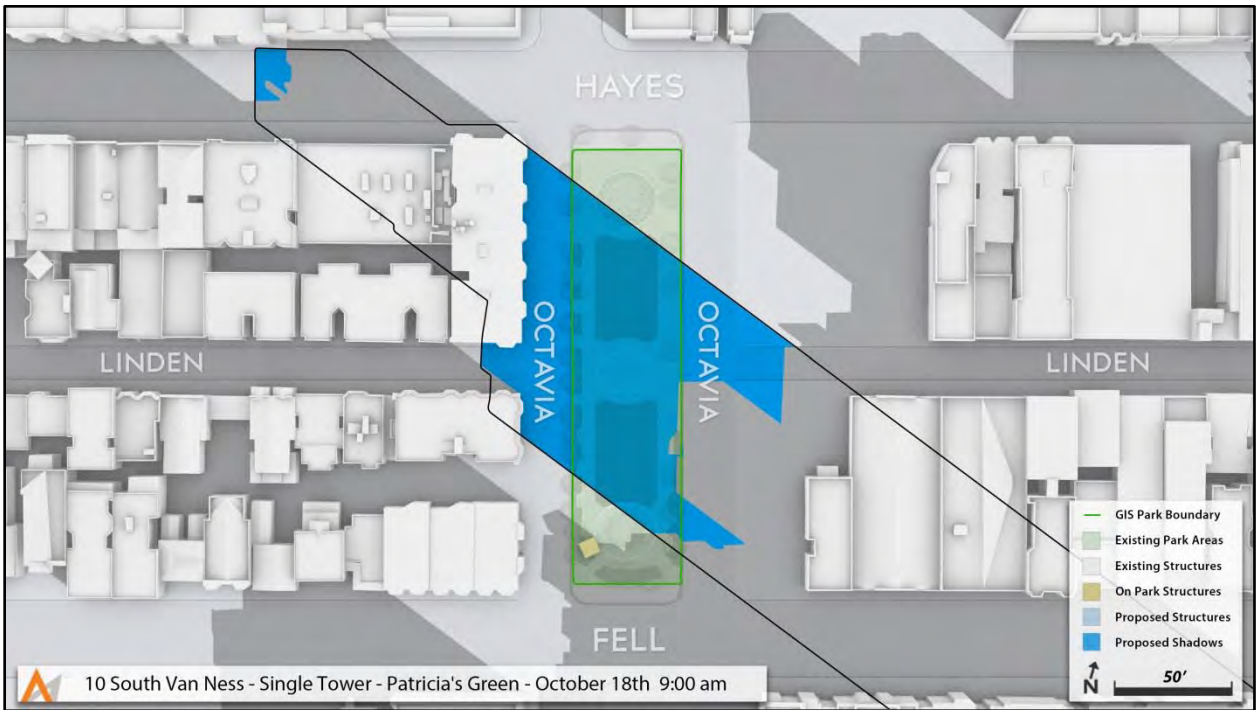
Variant

The variant would cast new shadow on Patricia's Green between January 18 and March 1, and between October 8 and November 22. As shown in Figure 4.6.4 (p. 4.6.15), Figure 4.6.7 (p. 4.6.18), Figure 4.6.10 (p. 4.6.21), and Figure 4.6.13 (p. 4.6.24), new shadow from the proposed project or variant would not reach Patricia's Green on the summer solstice. No new shadow from the variant would reach Patricia's Green after 9:29 a.m. on any day of the year. During the periods when shadows would be cast on the park, the largest new shadow (based on area) would occur on October 18 beginning at 9 a.m., lasting 15 minutes and covering an area of approximately 11,895 square feet, or 66.4 percent of the park. **Figure 4.6.17: Variant's Largest New Shadow on Patricia's Green (66 percent on October 18 at 9 a.m.)** shows the variant's maximum shadow coverage on Patricia's Green. The variant would add 212,668 square foot–hours of shadow annually on Patricia's Green, or 0.319 percent more shadow on the park when calculated as a percentage of theoretically available annual sunlight (Table 4.6.2).

Overall Effect on Patricia's Green

A visual observation was conducted on the morning of June 20, 2016. Activities included sitting, walking, dog walking, stretching, yoga, and socializing. The number of users between 7 and 9:45 a.m. varied between four and 20, with the lowest number at 7 a.m. and the highest at 9:45 a.m. Based on the site visit, park use before 9 a.m. typically is low.

In October, shadows would be cast on Patricia's Green from sunrise until approximately 7:45 a.m. under the proposed project, or from sunrise until approximately 9:29 a.m. under the variant. Shadows cast by the proposed project would cover the northern half of Patricia's Green and a small portion of the southern lawn and western sidewalk, while shadows cast by the variant would cover portions of both the northern and southern lawns. Shadows cast by the proposed project at approximately 7:45 a.m. or by the variant at approximately 9 a.m. would cover roughly



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum,* January 17, 2018

Figure 4.6.17: Variant's Largest New Shadow on Patricia's Green (66 percent on October 18 at 9 a.m.)

half of the property. New shadows from the proposed project would not cover the children's play area, while new shadows from the variant would cover a small portion of the children's play area during the time of maximum shading.

The variant would cover a larger area of Patricia's Green with shadows for a longer portion of the year than the proposed project, but both the proposed project and the variant would affect Patricia's Green only during the morning. Based on a visual observation of the park during the morning, use of the park before 9 a.m. was low. Furthermore, active recreational uses, such as walking and dog walking, were observed to be the principal activities at times when the variant would create net new shadow on the park. Enjoyment of these activities is less dependent on sunlight than passive recreational uses, such as sitting, talking on the phone, or eating. Therefore, new shadows from the proposed project or the variant would not substantially affect use of Patricia's Green. In addition, shadows cast by the variant, which would cover a larger area of the property than the proposed project, would recede entirely by 9:29 a.m. People using Patricia's Green between 9 and 9:29 a.m. potentially would be adversely affected by new shadow from the variant. However, park usage increases substantially after 9:29 a.m., at which point new shadow from the variant would no longer reach Patricia's Green.

Because of the limited duration of shadows and time of day, and time of year when Patricia's Green would be shaded by the proposed project or variant, new shadow would not substantially

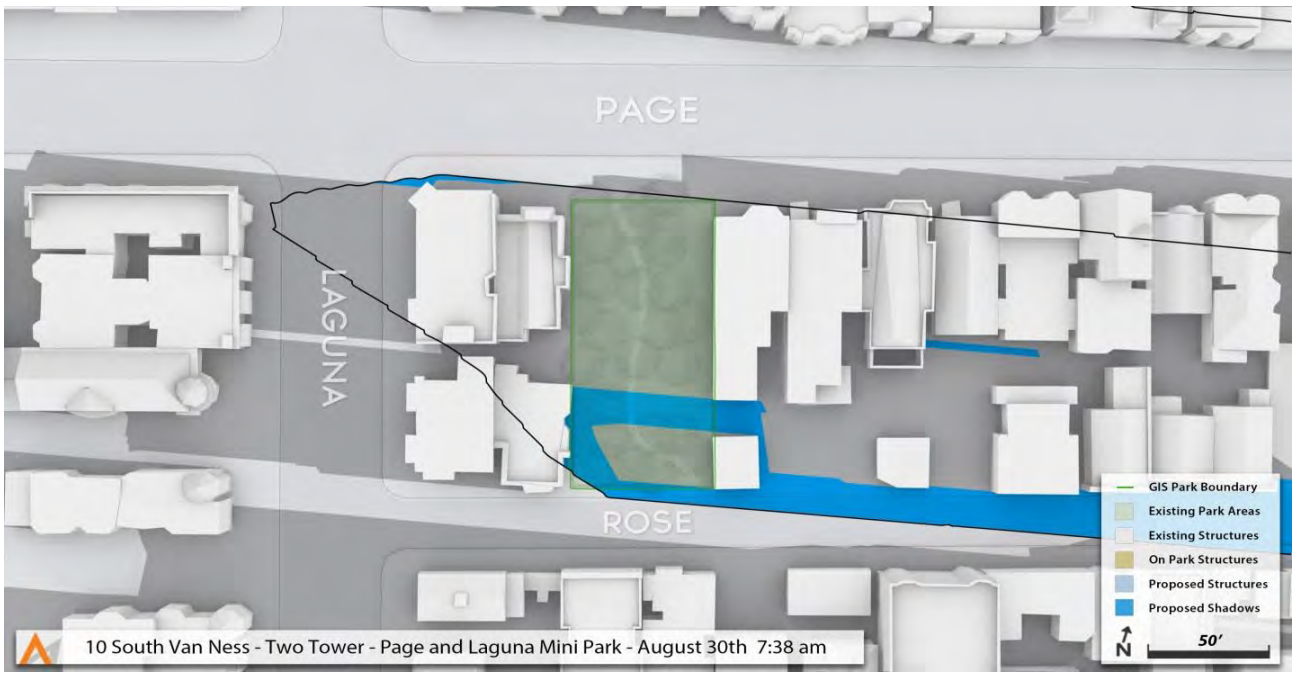
affect users at Patricia's Green. Therefore, the impact of new shadow at Patricia's Green from the proposed project or variant would be less than significant.

Page & Laguna Mini Park

Page & Laguna Mini Park has 24,472,209 square foot–hours of theoretically available annual sunlight. The park's existing annual shadow coverage is 12,095,949 square foot–hours, which is 49.427 percent of theoretically available annual sunlight available on Page & Laguna Mini Park.

Proposed Project

The proposed project would cast new shadow on Page & Laguna Mini Park between April 12 and May 10, and between August 2 and August 30. No new shadow from the proposed project would affect the park after 7:41 a.m. on any day of the year. During the periods when shadows would be cast on this park, the largest new shadow (based on area) would occur on August 30 and April 12 at 7:38 a.m., lasting 3 minutes, 36 seconds and covering an area of approximately 1,134 square feet, or 17.24 percent of the park (**Figure 4.6.18: Proposed Project's Largest New Shadow on Page & Laguna Mini Park (17.24 percent on August 30 at 7:38 a.m.)**). This maximum shadow coverage from the proposed project would occur in the southern quarter of the park, north of the Rose Street entrance. Annual shadow results for existing conditions, the proposed project, and the variant are shown in **Table 4.6.3: Annual Shadow Results for the Page & Laguna Mini Park**.



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.18: Proposed Project's Largest New Shadow on Page & Laguna Mini Park (17.24 percent on August 30 at 7:38 a.m.)

Table 4.6.3: Annual Shadow Results for the Page & Laguna Mini Park

	Existing Conditions	Existing plus Proposed Project	Existing plus Variant
Theoretically Available Annual Sunlight = 24,472,209 sfh[1]			
Annual shadow (sfh)	12,095,949	12,098,870	12,110,036
Difference		*+2,921*	*+14,086*
Annual Shadow as a Percentage of TAAS	49.427%	49.439%	49.485%
Difference		*+0.012%*	*+0.058%*

Notes:
sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] Based on the City's annualized TAAS factor.
Sources: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018; and FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

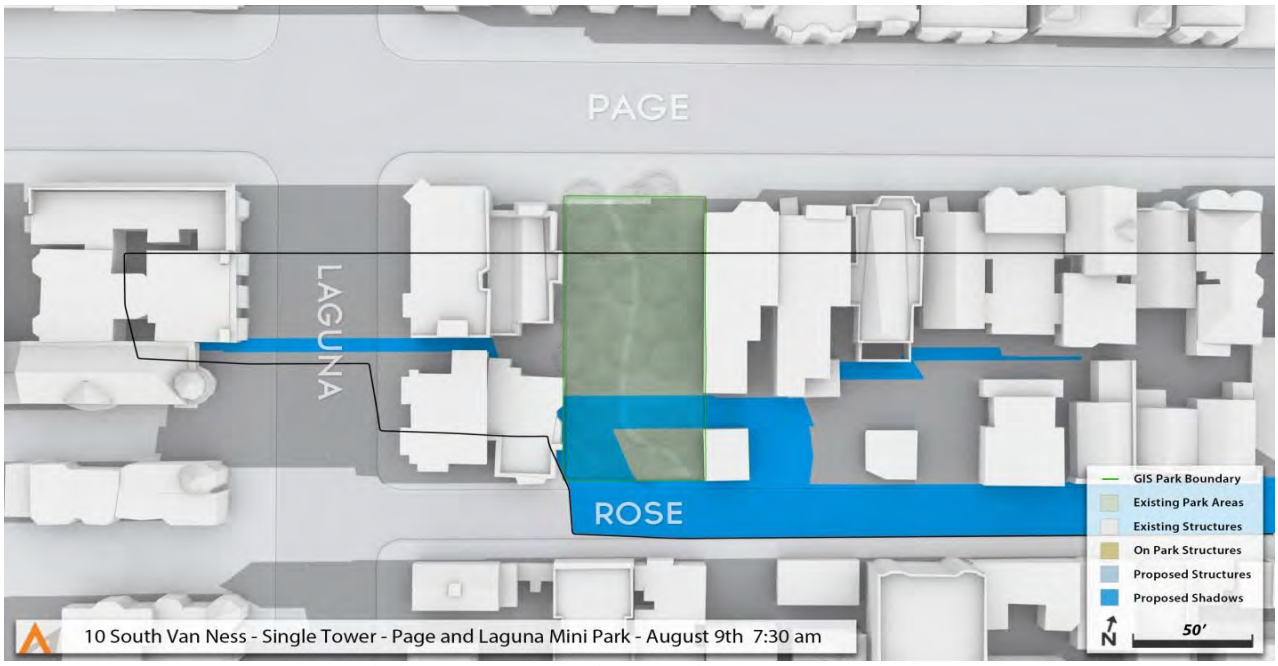
Variant

The variant would cast new shadow on Page & Laguna Mini Park between August 2 and August 23, and between April 9 and May 10. During the period when shadows would be cast on this park, the largest new shadow (based on area) would occur on August 9 and May 3 at 7:45 a.m., would last 15 minutes, and would cover an area of approximately 1,236 square feet, or 18.8 percent of the park. This maximum shadow coverage of the variant would occur in the southern quarter of the park, north of the Rose Street entrance (**Figure 4.6.19: Variant's Largest New Shadow on Page & Laguna Mini Park (18.8 percent on August 9 at 7:45 a.m.)**). The variant would add 14,086 square foot–hours of net new shadow, resulting in a 0.058 percent increase in annual shadow compared to existing conditions as a percentage of theoretically available annual sunlight (Table 4.6.3).

Overall Effect on Page & Laguna Mini Park

As stated previously, the proposed project and variant would result in increases in annual shadow of 0.012 percent and 0.058 percent, respectively. In August, when shadows cast by the proposed project or variant would be the greatest, the majority of the park would already be shaded by other buildings in the vicinity.

Site visits to Page & Laguna Mini Park took place on the mornings of July 26 and 28, 2016, and on the afternoons of August 4 and 5, 2016, to observe park use and assess new shading effects on the existing pattern of park use. Based on the visual observation, the primary activities include walking and dog walking. Between 7 and 10 a.m., the number of people using the park ranged from zero to six at any given time.



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.19: Variant's Largest New Shadow on Page & Laguna Mini Park (18.8 percent on August 9 at 7:45 a.m.)

Shadows from the proposed project would affect the park primarily in the morning when park usage typically is low. Furthermore, active recreational uses, such as walking and dog walking, are the principal observed activities. Enjoyment of these activities is less dependent on sunlight than passive recreational uses, such as sitting, talking on the phone, or eating. Therefore, the increase in shadow caused by the proposed project or variant would not substantially or negatively affect park use, and the impact of the proposed project or variant on Page & Laguna Mini Park would be less than significant.

Howard & Langton Mini Park

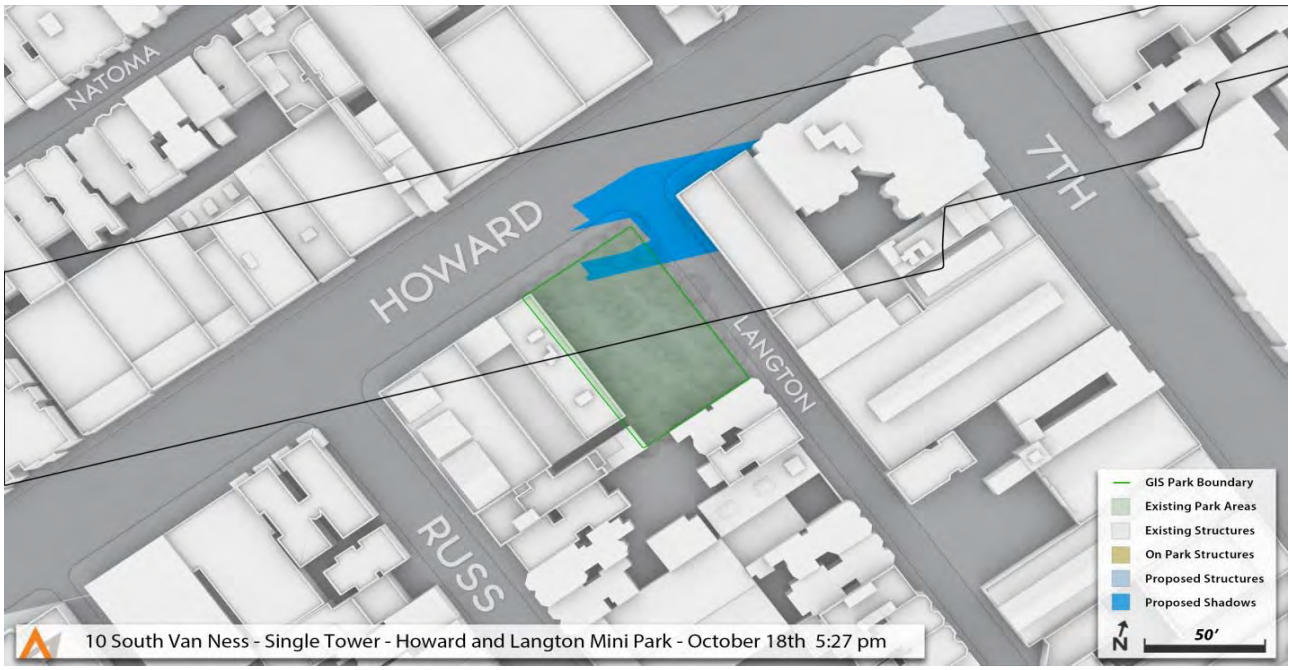
As shown in Figure 4.6.1, p. 4.6.3, shadow from the proposed project would not reach Howard & Langton Mini Park. Therefore, the following analysis pertains to the variant only. Annual shadow on Howard & Langton Mini Park currently is 48.850 percent of theoretically available annual sunlight (**Table 4.6.4: Annual Shadow Results for Howard & Langton Mini Park**).

Shadows from the variant on Howard & Langton Mini Park would occur on and around October 18 and February 22. During these periods, the largest new shadow (based on area) would occur at 5:27 p.m., would last six minutes, and would cover an area of approximately 602 square feet (5.89 percent) of the park. **Figure 4.6.20: Variant's Largest New Shadow on Howard & Langton Mini Park (5.89 percent on October 18 at 5:27 p.m.)** shows the maximum shadow coverage on Howard & Langton Mini Park.

Table 4.6.4: Annual Shadow Results for Howard & Langton Mini Park

	Existing Conditions	Existing plus Variant
Theoretically Available Annual Sunlight = 38,025,265 sfh[1]		
Annual shadow (sfh)	18,575,415	18,576,228
Difference		*+812*
Annual Shadow as a Percentage of TAAS	48.850%	48.852%
Difference		*+0.002%*

Notes:
sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] Based on the City's annualized TAAS factor.
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.20: Variant's Largest New Shadow on Howard & Langton Mini Park (5.89 percent on October 18 at 5:27 p.m.)

In addition, the portion of the park that would be shaded by the variant has substantial tree cover, which casts shadow on this portion of the park year-round. Persons seeking sunlight would not be using this portion of the park. As such, new shadow from the variant likely would not substantially affect users of the park. Therefore, the variant's impact on shadow at Howard & Langton Mini Park would be less than significant.

Hayes Valley Playground

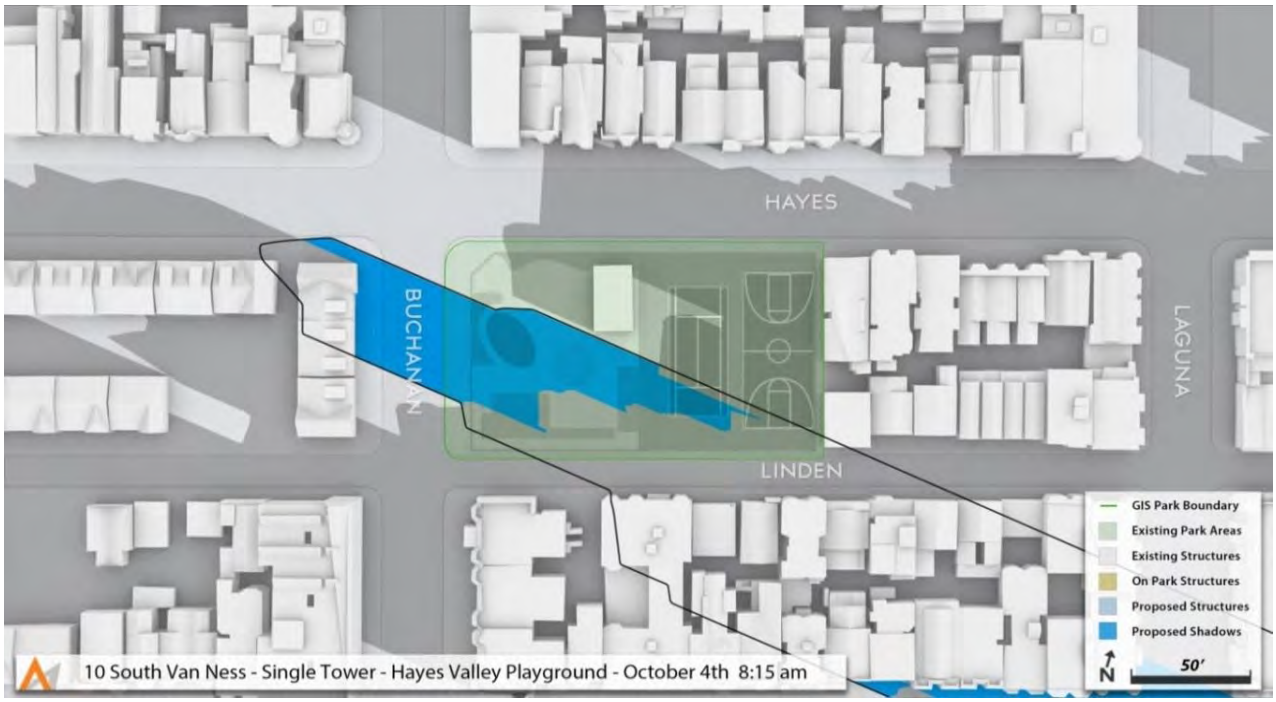
As shown in Figure 4.6.1, p. 4.6.3, shadow from the proposed project would not reach Hayes Valley Playground. Therefore, the following analysis pertains to the variant only. Annual shadow on the playground currently is 26.588 percent of theoretically available annual sunlight (**Table 4.6.5: Annual Shadow Results for the Hayes Valley Playground**).

Table 4.6.5: Annual Shadow Results for the Hayes Valley Playground

	Existing Conditions	Existing plus Variant
Theoretically Available Annual Sunlight = 122,080,743 sfh[1]		
Annual shadow (sfh)	32,458,749	32,487,917
Difference		*+29,168*
Annual Shadow as a Percentage of TAAS	26.588%	26.612%
Difference		*+0.024%*

Notes: sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] Based on the City's annualized TAAS factor.
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

The variant would cast new shadow on Hayes Valley Playground between October 4 and 11, and again between March 1 and 8. During these two weeks of the year, no new shadow from the variant would affect the playground after 8:29 a.m. During these periods, the largest new shadow (based on area) would occur on October 4 and March 8 at 8:15 a.m., would last 10 minutes, 12 seconds, and would cover approximately 7,762 square feet (23.66 percent) of the playground (**Figure 4.6.21: Variant's Largest New Shadow on Hayes Valley Playground (23.66 percent on October 4 at 8:15 a.m.)**).



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.21: Variant's Largest New Shadow on Hayes Valley Playground (23.66 percent on October 4 at 8:15 a.m.)

Hayes Valley Playground features children's play areas, a stage and plaza for community gatherings, community garden plots, outdoor fitness equipment, a 2,500-square-foot clubhouse, a basketball court, and a tennis court. The largest new shadow would cover the community plaza, a portion of the play area, and a small portion of the tennis court (Figure 4.6.21).

A visual survey of Hayes Valley Playground was conducted on the morning of August 2, 2017. The primary observed activities involved people exercising on park-provided exercise equipment, playing basketball, playing on and around play structures, walking, and dog walking. Between 7 and 10 a.m., a maximum of four park users were present at any given time. At 10:30 a.m., when new shadow from the variant would not cover any portion of the park at any time of the year, five people were using the playground.

The types of activities observed at this playground generally were active recreational uses, such as playing basketball or playing on the playground. Enjoyment of these types of activities is not substantially affected by shadow.

Therefore, due to the short duration of the shadows and the types of activities that generally take place at the times shadows occur, the shadow impacts of the variant on the Hayes Valley Playground would be less than significant.

Koshland Community Park and Learning Center

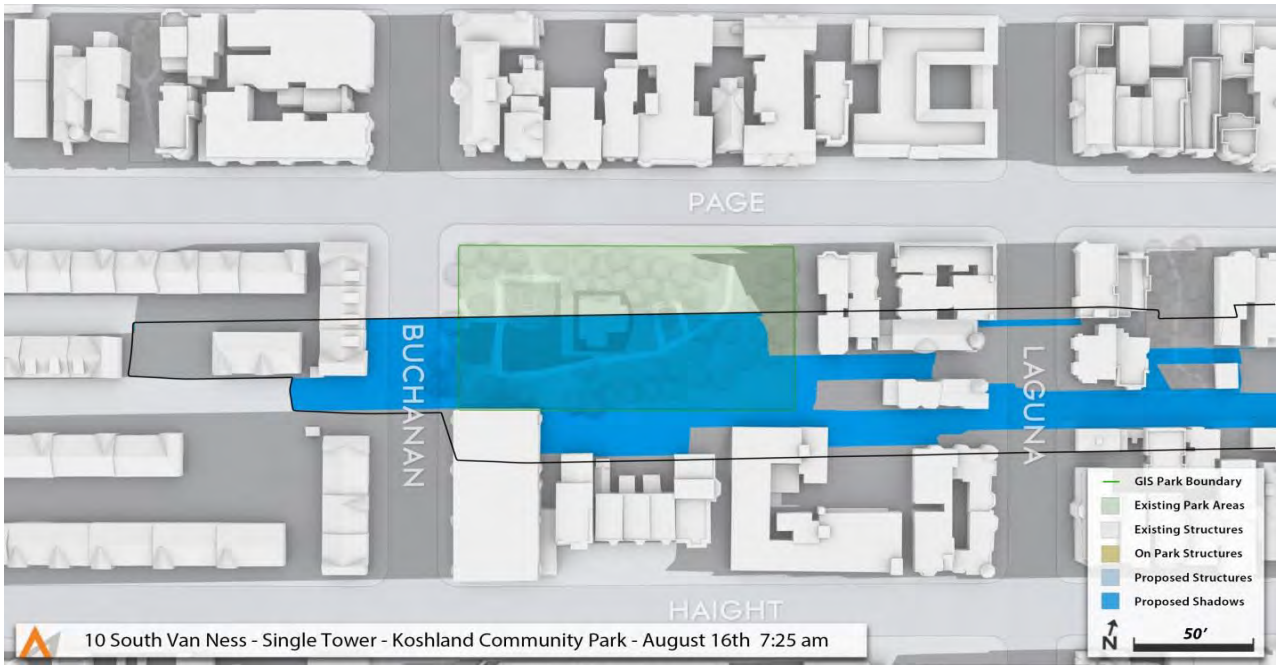
As shown in Figure 4.6.1, p. 4.6.3, shadow from the proposed project would not reach Koshland Community Park and Learning Center. Therefore, the following analysis pertains to the variant only. Annual shadow on Koshland Community Park and Learning Center currently is 16.233 percent of theoretically available annual sunlight (**Table 4.6.6: Annual Shadow Results for Koshland Community Park and Learning Center**).

Table 4.6.6: Annual Shadow Results for Koshland Community Park and Learning Center

	Existing Conditions	Existing plus Variant
Theoretically Available Annual Sunlight = 133,133,539 sfh[1]		
Annual shadow (sfh)	21,611,520	21,696,777
Difference		*+82,257*
Annual Shadow as a Percentage of TAAS	16.233%	16.297%
Difference		*+0.064%*

Notes:
sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] Based on the City's annualized TAAS factor.
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

The variant would cast new shadow on Koshland Community Park and Learning Center between August 9 and August 16, and between April 26 and May 3. No new shadow from the variant would affect the property after 7:44 a.m. on any day of the year. During these two weeks, the largest new shadow (based on area) would occur on August 16 and April 26, beginning at 7:25 a.m., would last 2 minutes, 24 seconds, and would cover an area of approximately 19,772 square feet (55.27 percent) of the property. **Figure 4.6.22: Variant's Largest New Shadow on Koshland Community Park and Learning Center (55.27 percent on August 16 at 7:25 a.m.)** shows the maximum shadow coverage on Koshland Community Park and Learning Center.



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.22: Variant's Largest New Shadow on Koshland Community Park and Learning Center (55.27 percent on August 16 at 7:25 a.m.)

Shadow from the variant would cover approximately half of the property, including portions of the basketball half-court and children's play equipment, until approximately 7:25 a.m. on April 26 and August 16 (Figure 4.6.22).

A visual survey of Koshland Community Park and Learning Center was conducted on the morning of July 18, 2017, to observe park usage. Based on visual observation, park usage was between zero and two people between 7 and 8 a.m., and between one and five people between 8 and 8:30 a.m. Between 8 and 8:30 a.m., five adults were observed participating in a fitness-related group activity on the basketball half-court. Between 9 and 10 a.m., the park was used only by a few people who were walking dogs, which is an active recreational use, an activity less affected by shadow than passive uses such as sitting, talking on the phone, or eating.

Results of the visual survey indicate that use generally increases between sunrise and the middle of the day, as temperatures and sunlight increase. Furthermore, shadow from the variant would not affect the property after 7:44 a.m. on any day of the year. As the variant would create shadow only before 7:44 a.m. and uses at this time are primarily active, it would not substantially affect recreational use of the park. Therefore, the variant's impact on shadow at Koshland Community Park and Learning Center would be less than significant.

Buchanan Street Mall

As shown in Figure 4.6.1, p. 4.6.3, shadow from the proposed project would not reach the Buchanan Street Mall. Therefore, the following analysis pertains to the variant only. Annual shadow on the mall currently is 27.873 percent of theoretically available annual sunlight (**Table 4.6.7: Annual Shadow Results for the Buchanan Street Mall**).

Table 4.6.7: Annual Shadow Results for the Buchanan Street Mall

	Existing Conditions	Existing plus Variant
Theoretically Available Annual Sunlight = 293,711,495 sfh[1]		
Annual shadow (sfh)	81,866,060	81,875,692
Difference		*+9,632*
Annual Shadow as a Percentage of TAAS	27.873%	27.876%
Difference		*+0.003%*

Notes:
sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] Based on the City's annualized TAAS factor.
Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

The variant would cast new shadow from sunrise to 8:10 a.m. between November 1 and November 29, and between January 11 and February 8. No new shadow from the variant would affect the mall after 8:10 a.m. on any day of the year. During these periods, the largest new shadow (based on area) would occur on November 22 and January 18 at 8 a.m., would last nine minutes, and would cover an area of approximately 2,475 square feet (3.14 percent) of the property. **Figure 4.6.23: Variant's Largest New Shadow on the Buchanan Street Mall (3.14 percent on November 22 at 8 a.m.)** shows the maximum shadow coverage on the mall.

Shadow from the variant would cover a small portion of the mall north of McAllister Street (Figure 4.6.23). The portion of the mall that would be shadowed because of the variant is currently occupied by a large tree, which casts shadow on that area year-round. Therefore, the variant's impact on shadow at Buchanan Street Mall would be less than significant.

Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.23: Variant's Largest New Shadow on the Buchanan Street Mall (3.14 percent on November 22 at 8 a.m.)

Overall Shadow Impact Conclusion

As described above, visual observations were conducted at the six recreation and park commission properties that would be shaded by the proposed project or variant,[7] to observe how new shading could affect existing patterns of use. Primarily, active recreational uses were observed, including walking, dog walking, exercising, playing sports, and playing on play structures. Passive recreational uses, including sitting, eating, talking on the phone, or listening to music, were less common during the hours in which new shadow would reach the six park properties.

Shadow from the proposed project or variant on parks would be limited to certain days of the year and would be limited in duration on those days. Net new shadow on these parks would generally occur at times of day when park uses were observed to be primarily active uses that are not dependent on access to sunlight. For these reasons, the proposed project or variant would not substantially interfere with existing recreational uses of the affected parks. Therefore, the impact would be less than significant.

[7] Visual observations were conducted at Patricia's Green, Page & Laguna Minipark, Howard & Langton Minipark, Hayes Valley Playground, Koshland Community Park and Learning Center, and Buchanan Street Mall.

OTHER PUBLIC SPACES

Impact SH-2: The proposed project or variant would not substantially shade outdoor recreation facilities or other public areas, such as streets and sidewalks that are not under the jurisdiction of the San Francisco Recreation and Park Commission. ***(Less than Significant)***

Privately Owned Public Open Spaces

Privately owned public open spaces are publicly accessible spaces, including plazas, terraces, atriums, and small parks that are provided and maintained by private entities. The one existing privately owned public open space in the vicinity of the project site is located in the lobby of a building at 77 Van Ness Avenue. This space is indoors; thus, it would not be affected by shadow related to the proposed project or the variant. Therefore, it is not considered in this analysis.

Streets and Sidewalks

In accordance with San Francisco Planning Code section 146, the proposed project or the variant would be designed in order to maintain direct sunlight on public sidewalks in certain downtown areas during critical periods of use. However, the proposed project or variant would cast new shadow on nearby streets and sidewalks throughout the year, to the extent that these areas are not shaded already by existing buildings that line the streets.

In the mornings during the summer, shadow from the proposed project or variant would shade streets and sidewalks to the west, including Market Street, Gough Street, and Octavia Street, among others. In the afternoons during the summer, shadow from the proposed project or variant would shade Mission Street, Howard Street, and 10th Street, among others. During the spring and fall, Oak Street, Octavia Street, and Fell Street, among others, would be shaded during the mornings, and streets including Ninth Street, 10th Street, and Folsom Street would be shaded during the afternoons. During the winter, Gough Street, Octavia Street, and Webster Street would be shaded during the mornings; and Sixth Street, Seventh Street, Eighth Street, and Ninth Street would be shaded during the afternoons.

New shadow from the proposed project or variant would not affect the use and enjoyment of sidewalks in the area, which function primarily as public pathways for pedestrians. In addition, many sidewalks that would be shaded by the proposed project or variant already are shadowed for portions of the day by nearby, multistory buildings.

Overall, the proposed project or variant would not substantially increase the amount of shadow on the sidewalks above levels that are common and generally expected in densely developed urban settings. Therefore, the shadow impact of the proposed project or variant on sidewalks in the project area would be less than significant.

CUMULATIVE IMPACTS

Impact C-SH-1: The proposed project or variant in combination with past, present, and reasonably foreseeable future projects in the project area would not create new shadow in a manner that would substantially affect outdoor recreation facilities or other public areas. The proposed project would not make a cumulatively considerable contribution to a significant cumulative shadow impact. (*Less than Significant*)

The cumulative projects considered in this shadow analysis are past, present, and reasonably foreseeable projects that include proposed buildings at least 40 feet tall on project sites within a 1,500-foot radius of the project site. The list of cumulative projects was based on the projects for which planning department Environmental Evaluation Applications were filed or which the planning department had otherwise determined are reasonably foreseeable, at the time of the notice of preparation.

However, as discussed in Section 4.0.7, changes to the cumulative project list have been made since the preparation of the shadow technical memoranda for the project and variant. These changes include moving several projects from the cumulative projects list into the existing condition, including 1500 Mission Street; adding certain projects to the cumulative projects list, including 98 Franklin Street, 30 Van Ness Avenue, 42 Otis Street, and Parcel U; and removing projects that are no longer reasonably foreseeable, including 33 Gough Street and 1390 Market Street. The current list of cumulative projects is shown in **Table 4.0.1: Cumulative Projects**, p. 4.0.10, and **Figure 4.0.1: Cumulative Projects**, p. 4.0.11, in Section 4.0, Chapter Introduction.

The projects that were moved into the existing condition were accounted for in the cumulative shadow scenario for the proposed project and variant. The proposed 98 Franklin Street project would cast intervening shadow on parks to the northwest in the morning during the summer (with the proposed project), and in the fall (with the variant). The 30 Van Ness Avenue project may also cast shadow on parks to the northwest in the morning during the summer and in the fall. Therefore, by not including these two projects, the cumulative shadow analysis likely overestimates the amount of net new shading contributed by the project and variant on parks to the northwest during these times of day and year. Given the height of the proposed projects at 42 Otis Street and Parcel U, the addition of these projects to the cumulative scenario would not change the amount of shadow on nearby parks. Similarly, given the heights of the proposed projects at 33 Gough Street and 1390 Market Street, the removal of these projects from the cumulative scenario would not change the shadow effects of the proposed project or variant. The cumulative analyses for affected parks in this section therefore represents a conservative estimate of cumulative shadow impacts, because the cumulative analyses likely overstates, rather than understates, the proposed project's and variant's relative contribution to cumulative shadow on public open spaces.

Multiple buildings on the cumulative projects list have not been designed or proposed yet. However, the Hub project outlines the height and development intensity allowed for buildings in the Hub project area. Because multiple buildings now in the Hub project area are expected to be demolished and replaced with larger buildings in the future, the shadow model included these projects as simplified building envelopes. The following projects were modeled as simplified building envelopes: 33 Gough Street (modeled as a 200-foot-tall building with an 80-foot-tall podium), 1390 Market Street (Fox Plaza Expansion, modeled as a 120-foot-tall building), and 30 Van Ness Avenue (modeled as a 400-foot-tall building).

Construction of foreseeable projects under cumulative conditions would increase the area and duration of shadow that would fall on Patricia's Green, Page & Laguna Mini Park, Hayes Valley Playground, Koshland Community Park and Learning Center, Howard & Langton Mini Park, and Buchanan Street Mall. **Table 4.6.8: Annualized Shadow Results—Comparison between the Cumulative Projects with the Proposed Project and Variant** summarizes annualized shadow under cumulative conditions and cumulative conditions plus the proposed project and variant. In the table, the data shown in the five columns to the right of the Cumulative Projects column indicate the contribution of the proposed project or variant to cumulative shadow impacts. Thus, these columns subtract shadow under the proposed project, variant, or existing conditions from the cumulative projects scenarios to identify the incremental contribution from the proposed project or the variant. The differences presented in these five columns support a determination of whether or not a cumulative impact related to shadow would occur.

Cumulative impacts for each park are discussed separately below, followed by an overall cumulative impact conclusion for all properties.

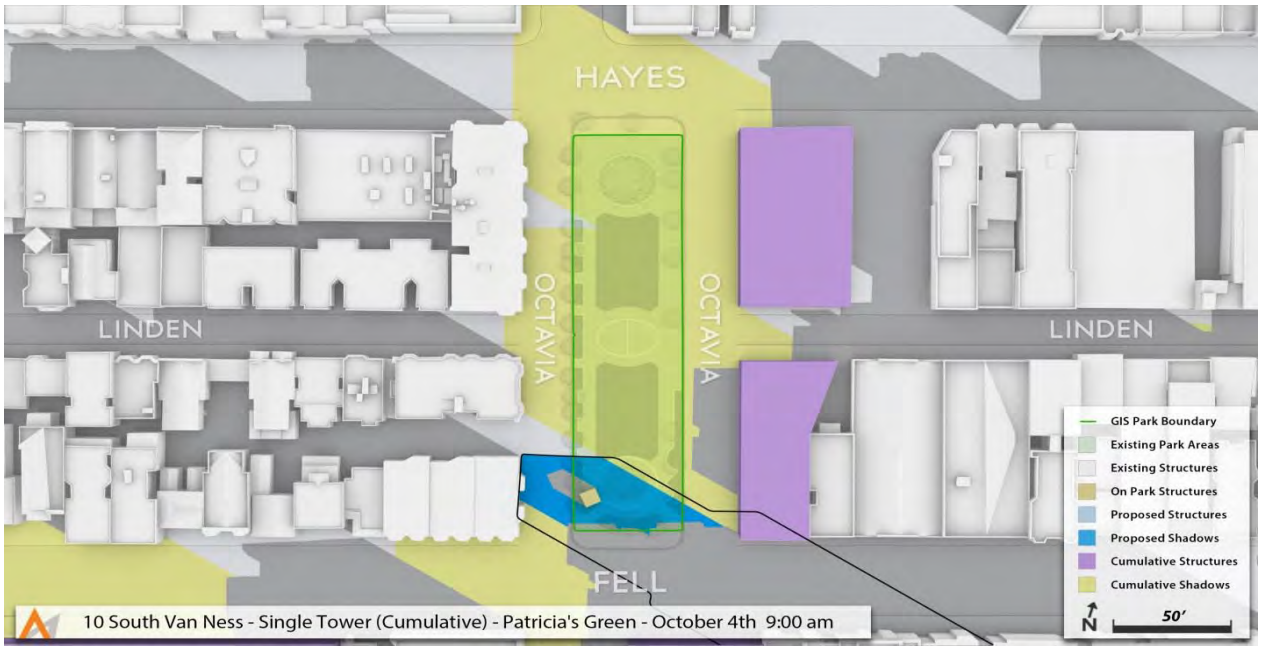
Patricia's Green

The shadow technical memoranda that were prepared for the proposed project and variant modeled and quantified potential shadows from cumulative projects in combination with the proposed project and variant, to understand the amount of shadow that would be attributable to the proposed project and variant relative to that of the cumulative projects. With development of cumulative projects, the annual shadow coverage on Patricia's Green would be 24,917,975 square foot–hours, or 11,455,220 square foot–hours more shadow coverage than under existing conditions. This would translate to an increase in shadow coverage equal to 17.195 percent of theoretically available annual sunlight compared to existing conditions. As shown in **Figure 4.6.24: Cumulative Projects plus Variant—Largest New Shadow Coverage on Patricia's Green (11.8 percent on October 4 at 9 a.m.)**, the majority of this shadow would be attributable to three structures anticipated to be built under cumulative conditions adjacent to Patricia's Green, namely at 432, 424, and 350 Octavia Boulevard. Under cumulative plus proposed project or variant conditions, the proposed project would contribute 0.002 percent of the increase in shadow, and the variant would contribute 0.024 percent of the increase in shadow, as a percentage of theoretically available annual sunlight.

Table 4.6.8. Annualized Shadow Results—Comparison between the Cumulative Projects with the Proposed Project and Variant

		Existing Conditions	Cumulative Projects	Cumulative Projects plus Proposed Project	Cumulative Projects plus Variant	Difference between Cumulative plus Variant and Cumulative plus Proposed Project	Difference between Cumulative plus Proposed Project and Existing Conditions	Difference between Cumulative plus Variant and Existing Conditions
Patricia's Green	sfh[1]	13,462,755	24,917,975	24,919,509	24,933,774	14.265	11,456,754	11,471,019
	% TAAS[2]	20.208%	37.403%	37.405%	37.427%	.022%	17.20%	17.22%
Page & Laguna Mini Park	sfh	12,095,949	12,098,671	12,101,592	12,112,758	11,166	5,643	16,809
	% TAAS	49.427%	49.438%	49.458%	49.496%	.038%	0.03%	0.07%
Hayes Valley Playground	sfh	32,458,749	32,458,749	N/A	32,487,917	N/A	N/A	29,168
	% TAAS	26.588%	26.588%	N/A	26.612%	N/A	N/A	0.02%
Koshland Community Park and Learning Center	sfh	21,611,520	21,611,520	N/A	21,696,777	N/A	N/A	85,257
	% TAAS	16.233%	16.233%	N/A	16.297%	N/A	N/A	0.06%
Buchanan Street Mall	sfh	81,866,060	81,866,060	N/A	81,875,692	N/A	N/A	9,632
	% TAAS	27.873%	27.873%	N/A	27.876%	N/A	N/A	0.003%
Howard & Langton Mini Park	sfh	18,575,415	18,575,415	N/A	18,576,228	N/A	N/A	813
	% TAAS	48.850%	48.850%	N/A	48.852%	N/A	N/A	0.002%

Notes:
N/A = not applicable; sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] All sfh are rounded to the nearest whole number.
[2] All percentages are rounded to the nearest 0.000%.
[3] Under cumulative conditions (without the proposed project or the variant), future foreseeable projects surrounding the proposed Brady Park such as at 1601–1637 Market Street, 1700 Market Street, 53 Colton Street, and 30 Otis Street would shade most of the properties (with the exception of the southwestern corner) because of their adjacency to the open space.
Sources: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018; and FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.24: Cumulative Projects plus Variant—Largest New Shadow Coverage on Patricia's Green (11.8 percent on October 4 at 9 a.m.)

Shadow coverage under cumulative conditions would be 37.403 percent of theoretically available annual sunlight, an increase of 17.195 percent over existing conditions. This increase, attributable mainly to the development of adjacent buildings (at 432, 424, and 350 Octavia Street), was identified as an adverse cumulative impact in the Market and Octavia Neighborhood Plan Final EIR.[8] With respect to Patricia's Green (which was referred to as Hayes Green in the plan EIR), the plan EIR determined that shadow impacts resulting from plan implementation would be potentially significant because at the time the plan EIR was being prepared, Patricia's Green was under construction, and thus a qualitative analysis of how the park would be used could not be undertaken.

Shadow coverage at Patricia's Green is 20.208 percent of theoretically available annual sunlight under existing conditions but would be 37.403 percent with implementation of cumulative projects, which would create a substantial increase in shadow. Because the Market and Octavia Neighborhood Plan Final EIR determined that cumulative impacts from plan implementation would be potentially significant, and because the plan area generally is developing as planned, the cumulative impact from development of cumulative projects would be *significant and unavoidable*. The CEQA Guidelines state that when a cumulative impact is cumulatively

[8] San Francisco Planning Department, *Market and Octavia Neighborhood Plan Final EIR*, Volume II, September 2007. Planning Department Case No. 2003.0347E. State Clearinghouse No. 2004012118. Available: http://www.sf- planning.org/index.aspx?page=1714.

significant, the lead agency examining the project shall determine whether a project's incremental effect is cumulatively considerable. Therefore, the analysis below examines whether the proposed project or variant would have a significant cumulative impact.

As described under "Significance Thresholds," p. 4.6.12, the analysis of shadow impacts considers the times and locations where shadows would occur, the anticipated duration of the shadows, and the potential for the shadows to substantially and adversely affect any activities or uses in the subject properties or open spaces.

The largest new shadow would occur on October 4 and March 8 at 9 a.m., and would cover approximately 11.8 percent of Patricia's Green. New shadow at Patricia's Green would be greatest during the morning but would decrease throughout the day, as the observed park use increases. Results of the visual observation, which are included in the technical memoranda prepared for the proposed project and the variant, showed that usage during morning hours includes sitting, walking, dog walking, stretching and yoga, and socializing.

The visual observation demonstrated that use of Patricia's Green is lowest during the morning hours, when shadow under cumulative conditions would be the greatest, and would be highest during the middle of the day, when project shadows would be smallest. During the summer, and during the majority of the day during the spring, fall, and winter, no shadow would occur on Patricia's Green. Therefore, few park users would be affected by shadow from development of the cumulative projects. Furthermore, the proposed project and variant would contribute 0.002 percent and 0.024 percent of the 17.20 percent and 17.22 percent increases in shadow under cumulative plus proposed project and cumulative plus variant conditions, respectively. Therefore, the incremental shadow effect of the proposed project or variant on Patricia's Green would not adversely affect park usage, and likewise would not make a cumulatively considerable contribution to this adverse cumulative impact. The project or variant's contribution to the cumulative impact would therefore be less than significant.

Page & Laguna Mini Park

Page & Laguna Mini Park was not discussed in the Market and Octavia Neighborhood Plan Final EIR. As shown in Table 4.6.8, p. 4.6.44, the increase in shadow on Page & Laguna Mini Park from development under cumulative conditions would increase shadow as a percentage of theoretically available annual sunlight by 0.011 percent compared to existing conditions. Under cumulative conditions, shadow would reach the park in the early morning hours, when the park already generally would be in shadow from existing buildings. Furthermore, early-morning uses typically would be limited to active recreational uses, including walking, dog walking, and exercising, which are less dependent on sunlight than passive recreational uses, including sitting, eating, and talking on the phone. Therefore, no cumulative impact would occur.

Hayes Valley Playground, Koshland Community Park and Learning Center, Buchanan Street Mall, and Howard & Langton Mini Park

As shown in Table 4.6.8, p. 4.6.44, shadow at these parks under the cumulative projects scenario would be identical to shadow under existing conditions and under the existing plus project scenario. That is, no shadow from cumulative projects would reach these parks. Because cumulative projects would not shade these parks, impacts under cumulative conditions would be the same as those discussed for the existing plus variant scenario under Impact SH-1 (see "Howard & Langton Mini Park," "Hayes Valley Playground," "Koshland Community Park and Learning Center," and "Buchanan Street Mall," on pp. 4.6.34 through 4.6.39), and no cumulative impact would occur.

Streets and Sidewalks

Cumulative projects would add new shadow on sidewalks in the project area; however, these sidewalks already are shadowed for much of the day by densely developed surrounding buildings. The increase in shadow under cumulative conditions would not exceed levels that are common and generally expected in densely developed urban settings. Therefore, the cumulative shadow impact on streets and sidewalks would be less than significant.

Overall Cumulative Shadow Conclusion

The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in project area, would result in less-than-significant impacts to five of the six area parks. The proposed project or variant would not make a considerable contribution to the cumulative shadow impact on Patricia's Green; therefore, cumulative shadow impacts would be less than significant.

Informational Discussion on Proposed Parks

The proposed Brady Park has not been approved and the design details may change. Similarly, the 11th & Natoma Park does not exist yet, and final programming has not been determined. The 11th & Natoma Park would be approximately the same size as Patricia's Green and may include a playground, sports court, and/or active green space, but these uses are initial programming concepts and a conceptual site plan is not publicly available. Given that these parks do not yet exist it was not possible to conduct site visits to observe park use. Without information about park programming or observations of park use it is not possible to assess the effects of shading on the use and enjoyment of the parks for the purpose of CEQA analysis. An assessment of impacts on the proposed parks would be speculative, and therefore, pursuant to the CEQA Guidelines, should not be considered in making an impact determination. However, a discussion characterizing the shadow effects of the proposed project and variant on the proposed parks is included, below, for informational purposes.

PROPOSED BRADY PARK

Table 4.6.9: Annual Shadow Results for the Proposed Brady Park shows quantitative results for existing conditions plus the proposed project, summarized as a percentage of theoretically available sunlight. If the proposed Brady Park is implemented as planned, new shadow from the proposed project would reach the park and shadow from the variant would not reach the park. As shown in Table 4.6.9, Brady Park would have 77,542,402 square foot–hours of theoretically available annual sunlight throughout the year.

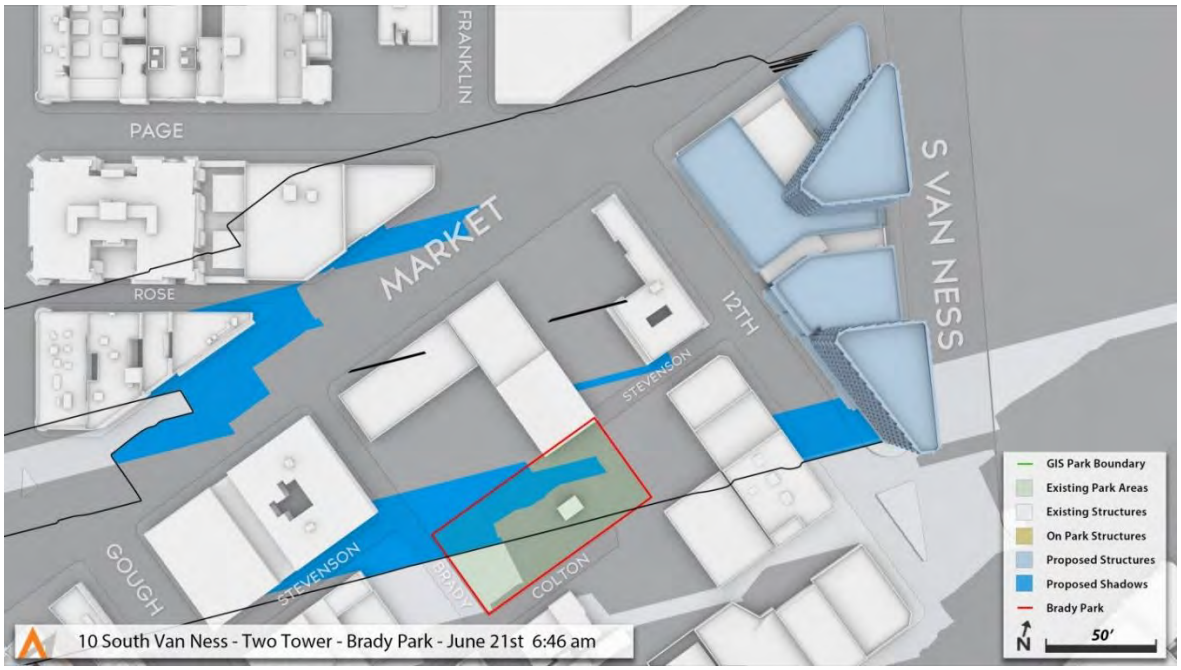
Table 4.6.9: Annual Shadow Results for the Proposed Brady Park

	Existing Conditions[1]	Existing plus Proposed Project
Theoretically Available Annual Sunlight = 77,542,402 sfh[2]		
Annual shadow (sfh)	11,500,977	11,544,071
Difference		*+43,094*
Annual Shadow as a Percentage of TAAS	14.832%	14.888%
Difference		*+0.056%*

Notes:
sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] *Existing* presents the amount of shadow that would be cast on the park if the park existed under current conditions.
[2] Based on the City's annualized TAAS factor.
Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018

Existing shadow on the proposed park will be approximately 11,500,977 square foot–hours, which is 14.832 percent of theoretically available annual sunlight. With the proposed project, Brady Park would be shaded for an additional 43,094 square foot–hours during the year, an increase of 0.056 percent.

Shadows from the proposed project would occur between May 24 and July 19. The average duration of new shadow on the proposed Brady Park would be 35 minutes, 38 seconds, with the longest duration occurring on June 21 for approximately 50 minutes. The largest new shadow (based on area) would occur on June 21 at 6:47 a.m. and would cover approximately 3,500 square feet (16.8 percent) of the proposed park. New shadow would affect the park for a maximum of 50 minutes in the park's northwestern half (see **Figure 4.6.25: Proposed Project's Largest New Shadow on the Proposed Brady Park (16.8 percent on June 21 at 6:46 a.m.)**). No new shadow from the proposed project would occur at the proposed Brady Park after 7:44 a.m. at any point during the year.



Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018

Figure 4.6.25: Proposed Project's Largest New Shadow on the Proposed Brady Park (16.8 percent on June 21 at 6:46 a.m.)

In the future, the surrounding cumulative projects, including 1601–1637 Market Street, 1700 Market Street, 53 Colon Street, and 30 Otis Street, would shade portions of the park during all hours of the day.

PROPOSED 11TH & NATOMA PARK

The recreation and park commission has acquired a new park property on 11th Street between Minna and Natoma streets (Block 3510/Lots 035, 037, 039, 055, 056). The proposed 11th & Natoma Park would be in District 6, the Western South of Market neighborhood, which has the fewest public parks in the City. Development of this park would be consistent with objective 1 in the *San Francisco Recreation and Parks 2016–2020 Strategic Plan*, which strives to "develop more open space to address population growth in high needs areas and emerging neighborhoods."[9] The timing of construction and programming of the proposed 11th & Natoma Park is unknown at this time, but construction would begin no sooner than 2021, when the current site tenant's lease expires. The site of the proposed 11th & Natoma Park currently is occupied by commercial buildings.

[9] San Francisco Recreation and Park Department, 2016, *San Francisco Recreation and Parks 2016–2020 Strategic Plan*, https://view.joomag.com/rpd-strategic-plan/0230791001453414745?shortv.

If the proposed park is implemented as planned, new shadow from either the proposed project or the variant would reach this location. **Table 4.6.10: Annual Shadow Results for the Proposed 11th & Natoma Park** shows quantitative results for existing conditions plus the proposed project and existing conditions plus the variant, summarized as a percentage of theoretically available sunlight.

Table 4.6.10: Annual Shadow Results for the Proposed 11th & Natoma Park

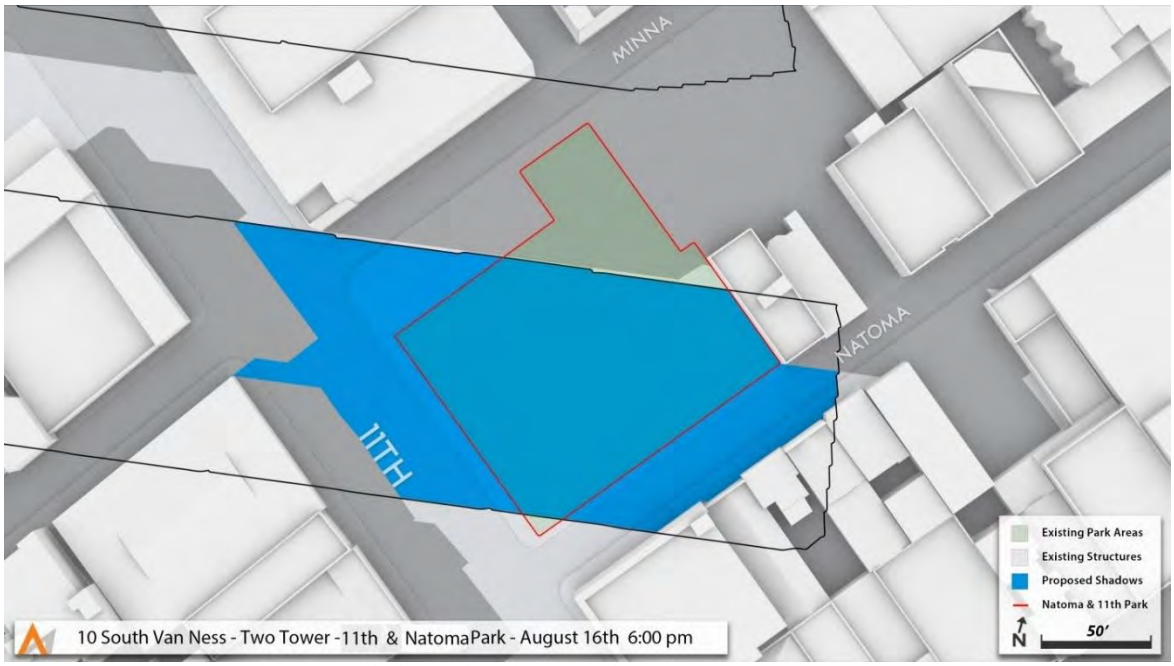
	Existing Conditions[1]	Existing plus Proposed Project	Existing plus Variant
Theoretically Available Annual Sunlight = 72,928,025 sfh[2]			
Annual shadow (sfh)	15,160,278	16,358,292	16,208,824
Difference		*+1,198,014*	*+1,048,546*
Annual Shadow as a Percentage of TAAS	20.788%	22.43%	22.228%
Difference		*+1.643%*	*+1.438%*

Notes:
sfh = square foot–hours; TAAS = theoretically available annual sunlight
[1] *Existing* presents the amount of shadow that would be cast on the park if the park existed under current conditions.
[2] Based on the City's annualized TAAS factor.
Sources: FASTCAST, *10 South Van Ness Shadow Technical Memorandum*, January 17, 2018; and FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018.

As shown in Table 4.6.10, if the proposed 11th & Natoma Park existed today, it would have 72,928,025 square foot–hours of theoretically available annual sunlight. Existing shadow on the proposed park would be approximately 15,160,278 square foot–hours, which is 20.788 percent of theoretically available annual sunlight.

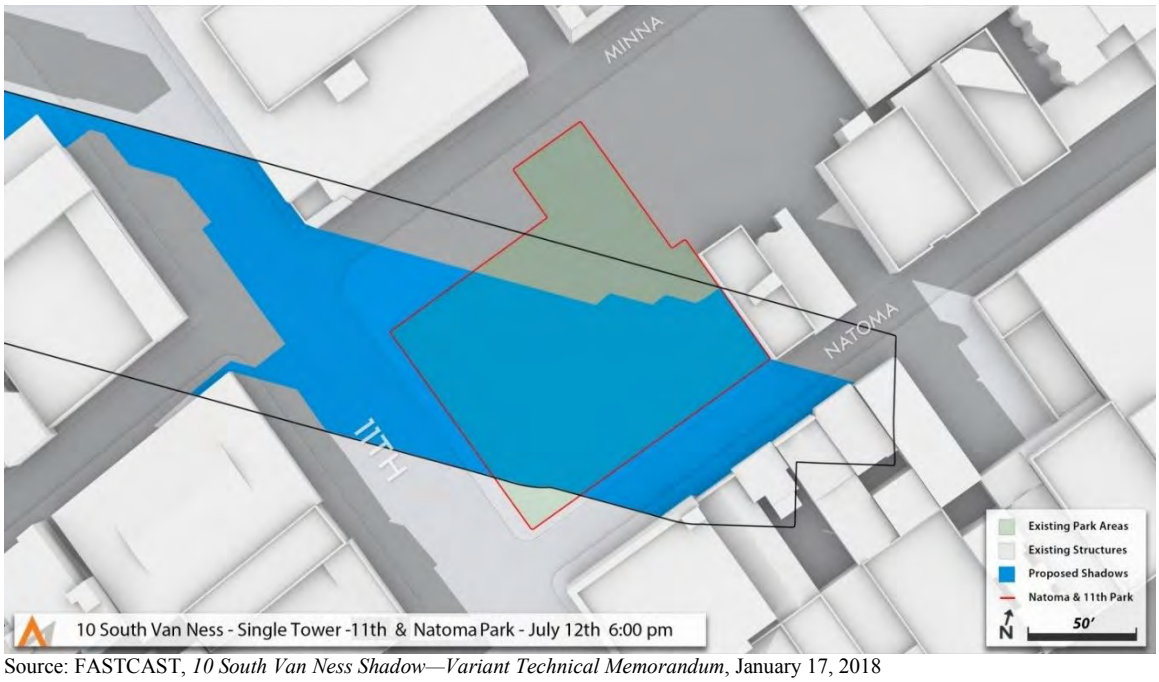
The proposed project would cast new shadow on the proposed 11th & Natoma Park between March 22 and September 20. During this period, the largest new shadow (based on area) would occur on August 16 and April 26 at 6 p.m., lasting until sunset, approximately 7:45 p.m., and covering 65.97 percent of the proposed park area. **Figure 4.6.26: Proposed Project's Largest New Shadow on the Proposed 11th & Natoma Park (65.97 percent on August 16 at 6 p.m.)** shows the shadow on August 16, which would be identical to shadow on April 16. Outside the period from March 22 through September 20, the proposed project would not cast new shadow on the proposed park.

The variant would add 1,048,546 square foot–hours of net new shadow on the proposed 11th & Natoma Park, a 1.438 percent increase in annual shadow as a percentage of theoretically available annual sunlight (Table 4.6.10). The variant would cast new shadow on the proposed park between March 22 and September 20. During this period, the largest new shadow (based on area) would occur on July 12 and May 31, at 6 p.m., and would last until sunset, approximately 8:25 p.m. (see **Figure 4.6.27: Variant's Largest New Shadow on the Proposed 11th & Natoma Park (59.6 percent on July 12 at 6 p.m.)**). The largest new shadow would cover 11,679 square feet (59.60 percent) of the proposed park.



Source: FASTCAST, *10 South Van Ness Shadow Technical Memorandum,* January 17, 2018

Figure 4.6.26: Proposed Project's Largest New Shadow on the Proposed 11th & Natoma Park (65.97 percent on August 16 at 6 p.m.)



Source: FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018

Figure 4.6.27: Variant's Largest New Shadow on the Proposed 11th & Natoma Park (59.6 percent on July 12 at 6 p.m.)

As stated in the 10 South Van Ness Shadow – Variant Technical Memorandum, in the future, cumulative projects developed in the area, including the project variant, would increase shadow on the proposed 11th & Natoma Park by 1.290 percent of theoretically available annual sunlight, compared to existing conditions.[10] The largest shadows under cumulative conditions generally would be during summer afternoons.

[10] FASTCAST, *10 South Van Ness Shadow—Variant Technical Memorandum*, January 17, 2018, pp. 34-35.

5. ALTERNATIVES

5.1 INTRODUCTION

Chapter 5, Alternatives, evaluates alternatives to the proposed project and variant and examines the potential environmental impacts associated with each alternative. By comparing these alternatives to the proposed project and variant, the relative environmental advantages and disadvantages of each may be analyzed and weighed. California Environmental Quality Act (CEQA) Guidelines section 15126.6(a) states that an environmental impact report (EIR) must describe and evaluate a reasonable range of alternatives to the proposed project and variant that would feasibly attain most of the proposed project's basic objectives and avoid or substantially lessen any identified significant adverse environmental impacts of the proposed project.

The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those potentially feasible alternatives necessary to foster informed public participation and an informed and reasoned choice by the decision-making body (CEQA Guidelines section 15126.6(f)). Therefore, an EIR does not need to address every conceivable alternative or consider infeasible alternatives. CEQA generally defines "feasible" to mean the ability to be accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, social, technological, and legal factors. The following factors may also be considered: site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and the ability of the proponent to attain site control (CEQA Guidelines section 15126.6(f)(1)). An EIR does not need to consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote and speculative.

The following alternatives are described and analyzed in Sections 5.2 through 5.6.

- No Project Alternative – Alternative 1
- Proposed Project Full Preservation Alternative – Alternative 2
- Proposed Project Partial Preservation Alternative – Alternative 3
- Variant Full Preservation Alternative – Alternative 4
- Variant Partial Preservation Alternative – Alternative 5

Table 5.1: Comparison of the Proposed Project and Variant to Alternatives, compares the main features and the impacts of the proposed project and variant to those of the alternatives.

Table 5.1: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

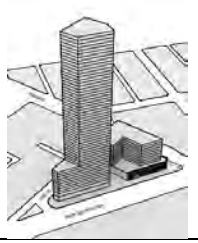
	No Project Alternative 1	**Proposed Project**	**Proposed Project Full Preservation Alternative 2**	**Proposed Project Partial Preservation Alternative 3**	**Variant**	**Variant Full Preservation Alternative 4**	**Variant Partial Preservation Alternative 5**
							
Retail/Commercial (gsf)	91,088	30,350	64,900	31,400	30,450	64,400	28,100
Residential (gsf)	–	935,745	435,700	707,600	935,250	619,900	770,300
Parking (gsf)	–	102,000	47,900	73,500	101,992	65,000	78,400
Total gsf[1]	91,088	1,071,095	548,500	812,500	1,072,989	749,300	876,800
Residential (nsf)	–	671,380	295,700	486,200	696,468	430,100	543,700
Tower Efficiency[2]	–	73% North Tower/72% South Tower	72%	72% North Tower/68% South Tower	77%	74%	73%
Net Unit Size	–	682	682	682	682	702	702
Dwelling Units							
Studio		*375*	*166*	*272*	*347*	*213*	*270*
1 Bedroom		*461*	*203*	*334*	*449*	*276*	*349*
2 Bedroom		*100*	*44*	*72*	*166*	*102*	*129*
3 Bedroom		*48*	*21*	*35*	*22*	*14*	*17*
Total Units		984	434	713	984	605	765
Parking Spaces	–	**518**	239	367	518	325	392
Bicycle Spaces							
Class 1		***336***	*192*	*257*	*325*	*235*	*270*
Class 2		***61***	*33*	*48*	*61*	*41*	*49*
Total		386	225	305	386	276	319

Table 5.1: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
Podium Height (Max.)	–	114 Feet North Podium/120 Feet South Podium	120 Feet Podium	120 Feet Podium	139 Feet Podium/164 Feet Podium (120 Feet Average)	120 Feet Podium	120 Feet Podium
Building Height	30 – 45 Feet	400 Feet	400 Feet	400 Feet	590 Feet	590 Feet	590 Feet
Stories	2	41	41	41	55	55	55
Existing GSF Retained	91,088 plus All Façades	–	59,400 plus North Façades	North Façades	–	59,400 plus North Façades	North Façades
Excavation Required (yd^3)	–	100,000 (Full Site)	50,000 (Partial Site[3])	70,000 (Full Site)	100,000 (Full Site)	60,000 (Partial Site[3])	80,000 (Full Site)
Ability to Meet Project Sponsor's Objectives?	No	Yes	Most	Most	Yes	Most	Most
Comparison of Significant Impacts							
Cultural Resources (Historic Architectural)							
CR-1: The proposed demolition of the building at 10 South Van Ness Avenue would cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5 of the CEQA Guidelines.	None	SUM	LTS	SUM	SUM	LTS	SUM

Table 5.1: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
Transportation and Circulation – Cumulative Construction Impacts							
C-TR-7: The duration and magnitude of temporary construction activities for the proposed project, the variant, or the straight-shot streetscape option, in combination with construction of past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in a significant cumulative impact from potentially hazardous conditions to which the proposed project or variant would contribute considerably.	None	SUM	SUM	SUM	SUM	SUM	SUM

Table 5.1: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
Noise							
NO-1: Proposed project or variant construction would generate noise levels in excess of standards and would result in substantial temporary increases in ambient noise levels.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM
NO-2: Operation of the proposed project or variant would generate noise levels in excess of standards or result in substantial temporary increases in ambient noise levels, above levels existing without the project.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM
C-NO-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects, would result in a considerable contribution to significant cumulative construction noise.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM

Table 5.1: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
Air Quality							
AQ-3: Construction and operation of the proposed project or variant could generate toxic air contaminants, including diesel particulate matter, exposing sensitive receptors to substantial air pollutant concentrations.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM
C-AQ-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would contribute to cumulative health risk impacts on sensitive receptors.	None	LTSM	LTSM	LTSM	LTSM	LTSM	LTSM

Table 5.1: Comparison of Characteristics and Significant Impacts of the Proposed Project and Variant to the Alternatives

	No Project Alternative 1	Proposed Project	Proposed Project Full Preservation Alternative 2	Proposed Project Partial Preservation Alternative 3	Variant	Variant Full Preservation Alternative 4	Variant Partial Preservation Alternative 5
Wind							
C-WI-1: The proposed project or variant, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that would make a cumulatively considerable contribution to a significant cumulative wind impact.	None	SUM	SUM	SUM	SUM	SUM	*SUM*

Notes:
[1] Total gsf includes parking gsf and excludes rooftop mechanical.
[2] A typical residential tower has an efficiency factor of 70–80%, assuming a typical residential core.
[3] Size and geometry of basement levels create highly inefficient layouts and may not be able to accommodate parking, bicycle parking, and necessary infrastructure.
Source: SWCA/10SVN, LLC, *10 South Van Ness Avenue Preservation Alternatives Report*, prepared by Page & Turnbull, Inc., January 30, 2018. Case No. 2015-004568ENV.

Selection of EIR Alternatives

As evaluated and identified in Section 4.1, Cultural Resources (Historic Architectural), for the proposed project and variant, demolition of the existing building at 10 South Van Ness Avenue would result in a significant and unavoidable impact on the historical resource. Thus, in developing the alternatives to be analyzed in this EIR, the planning department has considered a range of feasible design configurations and development programs that could avoid or lessen the significant impact on the historical resource, while optimizing the development potential on the project site. This chapter evaluates five alternatives based on the preservation alternatives report prepared by historical resources consultant Page and Turnbull.[1] Preliminary concepts for the preservation alternatives presented in this report were reviewed by the Architectural Review Committee of the Historic Preservation Commission, which determined that these alternatives are adequate.[2]

Under CEQA, projects that comply with the Standards for Rehabilitation benefit from a regulatory presumption that they would have a less-than-significant adverse impact on a historical resource.[3] Projects that do not comply with all of the rehabilitation standards may cause either a substantial or less-than-substantial adverse change in the significance of a historical resource. Thus, in some circumstances, a project may not be required to comply with all 10 standards for rehabilitation in order for the historical resource's material integrity to be retained such that the property will continue to convey its historic significance and retain its eligibility for listing in the California Register of Historical Resources.

During the review of each of the full and partial preservation alternatives, the following standards from the Secretary of the Interior's Standards for Rehabilitation were reviewed. According to section 15126.4(b)(1) of the Public Resources Code (CEQA), if a project complies with the standards, the project's impact "will generally be considered mitigated below a level of significance and thus is not significant."

> **Rehabilitation Standard 1:** A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

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1 Page and Turnbull, 10 South Van Ness Avenue Preservation Alternatives Report, San Francisco, California, January 30, 2018.

2 Preliminary concepts for the preservation alternatives presented in this report were reviewed by the Architectural Review Committee of the Historic Preservation Commission, which determined that these are adequate. San Francisco Planning Department, *Memorandum: Meeting Notes from the Review and Comment at the October 4, 2017 ARC meeting for the 10 South Van Ness Avenue Preservation Alternatives for Draft EIR, Case No. 2015-004568ENV*.

3 CEQA Guidelines, section 15064.5(b)(3).

Rehabilitation Standard 2: The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

Rehabilitation Standard 3: Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

Rehabilitation Standard 4: Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

Rehabilitation Standard 5: Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

Rehabilitation Standard 6: Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

Rehabilitation Standard 7: Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

Rehabilitation Standard 8: Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

Rehabilitation Standard 9: New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

Rehabilitation Standard 10: New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

As indicated in **Table 5.2: Summary of Rehabilitation Standards Met by Preservation Alternatives**, the proposed project and variant would not comply with any of the applicable rehabilitation standards, except for rehabilitation standard 8 (archeological resources). Both of the partial preservation alternatives would comply with 6 of the 10 standards. Both full preservation alternatives would comply with 9 of the 10 standards. None of the full or partial preservation alternatives would comply with all 10 rehabilitation standards.

Table 5.2: Summary of Rehabilitation Standards Met by Preservation Alternatives

Rehabilitation Standard	Proposed Project	Variant	No Project Alternative	Proposed Project		Variant	
				Full Preservation Alternative – Alternative 2	Partial Preservation Alternative – Alternative 3	Full Preservation Alternative – Alternative 4	Partial Preservation Alternative – Alternative 5
1	-	-	N/A	+	+	+	+
2	-	-	N/A	+	-	+	-
3	N/A	N/A	N/A	+	+	+	+
4	-	-	N/A	+	+	+	+
5	-	-	N/A	+	-	+	-
6	-	-	N/A	+	+	+	+
7	N/A	N/A	N/A	+	+	+	+
8	+	+	N/A	+	+	+	+
9	-	-	N/A	-	-	-	-
10	-	-	N/A	+	-	+	-

Note: N/A = not applicable; + = standard met; - = standard not met.
Source: Data compiled by AECOM in 2018

The full preservation alternatives to the proposed project and variant would call for a reduced intensity of demolition and new construction and would substantially reduce the residential and commercial land use program. As such, they would also act to reduce significant and unavoidable impacts identified for the proposed project and variant related to transportation, wind, and air quality. For these reasons, it was not necessary to develop and present separate EIR alternatives specifically for the purposes of avoiding or reducing these significant and unavoidable impacts of the proposed project and variant.

As with the proposed project and variant, the straight-shot streetscape option could be implemented with any of the alternatives studied in this chapter. There are no significant environmental impacts identified for the straight-shot streetscape option that would be different from, or unique to, that option. As such, no further analysis of the straight-shot streetscape option in the context of these alternatives is necessary.

This chapter identifies Alternative 2, the Proposed Project Full Preservation Alternative, as the environmentally superior alternative to the proposed project (i.e., the alternative that would result in the least adverse effect on the physical environment) and Alternative 4, the Variant Full Preservation Alternative, as the environmentally superior alternative to the variant. It concludes with a discussion of five alternatives that were considered but not analyzed further because they were rejected as infeasible or failed to meet the basic project objectives.

5.2 NO PROJECT ALTERNATIVE – ALTERNATIVE 1

CEQA Guidelines section 15126.6(e) requires that a "no project" alternative be evaluated: "The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project." CEQA Guidelines section 15126.6(e)(2) requires that the no project alternative analysis "discuss the existing conditions…as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and policies and consistent with the available infrastructure and community services." As noted in CEQA Guidelines section 15126.6, an EIR for "a development project on identifiable property" typically analyzes a no project alternative, i.e., "the circumstance under which the project does not proceed. Such a discussion would compare the environmental effects of the property remaining in its existing state against environmental effects that would occur if the project is approved. If disapproval of the project under consideration would result in predictable actions by others, such as the proposal of some other project, this 'no project' consequence should be discussed."

Description

Under the No Project Alternative, the existing conditions at the project site would not change. The existing building would remain along with the existing ingress and egress points, and the proposed project or variant would not be constructed. As such, the proposed housing units, commercial square footage, parking, and streetscape improvements would not be implemented.

Impacts

Under the No Project Alternative, the existing structure and use of the project site would not change and the existing physical conditions, as described in detail for each environmental topic in Chapter 4, Environmental Setting and Impacts, would remain the same. As such, under the No Project Alternative, none of the impacts associated with the proposed project or variant, as described in Chapter 4, would occur. However, development and growth would continue in the vicinity of the project site as reasonably foreseeable future projects are approved, constructed, and occupied. These projects could contribute to cumulative impacts in the vicinity, but under the No Project Alternative, land use activity on the project site would not contribute to these cumulative impacts beyond existing levels.

Historic Architectural Resources

Under the No Project Alternative, the existing building on the project site would not be demolished. The building, which was constructed in 1927, is the former home of the Fillmore

West concert venue and is considered to be a historical resource.[4] Therefore, compared to the proposed project or variant, which would result in a significant and unavoidable project-level impact, the No Project Alternative would have no impact related to historic architectural resources.

Transportation and Circulation

Under the No Project Alternative, existing conditions on the project site would not change. The project site would continue to operate as it currently does and there would be no changes to traffic, transit, pedestrian, bicycle, loading, emergency vehicle access, or parking conditions compared to existing conditions. Therefore, compared to the proposed project, which would have less-than-significant project-level transportation and circulation impacts and would contribute considerably to a significant and unavoidable cumulative construction traffic impact, the No Project Alternative would have no impacts related to transportation and circulation.

Improvement Measures I-TR-2a: Monitoring and Abatement of Queues and I-TR-2b: Active Garage Driveway Controls and Curbside Management, pp. 4.2.41-4.2.42, and I-TR-6: Coordination of Freight Loading/Service Vehicle Activities, p. 4.2.50, identified for the proposed project or variant in Section 4.2, Transportation and Circulation, would not be applicable to this alternative because it would result in no changes to existing site conditions.

Noise

Under the No Project Alternative there would be no demolition or construction activities and no new operational sources of noise on the project site. Noise conditions in the area would remain the same as under existing conditions. Because potential noise impacts that would occur under the proposed project would not occur under this alternative, implementing noise mitigation measures would not be necessary.

Air Quality

Under the No Project Alternative there would be no demolition or construction activities and no new operational sources of air pollutants within the project site. Existing stationary sources of air pollution near the project site and major roadways contributing to air pollution in the project vicinity would remain as in existing conditions. Because potential air quality impacts that would

[4] The Historic Resources Evaluation (Part I Historic Resource Evaluation, Final Version: 10 South Van Ness Avenue [2015-004568ENV] City and County of San Francisco, California) prepared for the project found the existing Honda dealership and service center at 10 South Van Ness Avenue to be eligible for listing in the California Register of Historic Places under Criterion 1 (events) for its association with the Fillmore West concert venue and Criterion 2 (persons) for its association with prominent San Francisco music promoter Bill Graham.

occur under the proposed project would not occur under this alternative, implementing air quality mitigation measures would not be necessary.

Wind

Under the No Project Alternative, there would be no change in existing wind conditions on or around the project site. The No Project Alternative would not result in the construction of any new buildings or structures that would intercept overhead wind currents, redirect them downward, and alter ground-level wind conditions. Compared to the proposed project, which would result in a cumulatively considerable contribution to significant cumulative wind impacts, the No Project Alternative would have no impacts related to wind.

Shadow

Under the No Project Alternative, there would be no change in existing sunlight conditions on any of the nearby Recreation and Park Commission properties and other public open spaces. The No Project Alternative would not cast net new shadow on open spaces or other public areas. Compared to the proposed project, which would result in a less-than-significant project-level shadow impact and a less-than-significant cumulatively considerable contribution to significant cumulative shadow impacts, the No Project Alternative would have no impacts related to shadow.

Other Topics

The initial study concluded that the proposed project or variant would have no impacts or less-than-significant impacts in the following analysis areas:

- Land use and land use planning (all topics)
- Population and housing (all topics)
- Cultural resources (archeological resources, human remains, and tribal cultural resources)
- Greenhouse gas emissions (all topics)
- Recreation (all topics)
- Utilities and service systems (all topics)
- Public services (all topics)
- Biological resources (all topics)
- Geology and soils (all topics)
- Hydrology and water quality (all topics)
- Hazards and hazardous materials (all topics)
- Mineral and energy resources (all topics)
- Agriculture and forestry resources (all topics)

The No Project Alternative would result in no impacts related to any of the above-listed environmental topics, because this alternative would result in no changes to existing site conditions. Therefore, mitigation measures presented in the initial study (EIR Appendix B) would not be required under the No Project Alternative.

Conclusion

Under the No Project Alternative, the existing conditions at the project site would not change. The existing building would be retained in its current condition and no large residential complex with ground-floor retail would be constructed on the site. The No Project Alternative would have no significant and unavoidable impacts related to historical resources, or cumulative impacts related to transportation (during construction) or wind; would have no impacts related to transportation and circulation, air quality, noise, or shadow; would have no impacts related to topics determined in the initial study to be either less than significant or less than significant with mitigation under the proposed project or variant; and would not require mitigation measures.

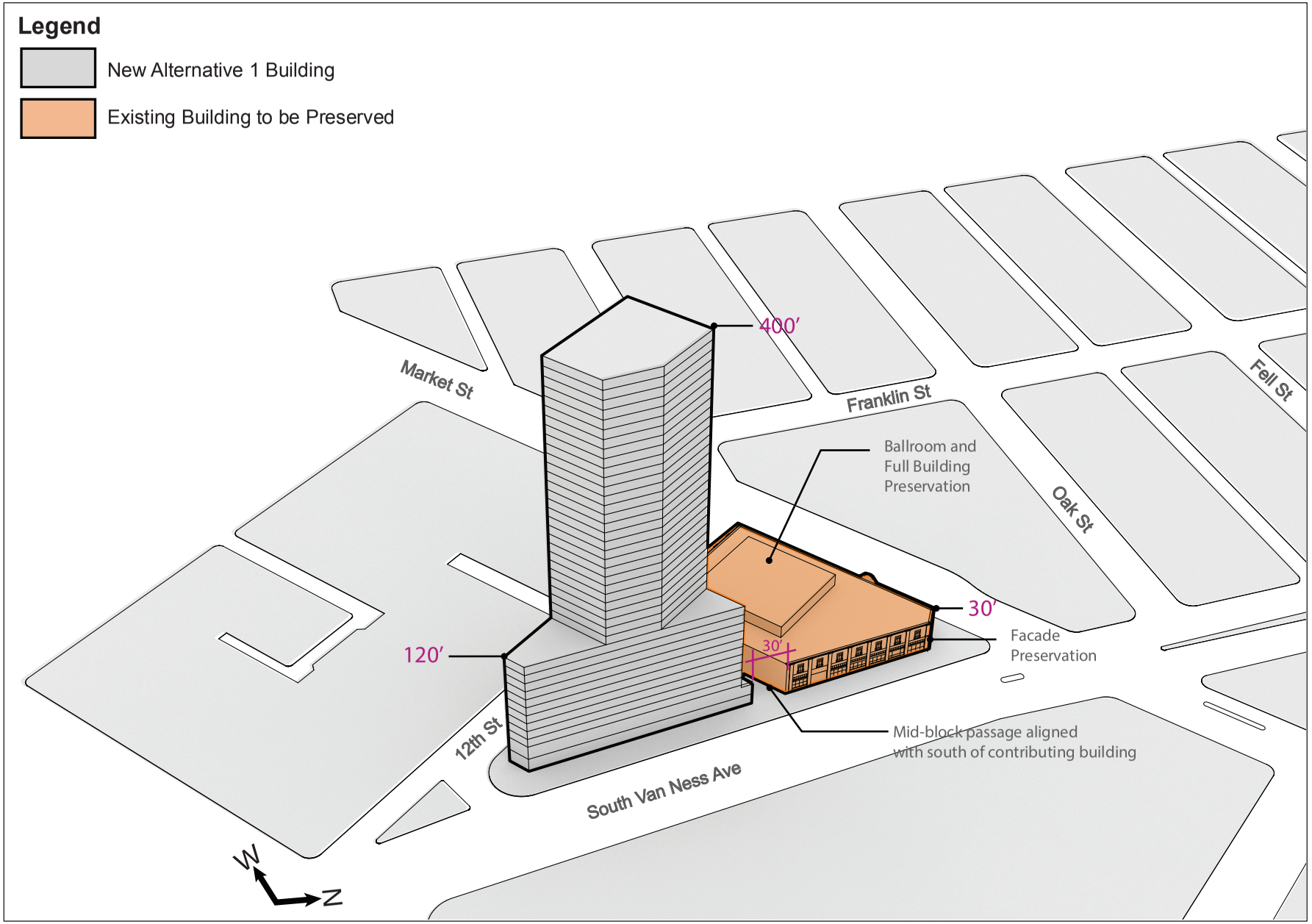
5.3 PROPOSED PROJECT FULL PRESERVATION ALTERNATIVE – ALTERNATIVE 2

Description

As explained in Historic Preservation Commission Resolution No. 0746 (March 18, 2015), a full preservation alternative "should fully preserve the features of the resource that convey its historic significance while still meeting most of the basic objectives of the project."[5] Under the Proposed Project Full Preservation Alternative (Alternative 2), the existing building at 10 South Van Ness, a historical resource, would undergo some changes (described below in the Historic Architectural Resources discussion under "Impacts") but it would retain all of its exterior and interior character-defining features. (See **Figure 5.1: Proposed Project Full Preservation-Alternative 2**.)

A single tower design would preserve the adjacent historical resource by maintaining the historically significant ballroom on the northern portion of the project site, including its concrete construction, orientation, footprint, massing, facades, windows, and detailing. The non-contributing southern garage addition portion of the existing building would be demolished and a new mixed-use building would be constructed in its place. Construction of the single tower avoids the need for deep excavation surrounding the existing building because the existing building would be retained in place, while still adhering to the load requirements above the Bay Area Rapid Transit (BART) easement at the north end of the project site.

[5] San Francisco Planning Department, Historic Preservation Commission Resolution No. 0746, March 18, 2015, p. 2.



Source: SITELAB (2017)

10 SOUTH VAN NESS AVENUE MIXED-USE PROJECT

2015-004568ENV

FIGURE 5.1: PROPOSED PROJECT FULL PRESERVATION - ALTERNATIVE 2

The new building under Alternative 2 includes an approximately 548,500-gross-square-foot, 41-story single tower (400-feet-tall plus an additional 20 feet for roof screens and elevator penthouses) constructed with a trapezoidal footprint situated over a 120-foot-tall podium.

The Proposed Project Full Preservation Alternative would provide more retail and/or commercial space square footage than the proposed project or variant would (see Table 5.1, p. 5.2) because the existing building would be devoted to retail/commercial uses (the second floor would not be suitable for residential use) and both the historic building and the new building would include active ground-floor uses.[6] Overall, Alternative 2 would provide a total of about 64,900 gross square feet of retail and/or commercial space, with ground-floor access along Market Street, South Van Ness Avenue, 12th Street, and the newly created mid-block passage that would be aligned south of the historical resource building. The historic building would provide a total of about 59,400 gross square feet of retail and/or commercial space, with no residential uses. Under the Proposed Project Full Preservation Alternative, the new building would include approximately 435,700 gross square feet of residential use on the upper floors of the tower, with a total of 434 residential units (166 studio, 203 one-bedroom, 44 two-bedroom, and 21 three-bedroom). The tower would have 72 percent *tower efficiency*.[7]

Alternative 2 would require 50,000 cubic yards less excavation than the proposed project (50,000 cubic yards, compared to 100,000 cubic yards for the proposed project) for below-grade foundation and structural work, and for the two-level parking garage/basement. The garage/basement, which would be accessed from 12th Street, would contain approximately 47,900 gross square feet of parking area, including 239 parking spaces provided in stackers and 192 Class 1 bicycle parking spaces. Thirty-three Class 2 bicycle parking spaces would also be provided on the sidewalk. As with the proposed project and variant, the garage/basement would include off-street loading spaces.

Construction of the Proposed Project Full Preservation Alternative is expected to follow a 36-month construction schedule as would the proposed project. The same discretionary project approvals identified for the proposed project in Chapter 2, Project Description, on pp. 2.49-2.51 would be required for this alternative.

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6 The second floor of the historic building would not be suitable for residential use because the potential reuse of the ballroom as a performance venue would be incompatible with residential use. Additionally, the floor plate dimension of the historic building (approximately 150 feet by 200 feet wide) is unsuitable for residential layout, as there would need to be major penetration with a light well in the structure to provide required light and air for residential use. This would involve the loss of interior character-defining features of the historic building.

7 Tower efficiency is the ratio of net residential floor area to gross floor area for an average residential floor, which describes how much of an average floor would be rentable. A typical residential tower has an efficiency factor of 80–85 percent, assuming a typical residential core.

Impacts

Historic Architectural Resources

Section 4.1, Cultural Resources (Historic Architectural), concluded that demolition of the ballroom portion of the building at 10 South Van Ness would cause a substantial adverse change in the significance of a historical resource. The planning department has determined that the southern portion of the existing building, a garage addition to the original ballroom, does not exhibit the exterior character-defining features of the historical resource as identified in the Historic Resource Evaluation,[8] nor does it possess the character-defining interior features associated with the Fillmore West, its founder Bill Graham, and the San Francisco counter-cultural music scene of the late-sixties and early-seventies. For this reason, the garage addition is not considered a character-defining feature of the 10 South Van Ness historical resource.

The Proposed Project Full Preservation Alternative would comply, on balance, with the Secretary of the Interior's Standards for Rehabilitation by retaining and reusing the original ballroom building at the northern end of the project site. The non-contributing garage addition would be demolished and replaced with a new residential building on the southern portion of the project site. According to section 15126.4(b)(1) of the Public Resources Code (CEQA), if a project complies with the standards, the project's impact "will generally be considered mitigated below a level of significance and thus is not significant."

Under this alternative, the historic northern portion of the existing building, including its concrete construction, orientation, footprint, massing, façades, windows, and detailing, as well as the ballroom and its associated interior features, would be retained and restored. The non-historic metal screens that span the historic façades would be removed, and the non-historic storefronts would be retained. The non-contributing southern garage addition portion of the existing building would be demolished and a new mixed-use building would be constructed in its place, including a new 30-foot-wide mid-block passage. This east-west mid-block passage would provide access between South Van Ness Avenue and 12th Street and would visually separate the existing two-story historic building from the new building. The historic northern portion of the existing building has a southern wall that would be exposed after the removal of the non-historic southern portion of the building, which would comprise the historic building's façade along the mid-block passage.

Compared to the proposed project and variant, which would demolish the existing historical resource, the Proposed Project Full Preservation Alternative would retain and rehabilitate the historic ballroom resource. Demolition of the garage addition on the southern portion of the project site would not eliminate a character-defining feature of the resource. Although new

[8] Page and Turnbull, 10 South Van Ness Avenue Preservation Alternatives Report, San Francisco, California, January 30, 2018, Footnote 13 on p. 6.

construction on the southern portion of the project site would alter the resource's immediate visual context by replacing the non-contributing garage addition with a new 41-story residential tower, the significance of the ballroom building on the northern portion of the project site is not premised on it possessing a cohesive visual relationship with its immediate surroundings.

This alternative would retain the historic building's character-defining interior and exterior features. As such, the historic building would retain its ability to convey its historic and architectural significance. Therefore, the Proposed Project Full Preservation Alternative would not cause material impairment and, unlike the proposed project, would not result in a significant and unavoidable impact related to demolition of a historical resource. Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse (pp. 4.1.24-4.1.27) would not be applicable under this alternative.

Transportation and Circulation

The Proposed Project Full Preservation Alternative would include 550 fewer residential units than the proposed project (984 for the proposed project and variant, 434 for this alternative). However, the alternative would include about 34,500 more square feet of commercial use. The alternative would generate more vehicular trips than under the proposed project, as shown in **Table 5.3: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Proposed Project Full Preservation Alternative (Alternative 2)**.

Table 5.3: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Proposed Project Full Preservation Alternative (Alternative 2)

Project/Alternative	Person Trips					Vehicle Trips
	Auto	Transit	Walk	Other [a]	Total	
Weekday PM Peak Hour						
Proposed Project/Variant[b]	497	585	377	292	1,750	445
Proposed Project Full Preservation Alternative	740	344	283	101	1,467	468

Notes:

[a] Other mode includes bicycles, motorcycles, and taxis.

[b] As discussed in Section 4.2, Transportation and Circulation, p. 4.2.34, the variant's land uses would be the same as those in the proposed project, but with approximately 100 additional gross square feet of retail use and a slightly different mix of residential units (the total number of units would remain the same). These differences, however, would result in a negligible increase in the overall travel demand for the variant, which would be similar to that of the proposed project.

Sources: CHS Consulting, 2017 (for the proposed project/variant) and San Francisco Planning Department, 2018 (for the alternative)

Like the proposed project, the Proposed Project Full Preservation Alternative would include construction of one vehicular access to the parking garage from 12th Street. The alternative would also include a transportation demand management program aimed at reducing vehicular trips by encouraging trips by other transportation modes, as would the proposed project and the

variant. All other on-street transportation improvements proposed under the project would also be applicable with Alternative 2, and the straight-shot streetscape option could be included.

VEHICLE MILES TRAVELED AND INDUCED AUTOMOBILE TRAVEL

Like the proposed project, Alternative 2 would be located in Transportation Analysis Zone 578 (see Section 4.2, Transportation and Circulation, pp. 4.2.8-4.2.9). The data in Table 4.2.7: Average Daily Vehicle Miles Traveled per Capita – Existing Conditions, p. 4.2.39, show that the project site is in an area (Transportation Analysis Zone 578) where existing VMT per capita for the proposed uses is less than the corresponding existing regional average per capita minus 15 percent. As with the proposed project, the Full Preservation Alternative would meet the screening criterion for proximity to transit stations, which further indicates that it would not cause substantial additional VMT under both project and cumulative conditions.

Alternative 2 would also not include any project elements that would substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow lanes) or by adding new roadways to the network. As such, Alternative 2 would have less-than-significant project and cumulative impacts on induced automobile travel, similar to the proposed project.

TRAFFIC HAZARD IMPACTS

Alternative 2 would include similar improvements to the project site. Vehicular access to the parking garage would be from a similar driveway on 12th Street as with the proposed project. Although vehicle trips would be incrementally increased compared to the proposed project, Alternative 2 would have less-than-significant project and cumulative impacts related to traffic hazards and could implement improvement measures identified for the proposed project (I-TR-2a: Monitoring and Abatement of Queues and I-TR-2b: Active Garage Driveway Controls and Curbside Management, pp. 4.2.41-4.2.42) to further reduce less-than-significant traffic hazard impacts.

OTHER TRANSPORTATION TOPICS

Alternative 2 would result in an increase in bicyclists, pedestrians, and transit users in the project area. It would also result in the need for loading spaces and emergency vehicle access. Nonetheless, similar to the proposed project, Alternative 2 would not include any design features that would create hazards for pedestrians and bicyclists. Additionally, like the proposed project, Alternative 2 would not increase the numbers of riders to a level that would exceed established significance thresholds. As such, Alternative 2 would result in less-than-significant project and cumulative impacts related to these other transportation topics, as would the proposed project.

CONSTRUCTION CUMULATIVE IMPACTS RELATED TO TRANSPORTATION

Under cumulative conditions, construction activities for Alternative 2 would be less than under the proposed project or variant. However, the timing of cumulative project construction may overlap with other construction activities in the study area for transportation improvement projects (e.g., Better Market Street, Van Ness Bus Rapid Transit [BRT] project) and other development projects (e.g., 1629 Market Street, 30 Otis Street, One Oak Street, 1546-1564 Market Street, 1500 Mission Street, 1601 Mission Street, 30 Van Ness Avenue, and 1 South Van Ness Avenue). While the timing for cumulative project construction is variable and subject to change, the duration and potential magnitude of construction activities for these projects could substantially interfere with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in potentially hazardous cumulative construction conditions. In some instances, concurrent construction activities may not result in significant impacts. However, given the magnitude of expected construction activities and the concentration of many such activities in a small geographic area, cumulative construction-related impacts on transportation and circulation are conservatively deemed significant. Implementing a coordinated construction management plan as required by the City would reduce but not fully mitigate these impacts, which would be significant and unavoidable for Alternative 2, similar to the proposed project.

Noise

Noise impacts under Alternative 2 would be similar in character to, but reduced from, those identified for the proposed project in Section 4.3, Noise due to the lower intensity and duration of demolition and construction activities, and the reduced intensity of land uses under this alternative. As with the proposed project, implementation of Mitigation Measure M-NO-1: Prepare and Implement Construction Noise Plan, pp. 4.3.25-4.3.27, and Mitigation Measure M-NO-2: Require that Exterior Mechanical Equipment Comply with Noise Ordinance Prior to Certificate of Occupancy, p. 4.3.33, would reduce the impacts of construction and operational noise to less-than-significant levels. Implementation of Mitigation Measure M-NO-1 would also reduce the contribution to significant cumulative construction noise to a less-than-considerable level, as described for the proposed project under Impact C-NO-1.

Air Quality

Alternative 2 would have substantially fewer residential units and less residential building area than the proposed project (434 under Alternative 2 and 984 under the proposed project). As such, impacts related to air quality would be reduced from those identified for the proposed project in Section 4.4, Air Quality. Like the proposed project, this alternative would not result in a significant impact related to construction and operational criteria pollutants, construction $PM_{2.5}$ and toxic air contaminants (TACs) (with implementation of Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions, and Mitigation Measure M-AQ-3b: Implement Best Available Control Technology for Diesel Equipment), operational $PM_{2.5}$ and

TACs, or odors. While this alternative would involve less construction activity than would the proposed project or variant, it would still contribute considerably to significant cumulative health risk effects on sensitive receptors. The contribution would be reduced to a less-than-considerable level with implementation of Mitigation Measure M-AQ-3a, as for the proposed project.

Wind

Under Alternative 2, due to the absence of the north tower and podium, wind conditions are expected to be reduced in comparison with the proposed project, particularly to the immediate north of the project site. The full preservation alternative would also reduce the level of downdrafts onto South Van Ness Avenue and thus would be anticipated to have a lesser impact.[9] In any case, planning code section 148 would require wind tunnel testing to ensure that the design would not result in new wind hazard exceedances. The wind canopies and street trees under the proposed project could also be implemented for the new building under this alternative and would be expected to improve wind conditions under the full preservation alternative. However, like the proposed project, it is expected that Alternative 2 would make a cumulatively considerable contribution to a significant cumulative wind impact. Implementing Mitigation Measure M-C-WI-1: Design Measures to Reduce Cumulative Off-Site Wind Impacts, in Section 4.5, Wind, p. 4.5.15, would reduce the impact, but not to a less-than-significant level.

Shadow

Due to the absence of the north tower and podium under this alternative, shadow impacts on public open spaces would be reduced in comparison with the proposed project. To the extent that new shading on Recreation and Park Commission properties and other public open spaces would occur the area affected by, and the duration of, net new shadow would be reduced from that of the proposed project. As with the proposed project, this alternative would result in a less-than-significant impact related to shadow.

Other Topics

The initial study concluded that the proposed project would have no impacts or less-than-significant impacts in the analysis areas/topics listed on p. 5.13.

The Proposed Project Full Preservation Alternative would occupy the same building site as the proposed project and would have a similar, though less intensive, land use development program overall (1,071,095 gross square feet of development under the proposed project and 548,500 gross square feet under this alternative). As a result, the construction and operational impacts of Alternative 2 for each of the initial study environmental topics noted on p. 5.13 would be similar to, but reduced from, those of the proposed project.

[9] BMT Fluid Mechanics, 10 South Van Ness Avenue – Preservation Alternatives, August 24, 2018.

The Proposed Project Full Preservation Alternative would not result in any new potentially significant impacts for the environmental topics identified in the initial study for the proposed project. Therefore, the conclusions in the initial study for these environmental topics would remain applicable to this alternative. The mitigation measures presented in the initial study for the proposed project (Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring, M-CR-2: Tribal Cultural Resources Interpretive Program, and M-GE-5: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources) would also be applicable to the Proposed Project Full Preservation Alternative.

Conclusion

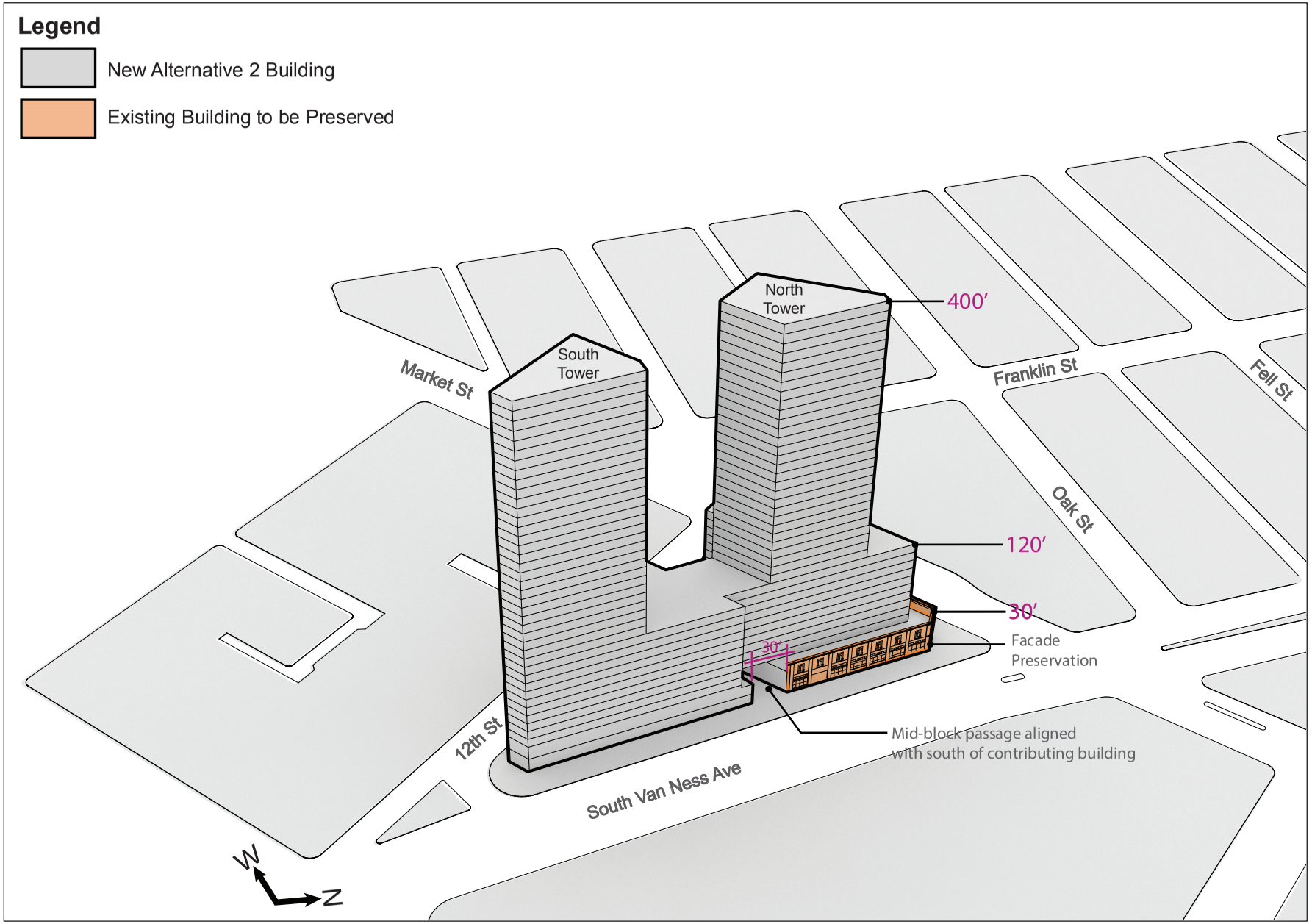
By retaining the existing historic building, the Proposed Project Full Preservation Alternative would avoid the significant and unavoidable impact related to demolition of a historical resource. Therefore, there would be no significant impact related to historic architectural resources, and Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse, identified for the proposed project, would not apply.

As with the proposed project, the Proposed Project Full Preservation Alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic) and cumulative wind conditions, less-than-significant impacts related to air quality and noise with mitigation, and less-than-significant impacts related to other transportation subtopics and shadow.

5.4 PROPOSED PROJECT PARTIAL PRESERVATION ALTERNATIVE – ALTERNATIVE 3

Description

The purpose of the Proposed Project Partial Preservation Alternative is to consider a project that would lessen the significant impacts of the proposed project on the existing historical resource while accommodating more of the land development program than the Proposed Project Full Preservation Alternative would. The Proposed Project Partial Preservation Alternative would retain historically significant portions of the existing building at 10 South Van Ness Avenue and adapt the property for residential use by adding two new buildings. Although all interior character-defining features would be removed, the only main exterior character-defining feature that would be partially compromised is the massing. The majority of the exterior character-defining features would be retained, including the concrete walls, orientation, footprint, façades, windows, and detailing. (See **Figure 5.2: Proposed Project Partial Preservation-Alternative 3.)**



Source: SITELAB (2017)

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2015-004568ENV

FIGURE 5.2: PROPOSED PROJECT PARTIAL PRESERVATION - ALTERNATIVE 3

The Proposed Project Partial Preservation Alternative would involve the construction of two new towers (the north tower and the south tower) and would partially retain the historic building on site. The two new towers would both be 41 stories and 400 feet tall (420 feet total, including roof screens and elevator penthouses) constructed above a 120-foot-tall podium. The north tower would incorporate the historic façades portion of the historical resource and would have a much small trapezoidal footprint that would be situated above the southeastern portion of the podium. The south tower would have a podium with a triangular footprint and a tower with a smaller triangular footprint situated above the southern wedge portion of the podium. Under the Proposed Project Partial Preservation Alternative, the north and south podiums would be separated by the mid-block passage at the ground and second floors and connected on the upper podium floors. The north tower would have 72 percent tower efficiency, and the south tower would have 68 percent tower efficiency.[10] The façades of the two proposed buildings under the Proposed Project Partial Preservation Alternative would be designed with modern materials, such as steel and glazing.

The Proposed Project Partial Preservation Alternative would have a total of approximately 812,500 gross square feet (including parking and excluding rooftop mechanical). The two new buildings under the Proposed Project Partial Preservation Alternative would have a total of about 31,400 gross square feet of retail and/or commercial space on the ground floor with access along Market Street, South Van Ness Avenue, 12th Street. There would be about 707,600 gross square feet (486,200 net square feet) of residential uses across both buildings on the upper floors (also including residential lobbies on the ground floor), with a total of 713 residential units (272 studio, 334 one-bedroom, 72 two-bedroom, and 35 three-bedroom units).

Below grade, the buildings would be connected via a two-level parking garage/basement accessed from 12th Street, and there would be about 73,500 gross square feet of parking with 367 parking spaces (in stackers) and 257 Class 1 bicycle parking spaces. Forty-eight Class 2 bicycle parking spaces would also be provided on the sidewalk. As with the proposed project and variant, the garage/basement would include off-street loading spaces. Alternative 2 would require 30,000 cubic yards less excavation than the proposed project (70,000 cubic yards, compared to 100,000 cubic yards for the proposed project) for below-grade foundation and structural work, and for the two-level parking garage/basement.

Construction of the Proposed Project Partial Preservation Alternative would be expected to follow a 36-month construction schedule as would the proposed project. The same discretionary project approvals identified in Chapter 2, Project Description, on pp. 2.49-2.51 would be required for this alternative.

[10] A typical residential tower has an efficiency factor of 80-85 percent, assuming a typical residential core.

Impacts

Historic Architectural Resources

Under Alternative 3, the three historic northern façades and the historic windows of the existing building at 10 South Van Ness Avenue would be retained and rehabilitated. The historic interior, including the double-height ballroom volume, the southeast wall, and the roof of the historic northern portion of the building be demolished. The non-historic metal screens that span the historic façades would be removed, although the non-historic storefronts would be retained.

Compared to the proposed project which would demolish the existing historical resource, Alternative 3 would construct a new mixed-use building directly behind and attached to the historic façades, although the new building volume above the historic façades would be set back 20–60 feet. The non-historic southern portion of the existing building would be demolished and a second new mixed-use building would be constructed in its place, also allowing for a new 30-foot-wide mid-block passage. As a result, this east-west mid-block passage would provide access between South Van Ness Avenue and 12th Street, and would visually separate the historic façade from the new building façade at the southern portion of the property.

By retaining the historic northern façades of the historical resource, the impact of the Proposed Project Partial Preservation Alternative on historical resources would be less than the impact of the proposed project, because it would partially retain the resource. Nevertheless, as with the proposed project, this alternative would involve demolition of the original second-floor ballroom interiors associated with the Fillmore West and with Bill Graham. As a result, this alternative would materially impair the historical resource, and, like the proposed project, would not avoid the significant and unavoidable impacts on historical resources. Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse would remain applicable under this alternative, but would not reduce this impact to a less-than-significant level.

Transportation and Circulation

The Proposed Project Partial Preservation Alternative would include 271 fewer residential units than the proposed project (984 for the proposed project, 713 for this alternative). This alternative would also include about 1,050 more square feet of commercial uses. Therefore, the alternative would generate fewer vehicular trips than under the proposed project, as shown in **Table 5.4: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Proposed Project Partial Preservation Alternative (Alternative 3)**.

Table 5.4: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Proposed Project Partial Preservation Alternative (Alternative 3)

Project/Alternative	Person Trips					Vehicle Trips
	Auto	Transit	Walk	Other [a]	Total	
Weekday PM Peak Hour						
Proposed Project/Variant[b]	497	585	377	292	1,750	445
Proposed Project Partial Preservation Alternative	562	442	245	147	1,395	417

Notes:

[a] Other mode includes bicycles, motorcycles, and taxis.

[b] As discussed in Section 4.2, Transportation and Circulation, p. 4.2.34, the variant's land uses would be the same as those in the proposed project, but with approximately 100 additional gross square feet of retail use and a slightly different mix of residential units (the total number of units would remain the same). These differences, however, would result in a negligible increase in the overall travel demand for the variant, which would be similar to that of the proposed project.

Sources: CHS Consulting, 2017 (for the proposed project/variant) and San Francisco Planning Department, 2018 (for the alternative)

Like the proposed project, the Proposed Project Partial Preservation Alternative would include one vehicular access to the parking garage from 12th Street. The alternative would also include a transportation demand management program aimed at reducing vehicular trips by encouraging trips by other transportation modes, as would the proposed project. All other on-street transportation improvements proposed under the project (including the straight-shot streetscape option) would be applicable to Alternative 3.

CONSTRUCTION CUMULATIVE IMPACTS

Under cumulative conditions, construction activities for Alternative 3 would be less than under the proposed project or variant. However, the timing of cumulative project construction may overlap with other construction activities in the study area for transportation improvement projects (e.g., Better Market Street, Van Ness Bus Rapid Transit [BRT] project) and other development projects (e.g., 1629 Market Street, 30 Otis Street, One Oak Street, 1546-1564 Market Street, 1500 Mission Street, 1601 Mission Street, 30 Van Ness Avenue, and 1 South Van Ness Avenue). While the timing for cumulative project construction is variable and subject to change, the duration and potential magnitude of construction activities for these various projects could substantially interfere with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in potentially hazardous cumulative construction conditions. In some instances, concurrent construction activities may not result in significant impacts. However, given the magnitude of expected construction activities and the concentration of many such activities close to each other in a small geographic area, cumulative construction-related impacts on transportation and circulation are conservatively deemed significant. Implementing a coordinated construction management plan as required by the City would reduce but not fully mitigate these impacts, which would be significant and unavoidable for Alternative 3, similar to the proposed project.

Noise

Noise impacts under Alternative 3 would be similar in character to, but reduced from, those identified for the proposed project in Section 4.3, Noise due to the lower intensity and duration of demolition and construction activities, and the reduced intensity of land uses under this alternative. As with the proposed project, implementation of Mitigation Measure M-NO-1: Prepare and Implement Construction Noise Plan, pp. 4.3.25-4.3.27, and Mitigation Measure M-NO-2: Require that Exterior Mechanical Equipment Comply with Noise Ordinance Prior to Certificate of Occupancy, p. 4.3.33, would reduce the impacts of construction and operational noise to less-than-significant levels. Implementation of Mitigation Measure M-NO-1 would also reduce the contribution to significant cumulative construction noise to a less-than-considerable level, as described for the proposed project under Impact C-NO-1.

Air Quality

Alternative 3 would construct a somewhat smaller building (812,500 gsf compared to 1,071,095 gsf) and would have fewer residential units (713 compared to 984 under the proposed project). As such, impacts related to air quality would be slightly reduced from the less-than-significant impacts identified for the proposed project in Section 4.4. Like the proposed project, this alternative would not result in a significant impact related to construction and operational criteria pollutants, construction $PM_{2.5}$ or TACs (with implementation of Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions, and Mitigation Measure M-AQ-3b: Implement Best Available Control Technology for Diesel Equipment), operational $PM_{2.5}$ or TACs, and odors. While this alternative would involve less construction activity than would the proposed project or variant, it would still contribute considerably to significant cumulative health risk effects on sensitive receptors. The contribution would be reduced to a less-than-considerable level with implementation of Mitigation Measure M-AQ-3a, as for the proposed project.

Wind

Under Alternative 3 wind conditions in and around the site would be expected to be generally comparable to those of the proposed project, with the possible exception of localized effects (e.g., building corners along the walkway separating both towers), which could be captured via wind tunnel testing.[11] In any case, planning code section 148 would require wind tunnel testing to ensure that the design would not result in wind hazard exceedances. The wind canopies and street trees under the proposed project could be implemented for the new building under this alternative and would be expected to improve wind conditions under this alternative. However, like the proposed project, it is expected that Alternative 3 would make a cumulatively considerable contribution to a significant cumulative wind impact. Implementing Mitigation Measure

[11] BMT Fluid Dynamics, 10 South Van Ness Avenue – Preservation Alternatives, August 24, 2018.

M-C-WI-1: Design Measures to Reduce Cumulative Off-Site Wind Impacts, in Section 4.5, Wind, p. 4.5.15, would reduce the impact, but not to a less-than-significant level.

Shadow

The two-tower scheme under the Proposed Project Partial Preservation Alternative would be substantially similar in height and configuration to the proposed project. As such, shadow impacts on open spaces would be similar to those described for the proposed project in Section 4.6, Shadow. As with the proposed project, this alternative would result in a less-than-significant impact related to shadow.

Other Topics

The initial study concluded that the proposed project would have no impacts or less-than-significant impacts in the analysis areas/topics listed on p. 5.13.

The Proposed Project Partial Preservation Alternative would occupy the same building site as the proposed project and would have a similar, though reduced, land use development program overall (1,071,095 gross square feet of development under the proposed project and 812,500 gross square feet under this alternative). As a result, the construction and operational impacts of Alternative 3 for each of the initial study environmental topics noted above on p. 5.13 would be similar to, but reduced from, those of the proposed project.

The Proposed Project Partial Preservation Alternative would not result in any new potentially significant impacts for the environmental topics identified in the initial study for the proposed project. Therefore, the conclusions in the initial study for these environmental topics would remain applicable to the alternative. The mitigation measures presented in the initial study for the proposed project (Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring, M-CR-2: Tribal Cultural Resources Interpretive Program, and M-GE-5: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources) would also be applicable to the Proposed Project Partial Preservation Alternative.

Conclusion

Like the proposed project, the Proposed Project Partial Preservation Alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic) and cumulative wind conditions, less-than-significant impacts related to noise and air quality with mitigation, and less-than-significant impacts related to other transportation subtopics and shadow.

Alternative 3 would also not avoid the significant and unavoidable impact on historical resources since the historic interior, including the ballroom, the southeast wall, and the roof of the historic north portion of the resource, would be demolished, resulting in a significant and unavoidable impact with mitigation. If Alternative 3 is chosen, mitigation measures for this alternative would

be tailored to ensure that the Secretary of the Interior's Standards for documentation of historical resources are met.

5.5 VARIANT FULL PRESERVATION – ALTERNATIVE 4

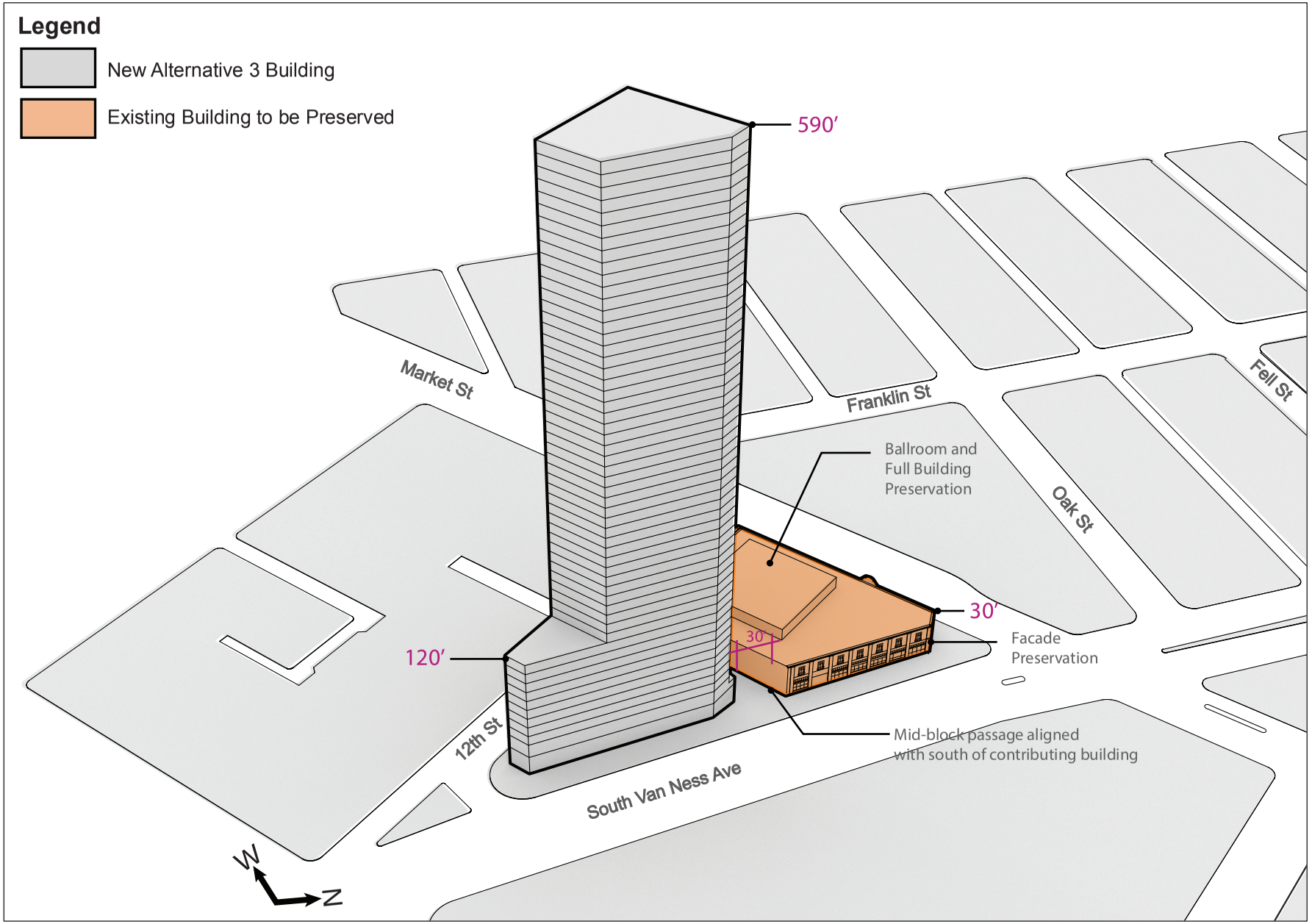
The purpose of Alternative 4 is to consider a plan that would lessen the significant impacts of the proposed variant on the existing historical resource. Alternative 4 would retain the significant portions of the existing historic building at 10 South Van Ness Avenue and adapt the property for residential use by adding a new building on the southern portion of the site. Alternative 4 would retain all character-defining features of the historic building.

Description

Alternative 4 would include a new building while retaining the existing historical resource on the northern portion of the project site. Under the Variant Full Preservation (Alternative 4), the existing historical resource at 10 South Van Ness, would undergo some changes (described below in the Historic Architectural Resources discussion under Impacts) but it would retain all of its exterior and interior character-defining features. (See **Figure 5.3: Variant Full Preservation-Alternative 4**.)

Alternative 4 would include a 55-story single tower (590-feet-tall plus an additional 20 feet for roof screens and elevator penthouses) constructed with a trapezoidal footprint situated over a 120-foot-tall podium with a triangular footprint. The single tower design would preserve the adjacent historical resource, since construction of the single tower avoids the need for deep excavation surrounding the existing building while still adhering to the BART easement at the north end of the site. The façades of the new building would be clad in modern materials, such as steel and glazing.

The Variant Full Preservation Alternative would provide more retail and/or commercial space square footage than the variant (see Table 5.1, p. 5.2) because the existing building would be devoted to retail/commercial uses (the second floor would not be suitable for residential use) and both the historic building and the new building would include active ground-floor uses. Overall, Alternative 4 would provide a total of about 64,400 gross square feet of retail and/or commercial space, with ground-floor access along Market Street, South Van Ness Avenue, 12th Street, and the newly created mid-block passage that would be aligned south of the existing historical resource. The historic building would be used for retail and/or commercial space, with no residential uses. Under the Variant Full Preservation Alternative, the new building would include approximately 619,900 gross square feet of residential use on the upper floors of the tower, with a total of 605 residential units (213 studio, 276 one-bedroom, 102 two-bedroom, and 14 three-bedroom).



Source: SITELAB (2017)

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FIGURE 5.3: VARIANT FULL PRESERVATION - ALTERNATIVE 4

Alternative 4 would require 40,000 cubic yards less excavation than the variant (60,000 cubic yards, compared to 100,000 cubic yards for the variant) for below grade foundation and structural work, and for the two-level parking garage/basement. The garage/basement, which would be accessed from 12th Street, would contain approximately 65,000 gross square feet of parking area, including 325 parking spaces provided in stackers, and 235 Class 1 bicycle parking spaces. Forty-one Class 2 bicycle parking would also be provided on the sidewalk. As with the variant, the garage/basement would include off-street loading spaces.

Construction of the Proposed Project Full Preservation Alternative would be expected to follow a 36-month construction schedule as would the variant. The same discretionary project approvals identified in Chapter 2, Project Description, on pp. 2.49-2.51 would be required for this alternative.

Impacts

Historic Architectural Resources

Section 4.1, Cultural Resources (Historic Architectural), concluded that demolition of the ballroom portion of the building at 10 South Van Ness would cause a substantial adverse change in the significance of a historical resource. The planning department has determined that the southern portion of the existing building, a garage addition to the original ballroom does not exhibit the exterior character-defining features of the historical resource as identified in the Historic Resource Evaluation,[12] nor does it possess the character-defining interior features associated with the Fillmore West, its founder Bill Graham, and the San Francisco counter-cultural music scene of the late-sixties and early-seventies. For this reason, the garage addition is not considered a character-defining feature of the 10 South Van Ness historical resource.

The Variant Full Preservation Alternative would comply, on balance, with the Secretary of the Interior's Standards for Rehabilitation by retaining and reusing the building at the northern end of the project site, including the original ballroom. The non-contributing garage addition would be demolished and replaced with a new residential building on the southern portion of the project site. According to section 15126.4(b)(1) of the Public Resources Code (CEQA), if a project complies with the standards, the project's impact "will generally be considered mitigated below a level of significance and thus is not significant."

[12] Page and Turnbull, 10 South Van Ness Avenue Preservation Alternatives Report, San Francisco, California, January 30, 2018, Footnote 13 on p. 6.

Under this alternative, the historic northern portion of the existing building, including its concrete construction, orientation, footprint, massing, façades, windows, and detailing, as well as the ballroom and associated interior features, would be retained and restored. The non-historic metal screens that span the historic façades would be removed, and the non-historic storefronts would be retained. The non-contributing southern garage addition would be demolished and a new mixed-use building would be constructed in its place, also allowing for a new 30-foot-wide mid-block passage. This east-west mid-block passage would provide access between South Van Ness Avenue and 12th Street, and would visually separate the two-story historic building from the new building. Because of the existing building's original construction, the historic northern portion has a southeast wall that would be exposed after the removal of the non-historic southern portion of the building and used as the façade along the mid-block passage.

The Variant Full Preservation Alternative would retain and rehabilitate the existing historic ballroom resource. Demolition of the garage addition on the southern portion of the project site would not eliminate a character-defining feature of the historical resource. Although new construction on the southern portion of the project site would alter the resource's immediate visual context by replacing the non-contributing garage addition with a new 55-story residential tower, the significance of the ballroom building on the northern portion of the project site is not premised on its possessing a cohesive visual relationship with its immediate visual surroundings.

This alternative would retain the historic building's character-defining interior and exterior features. As such, the historic building would retain its ability to convey its historic and architectural significance. Therefore, the Variant Full Preservation Alternative would not materially impair the existing historical resource and, unlike the variant, would not result in a significant and unavoidable impact. Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse would not be applicable under this alternative.

Transportation and Circulation

Alternative 4 would have 379 fewer residential units than the proposed project (984 for the proposed project, 605 for Alternative 4) and 33,950 gross square feet more commercial square feet. Alternative 4 would therefore generate fewer vehicular trips for residential uses and potentially more trips for commercial uses as shown in **Table 5.5: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Variant Full Preservation Alternative (Alternative 4)**.

Table 5.5: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Variant Full Preservation Alternative (Alternative 4)

Project/Alternative	Person Trips					Vehicle Trips
	Auto	Transit	Walk	Other [a]	Total	
Weekday PM Peak Hour						
Proposed Project/Variant [b]	497	585	377	292	1,750	445
Variant Full Preservation Alternative	808	441	320	135	1,705	534

Note:

[a] Other mode includes bicycles, motorcycles, and taxis.

[b] As discussed in Section 4.2, Transportation and Circulation, p. 4.2.34, the variant's land uses would be the same as those in the proposed project, but with approximately 100 additional gross square feet of retail use and a slightly different mix of residential units (the total number of units would remain the same). These differences, however, would result in a negligible increase in the overall travel demand for the variant, which would be similar to that of the proposed project.

Sources: CHS Consulting, 2017 (for the proposed project/variant) and San Francisco Planning Department, 2018 (for the alternative)

Like the proposed project, Alternative 4 would include a transportation demand management program aimed at reducing vehicular trips and encouraging the use of alternative transportation modes.

Alternative 4 would result in impacts related to transportation topics that would be substantially similar to those of Alternative 2 and the proposed project or variant, as it would be located in the same low-vehicle-miles-traveled area, and would include a transportation demand management program and similar pedestrian and bicycle improvements. Additionally, Alternative 4 would result in traffic hazards and emergency vehicle access and transit impacts similar to those of Alternative 2 and the proposed project or variant because it would include similar project elements. (For an in-depth discussion, see the discussion of Alternative 2 impacts on pp. 5.18-5.20.) Thus, the impacts of Alternative 4 on transportation and circulation would be less than significant.

Additionally, similar to the proposed variant and Alternative 2, implementing a coordinated construction management plan as required by the City would reduce but not fully mitigate cumulative construction impacts, which would be significant and unavoidable under Alternative 4, as with the proposed project.

Noise

Noise impacts under Alternative 4 would be similar in character to, but reduced from, those identified for the variant in Section 4.3, Noise due to the lower intensity and duration of demolition and construction activities, and the reduced intensity of land uses under this alternative. As with the variant, implementation of Mitigation Measure M-NO-1: Prepare and Implement Construction Noise Plan, pp. 4.3.25-4.3.27, and Mitigation Measure M-NO-2: Require that Exterior Mechanical Equipment Comply with Noise Ordinance Prior to Certificate of Occupancy, in Section 4.3, Noise, p. 4.3.33, would reduce the impacts of construction and operational noise to less-than-significant levels. Implementation of Mitigation Measure M-NO-1

would also reduce the contribution to significant cumulative construction noise impacts to a less-than-considerable level.

Air Quality

Alternative 4 would have fewer residential units (605 residential units compared to 984 under the variant). As such, impacts related to air quality would be reduced from those identified for the variant. Like the variant, this alternative would not result in a significant impact related to construction and operational criteria pollutants, construction $PM_{2.5}$ or TACs (with implementation of Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions, and Mitigation Measure M-AQ-3b: Implement Best Available Control Technology for Diesel Equipment), operational $PM_{2.5}$ or TACs, and odors. Also like the variant, implementation of Mitigation Measure M-AQ-3a would reduce the contribution of this alternative to significant cumulative construction-related health risk impacts to a less-than-considerable level.

Wind

Under Alternative 4, differences from the variant tower orientation and the changes in massing of the podium could result in higher winds driven down the tower façades, which are more exposed to prevailing westerly winds compared to the variant tower and would likely create more downdrafts resulting in increases in the number of hazard hours within the passage and on the opposite side of South Van Ness Avenue. [13] In any case, planning code section 148 would require wind tunnel testing to ensure that the design would not result in wind hazard exceedances. The wind canopies and tree plantings included with the variant could be implemented for the new building under this alternative and would be expected to improve wind conditions under the variant full preservation alternative. However, like the variant, it is expected that Alternative 4 would make a cumulatively considerable contribution to a significant cumulative wind impact. Implementing Mitigation Measure M-C-WI-1: Design Measures to Reduce Cumulative Off-Site Wind Impacts, in Section 4.5, Wind, p. 4.5.15, would reduce the impact, but not to a less-than-significant level.

Shadow

Due to the more southerly position of 590-foot-tall tower within the project site under Alternative 4 compared to that of the variant, shadow impacts on public open spaces would be reduced somewhat. To the extent that new shading on Recreation and Park Commission properties and other public open spaces would occur, the duration of shadow on public open spaces under the Alternative 4 would be slightly less overall than that of the variant. As with the variant, this alternative would result in a less-than-significant impact related to shadow.

[13] BMT Fluid Mechanics, 10 South Van Ness Avenue – Preservation Alternatives, August 24, 2018.

Other Topics

The initial study concluded that the variant would have no impacts or less-than-significant impacts in the analysis areas/topics listed on p. 5.13.

The Variant Full Preservation Alternative would occupy the same building site as the variant and would have a similar, though less intensive, land use development program overall (1,072,989 gross square feet of development under the variant and 749,300 gross square feet under this alternative). As a result, the construction and operational impacts of Alternative 4 for each of the initial study environmental topics noted above on p. 5.10 would be similar to, but reduced from, those of the variant.

The Variant Full Preservation Alternative would not result in any new potentially significant impacts for the environmental topics identified in the initial study for the variant. Therefore, the conclusions in the initial study for these environmental topics would remain applicable to this alternative. The mitigation measures identified in the initial study for the variant (Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring, M-CR-2: Tribal Cultural Resources Interpretive Program, and M-GE-5: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources) would also be applicable to the Variant Full Preservation Alternative.

The Variant Full Preservation Alternative would not result in any new potentially significant impacts for the environmental topics identified in the initial study for the variant. Therefore, the conclusions in the initial study for these environmental topics would remain applicable to the alternative. The mitigation measures presented in the initial study for the variant (Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring, M-CR-2: Tribal Cultural Resources Interpretive Program, and M-GE-5: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources) would also be applicable to the Variant Full Preservation Alternative.

Conclusion

By retaining the existing historic building, the Variant Full Preservation Alternative would avoid the significant and unavoidable impact related to the demolition of this historical resource. Unlike the variant, there would be no significant impact related to historic architectural resources, and Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse would not apply.

As with the variant, the Variant Full Preservation Alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic) and cumulative wind conditions, less-than-significant impacts related to air quality and noise with mitigation, and less-than-significant impacts related to other transportation subtopics and shadow.

5.6 VARIANT PARTIAL PRESERVATION – ALTERNATIVE 5

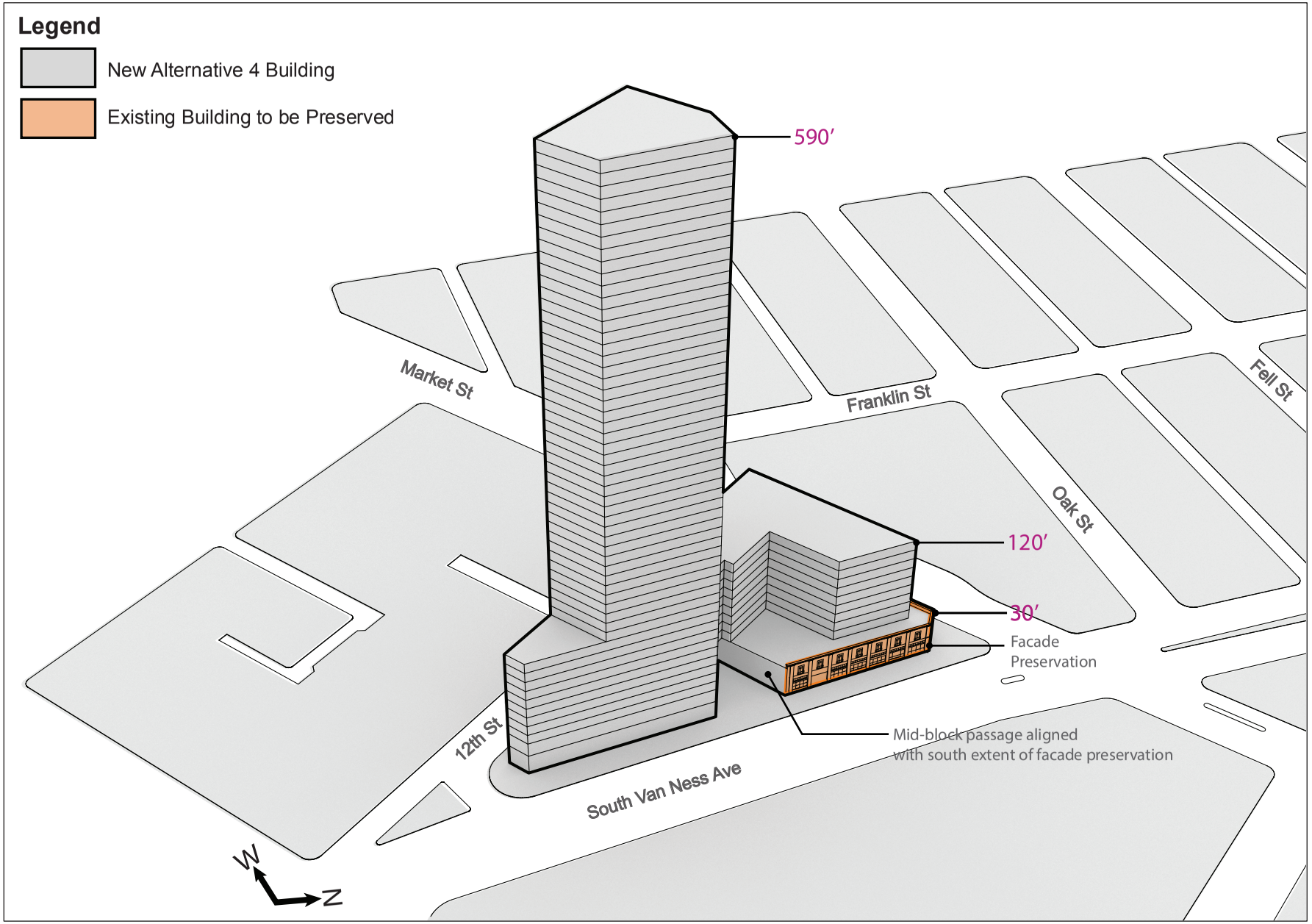
The purpose of the Variant Partial Preservation Alternative is to consider a project that would lessen the significant impacts of the variant on the existing historical resource. The Variant Partial Preservation Alternative would retain the historically significant portions of the existing building at 10 South Van Ness Avenue and adapt the property for residential use by adding a new building. Although all interior character-defining features would be removed, the character-defining features of the building's exterior would be partially retained, including the concrete walls, orientation, footprint, façades, windows, and detailing.

Description

The Variant Partial Preservation Alternative would include construction of a new tower on the southern portion of the project site. It would partially retain the historic building on site while accommodating more of the land development program than the Proposed Project Partial Preservation Alternative. The new tower would be 55 stories and 590 feet tall (610 feet including roof screens and elevator penthouses) constructed above a 120-foot-tall podium, with a triangular footprint. (See **Figure 5.4: Variant Partial Preservation- Alternative 5**.) In the northern portion of the project site, the podium would be retained and would incorporate the historic façades of the historical resource. Under the Variant Partial Preservation Alternative, the north and south podiums would be separated by a mid-block passage. The façades of the tower under the Variant Partial Preservation Alternative would be designed with modern materials, such as steel and glazing.

The Variant Partial Preservation Alternative would have a total of approximately 876,800 gross square feet (including parking and excluding rooftop mechanical). The new building under the Variant Partial Preservation Alternative would have a total of about 28,100 gross square feet of retail and/or commercial space on the ground floor with access along Market Street, South Van Ness Avenue, and 12th Street. There would be about 770,300 gross square feet (543,700 net square feet) of residential use across both buildings on the upper floors (also including residential lobbies on the ground floor), with a total of 765 residential units (270 studio, 349 one-bedroom, 129 two-bedroom, and 17 three-bedroom units).

Below grade, the building would include a two-level parking garage/basement accessed from 12th Street, and there would be about 78,400 gross square feet of parking with 392 parking spaces (in stackers) and space for 270 Class 1 bicycle parking spaces. Forty-nine Class 2 bicycle parking spaces would also be provided on the sidewalk. As with the variant, the garage/basement would include off-street loading spaces. Alternative 5 would require 30,000 cubic yards less excavation than the variant (70,000 cubic yards, compared to 100,000 cubic yards for the variant) for below-grade foundation and structural work and for the two-level parking garage/basement.



Source: SITELAB (2017)

10 SOUTH VAN NESS AVENUE MIXED-USE PROJECT
2015-004568ENV

FIGURE 5.4: VARIANT PARTIAL PRESERVATION - ALTERNATIVE 5

Construction of the Variant Partial Preservation Alternative would be expected to follow a 36-month construction schedule as would the proposed project. The same discretionary project approvals identified in Chapter 2, Project Description, on pp. 2.49-2.51 would be required for this alternative.

Impacts

Historic Architectural Resources

Under Alternative 5, the three historic northern façades and the historic windows of the existing building at 10 South Van Ness Avenue would be retained and rehabilitated. The historic interior, including the double-height ballroom volume, the southeast wall, and the roof of the historic northern portion of the building, would be demolished. The non-historic metal screens that span the historic façades would be removed, although the non-historic storefronts would be retained.

Compared to the variant, which would demolish the existing historical resource, Alternative 5 would construct a new mixed-use building directly behind and attached to the historic façades; the new building volume above the historic façades would be set back 20–60 feet. The non-historic southern portion of the existing building would be demolished and a second new mixed-use building would be constructed in its place, allowing for a new 30-foot-wide mid-block passage. This east-west mid-block passage would provide access between South Van Ness Avenue and 12th Street, and would visually separate the historic façade from the new building façade at the southern portion of the property.

By retaining the historic northern façades of the historical resource, the Variant Partial Preservation Alternative would improve upon the impact of the variant, because it would partially retain the historical resource. Nevertheless, as with the variant, because this alternative would require demolition of the original second-floor ballroom interiors associated with the Fillmore West and with Bill Graham, it would materially impair the historical resource, and therefore would result in significant and unavoidable impacts on historical resources. Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse would remain applicable under this alternative, but would not reduce this impact to a less-than-significant level.

Transportation and Circulation

The Variant Partial Preservation Alternative would have 219 fewer residential units than the variant (984 for the variant, 765 for Alternative 5) and a similar number of commercial square feet. Alternative 5 would generate fewer vehicular trips for residential uses and a similar number of trips for commercial uses as shown in **Table 5.6: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Variant Partial Preservation Alternative (Alternative 5)**.

Table 5.6: Trip Generation by Mode – Weekday PM Peak Hour, Proposed Project and Variant Partial Preservation Alternative (Alternative 5)

Project/Alternative	Person Trips					Vehicle Trips
	Auto	Transit	Walk	Other [a]	Total	
Weekday PM Peak Hour						
Proposed Project/Variant[b]	497	585	377	292	1,750	445
Variant Partial Preservation Alternative	558	471	248	158	1,435	425

Notes:

[a] Other mode includes bicycles, motorcycles, and taxis.

[b] As discussed in Section 4.2, Transportation and Circulation, p. 4.2.34, the variant's land uses would be the same as those in the proposed project, but with approximately 100 additional gross square feet of retail use and a slightly different mix of residential units (the total number of units would remain the same). These differences, however, would result in a negligible increase in the overall travel demand for the variant, which would be similar to that of the proposed project.

Sources: CHS Consulting, 2017 (for the proposed project/variant) and San Francisco Planning Department, 2018 (for the alternative)

Like the variant, Alternative 5 would include a transportation demand management program aimed at reducing vehicular trips and encouraging the use of alternative transportation modes.

Alternative 5 would result in impacts related to transportation topics that would be similar to those with the variant, as it would be located in the same low-vehicle-miles-traveled area and would include a transportation demand management program and similar pedestrian and bicycle improvements. Additionally, Alternative 5 would result in impacts similar to that of the proposed project and the variant related to traffic hazards and emergency vehicle access and transit, because it would include similar project elements. Thus, impacts of the Variant Partial Preservation Alternative on these resource areas would be less than significant.

CONSTRUCTION CUMULATIVE IMPACTS

Under cumulative conditions, construction activities for Alternative 5 would be less than under the proposed project or variant. However, the timing of cumulative project construction may overlap with other construction activities in the study area for transportation improvement projects (e.g., Better Market Street, Van Ness Bus Rapid Transit [BRT] project) and other development projects (e.g., 1629 Market Street, 30 Otis Street, One Oak Street, 1546-1564 Market Street, 1500 Mission Street, 1601 Mission Street, 30 Van Ness Avenue, and 1 South Van Ness Avenue). While timing for cumulative project construction is variable and subject to change, duration and potential magnitude of construction activities for these projects could substantially interfere with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas, thereby resulting in potentially hazardous cumulative construction conditions. In some instances, concurrent construction activities may not result in significant impacts. However, given the magnitude of expected construction activities and the concentration of many such activities close to each other in a small geographic area, cumulative construction-related impacts on transportation and circulation are conservatively deemed significant. Implementing a coordinated construction management plan as required by the City would reduce but not fully

mitigate these impacts, which would be significant and unavoidable for Alternative 5, similar to the variant.

Noise

Noise impacts under Alternative 5 would be similar in character to, but reduced from, those identified for the variant in Section 4.3, Noise due to the lower intensity and duration of demolition and construction activities, and the reduced intensity of land uses under this alternative. As with the variant, implementation of Mitigation Measure M-NO-1: Prepare and Implement Construction Noise Plan, pp. 4.3.25-4.3.27, and Mitigation Measure M-NO-2: Require that Exterior Mechanical Equipment Comply with Noise Ordinance Prior to Certificate of Occupancy, p. 4.3.33, would reduce the impacts of construction and operational noise to less-than-significant levels. Implementation of Mitigation Measure M-NO-1 would also reduce the contribution to significant cumulative construction noise impacts to a less-than-considerable level.

Air Quality

Alternative 5 would have fewer residential units (765 residential units compared to 984 under the variant). As such, impacts related to air quality would be somewhat reduced from those identified for variant. Like the variant, this alternative would not result in a significant impact related to construction and operational criteria pollutants, construction $PM_{2.5}$ or TACs (with implementation of Mitigation Measure M-AQ-3a: Minimize Off-Road Construction Equipment Emissions, and Mitigation Measure M-AQ-3b: Implement Best Available Control Technology for Diesel Equipment), operational $PM_{2.5}$ or TACs, and odors. Also like the variant, implementation of Mitigation Measure M-AQ-3a would reduce the contribution of this alternative to significant cumulative construction-related health risk impacts to a less-than-considerable level.

Wind

Under Alternative 5, differences from the variant tower orientation and changes in massing of the podium could result in higher winds driven down the tower façades, which are more exposed to prevailing westerly winds compared to the variant tower and could result in increases in the number of hazard hours within the passage and on the opposite side of South Van Ness Avenue. [14] In any case, planning code section 148 would require wind tunnel testing to ensure that the design would not result in new wind hazard exceedances. The wind canopies and tree plantings could be implemented for the new building under this alternative and would be expected to improve wind conditions under the Variant Full Preservation Alternative. However, like the variant, it is expected that Alternative 5 would make a cumulatively considerable contribution to a significant cumulative wind impact. Implementing Mitigation Measure M-C-WI-1: Design Measures to

[14] BMT Fluid Mechanics, 10 South Van Ness Avenue – Preservation Alternatives, August 24, 2018.

Reduce Cumulative Off-Site Wind Impacts, in Section 4.5, Wind, p. 4.5.15, would reduce the impact, but not to a less-than-significant level.

Shadow

Due to the more southerly position of the 590-foot-tall tower within the project site under Alternative 5 compared to that of the variant, shadow impacts on public open space would be reduced somewhat. To the extent that new shading on Recreation and Park Commission properties and other public open spaces would occur, the duration of tower shadow on public open spaces under the Alternative 5 would be slightly less overall than that of the variant. As with the variant, this alternative would result in a less-than-significant impact related to shadow.

Other Topics

The initial study concluded that the variant would have no impacts or less-than-significant impacts in the analysis areas/topics listed on p. 5.13.

The Variant Partial Preservation Alternative would occupy the same building site as the variant and would have a similar, though less intensive, land use development program overall (1,072,989 gross square feet of development under the variant and 876,800 gross square feet under this alternative). As a result, the construction and operational impacts of Alternative 5 for each of the initial study environmental topics noted above on p. 5.13 would be similar to, but reduced from, those of the variant.

The Variant Partial Preservation Alternative would not result in any new potentially significant impacts for the environmental topics identified in the initial study for the variant. Therefore, the conclusions in the initial study for these environmental topics would remain applicable to the alternative. The mitigation measures presented in the initial study for the variant (Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring, M-CR-2: Tribal Cultural Resources Interpretive Program, and M-GE-5: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources) would also be applicable to the Variant Partial Preservation Alternative.

Conclusion

Like the variant, the Variant Partial Preservation Alternative would result in a significant and unavoidable impact related to cumulative transportation (construction traffic) and cumulative wind conditions, less-than-significant impacts related to noise and air quality with mitigation, and less-than-significant impacts related to other transportation subtopics and shadow.

Alternative 5 would also not avoid the significant and unavoidable impact on historical resources, since the historic interior, including the ballroom, the southeast wall, and the roof of the historic north portion of the resource, would be demolished, thus resulting in a significant and

unavoidable impact with mitigation measures. If Alternative 5 is chosen, mitigation measures for this alternative would be tailored to ensure that the Secretary of the Interior's Standards for documentation of historical resources are met.

5.7 RELATIONSHIPTO PROJECT OBJECTIVES

The project sponsor's objectives for the proposed project and variant are presented in Chapter 2, Project Description, pp. 2.2-2.3.

The No Project Alternative – Alternative 1 would not meet any of the basic project objectives.

The Proposed Project Full Preservation Alternative – Alternative 2 could feasibly attain most of the project sponsor's objectives. However, this alternative would provide 550 fewer residential units than the proposed project (434 units with the alternative, compared to 984 units with the proposed project), so this alternative would not maximize the opportunity to increase the supply of housing in an area designated for higher residential density due to its proximity to downtown and accessibility to local and regional transit.

The Proposed Project Partial Preservation Alternative – Alternative 3 could feasibly attain most of the project sponsor's objectives. However, this alternative would provide 271 fewer residential units than the proposed project (713 units with the alternative, compared to 984 units with the proposed project) and would not maximize the opportunity to increase the supply of housing in an area designated for higher residential density due to its proximity to downtown and accessibility to local and regional transit.

The Variant Full Preservation Alternative – Alternative 4 could feasibly attain most of the project sponsor's objectives. However, this alternative would provide 379 fewer residential units than the proposed project (605 units with the alternative, compared to 984 units with the variant) and would not maximize the opportunity to increase the supply of housing in an area designated for higher residential density due to its proximity to downtown and accessibility to local and regional transit.

The Variant Partial Preservation Alternative – Alternative 5 could feasibly attain most of the project sponsor's objectives. However, this alternative would provide 219 fewer residential units than the variant (765 units with the alternative, compared to 984 units with the proposed project). Compared to the variant, this alternative would not maximize the opportunity to increase the supply of housing in an area designated for higher residential density due to its proximity to downtown and accessibility to local and regional transit.

The ability of each alternative to meet the objectives of the Proposed Project is presented in **Table 5.7: Ability of Alternatives to Meet Project Objectives**.

Table 5.7: Ability of Alternatives to Meet Project Objectives

Project Objective	Alternative 1 – No Project Alternative	Alternative 2 – Proposed Project Full Preservation	Alternative 3 – Proposed Project Partial Preservation	Alternative 4 – Variant Full Preservation	Alternative 5 – Variant Partial Preservation
	Would the alternative meet this objective?				
1. Redevelop a large, underused site at a prominent location with a residential tower that will serve as an iconic addition to the City's skyline demarking the Market Street and Van Ness Avenue intersection and including a range of residential unit types and neighborhood-serving retail uses.	No	Yes	Yes	Yes	Yes
2. Provide the maximum number of dwelling units on a site that currently has no housing, and was designated through community planning processes for higher density due to its proximity to downtown and accessibility to local and regional transit, in order to increase the city's supply of housing, contribute to the City's General Plan Housing Element goals, and the Association of Bay Area Governments' Regional Housing Needs Allocation for San Francisco.	No	Less than the proposed project[a]	Less than the proposed project[b]	Less than the proposed project[c]	Less than the proposed project[d]
3. Implement the objectives and policies of the Market & Octavia Area Plan and the proposed Market Street Hub Plan by activating a key site along the Van Ness Avenue and Market Street transit corridors, providing small business and employment opportunities, building housing that is affordable to a range of incomes, improving the quality and safety of the open space and streetscape, and providing other public benefits that would strengthen the mixed-use character of the neighborhood.	No	Yes	Yes	Yes	Yes
4. Promote transit ridership by constructing a substantial number of new housing units at a major transit hub at the development density and building	No	Less than the proposed project	Less than the proposed project	Less than the proposed project	Less than the proposed project

Table 5.7: Ability of Alternatives to Meet Project Objectives

Project Objective	Alternative 1 – No Project Alternative	Alternative 2 – Proposed Project Full Preservation	Alternative 3 – Proposed Project Partial Preservation	Alternative 4 – Variant Full Preservation	Alternative 5 – Variant Partial Preservation
	Would the alternative meet this objective?				
heights anticipated by the Market & Octavia Area Plan and the proposed Market Street Hub Plan.					
5. Encourage pedestrian activity and increase connectivity to the proposed Brady Park by creating a welcoming mid-block passageway that connects either South Van Ness Avenue to 12th Street under the proposed project or Market Street to 12th Street under the single tower project variant.	No	Yes	Yes	Yes	Yes
6. Construct a project that qualifies as an Environmental Leadership Development Project (as defined by the California Jobs and Economic Improvement Through Environmental Leadership Act [AB 900], as amended) to promote environmental sustainability, transportation efficiency, greenhouse gas reduction, stormwater management using green technology, substantial economic investment, and job creation.	No	Unknown	Unknown	Unknown	Unknown
7. Encourage and enliven pedestrian activity by improving 12th Street with wider sidewalks, street trees, special sidewalk paving, and bulb-outs, and developing ground-floor retail and public amenity space that serves neighborhood residents and visitors and responds to future users who will be accessing the site and future Bus Rapid Transit (BRT) stations in the area.	No	Yes	Yes	Yes	Yes
8. Improve the architectural and urban design character of the project site by replacing the existing utilitarian structures with a prominent residential tower	No	Yes	Yes	Yes	Yes

Table 5.7: Ability of Alternatives to Meet Project Objectives

Project Objective	Alternative 1 – No Project Alternative	Alternative 2 – Proposed Project Full Preservation	Alternative 3 – Proposed Project Partial Preservation	Alternative 4 – Variant Full Preservation	Alternative 5 – Variant Partial Preservation
	Would the alternative meet this objective?				
or towers that provide a transition between two planning districts and increase building heights at the corner of Market Street and Van Ness Avenue to demarcate the significance of this intersection.					
9. Provide publicly accessible open space on a site that would be privately owned by the project sponsor.	No	Yes	Yes	Yes	Yes
10. Provide well-designed parking, loading, and other transportation facilities and amenities with adequate access to serve the needs of the project's residents, employees, and guests, and respond to the neighborhood context and location.	No	Yes	Yes	Yes	Yes
11. Construct a high-quality project with enough residential floor area to produce a return on investment sufficient to attract private capital and construction financing.	No	Less than the proposed project	Less than the proposed project	Less than the proposed project	Less than the proposed project

Notes:

[a] Alternative 2 provides 44% of the units proposed for the project).

[b] Alternative 3 provides 72% of the units proposed for the project).

[c] Alternative 4 provides 61% of the units proposed for the project).

[d] Alternative 5 provides 78% of the units proposed for the project).

[e] The size and geometry of the basement levels in Alternatives 2 and 4 result in less efficient layouts and may not be able to accommodate parking, bicycle parking, and necessary infrastructure.

5.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Pursuant to CEQA Guidelines section 15126.6(e)(2), an EIR is required to identify the environmentally superior alternative (the alternative that has the fewest environmental impacts) from among the alternatives evaluated if the proposed project or variant has significant impacts that cannot be mitigated to a less-than-significant level.

The No Project Alternative would not result in any change to existing environmental conditions. This alternative is considered the overall environmentally superior alternative, because the significant impacts associated with implementation of the proposed project or variant would not occur with the No Project Alternative. If the No Project Alternative is found to be the environmentally superior alternative, CEQA requires selection of the "environmentally superior alternative other than the no project alternative" from among the other alternatives.

Here, Alternative 2, the Proposed Project Full Preservation Alternative, would be the environmentally superior alternative to the proposed project. Alternative 4, the Variant Full Preservation Alternative, would be the environmentally superior alternative to the variant. Either of these full preservation alternatives would avoid a significant impact resulting from the demolition of the 10 South Van Ness historical resource. They would also result in the least intensive trip generation among all of the remaining alternatives, and would create the least shadow on public spaces. However, alternatives 2 and 4 would still contribute to cumulatively considerable wind and construction transportation impacts.

5.9 ALTERNATIVES CONSIDERED AND REJECTED

Section 15126.6(c) of the CEQA Guidelines provides that an EIR should "identify any alternatives that were considered by the lead agency but rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination." This section identifies alternatives that were considered by the San Francisco Planning Department as lead agency but were rejected as infeasible during design development, and presents the reasons underlying this determination.

Off-Site Alternative

An off-site alternative was eliminated from consideration as an alternative to the proposed project and variant. The project site is already controlled by the project sponsor. To the extent that other suitable development sites may be available in the vicinity, the project sponsor holds no ownership, option, or development interest in any such parcel and has not indicated any plans to acquire such development rights in the near future. Additionally, an off-site alternative would not necessarily create high-density housing on a prominent site which is designated for high-density use due to its proximity to downtown and local and regional transit.

Full Preservation Alternative with Tower Addition on Top of Existing Building

A full preservation alternative involving the construction of a tower above the existing historic building was considered as a potential alternative to preserve and maintain the existing historical resource, including the character-defining ballroom. Such an alternative was rejected from consideration as an EIR alternative due to BART easement soil constraints. Construction of this preservation alternative would require that any structure built within the BART easement and within the zone of influence (where the ballroom is located) be constructed to avoid imposing greater stresses on the surrounding ground than the existing pressure. To add new weight above the BART easement, soil under the existing building would need to be removed to create the weight offset. This would require deep excavation (up to two floors deep of soil removal), which would not be possible without destroying the existing historical resource building onsite.

Further, even if it were possible to excavate under the existing building to remove soil, to develop a space above the ballroom, a system of one-story-deep transfer trusses would be needed to carry conventionally framed levels above the existing column-free long spans. This would not be structurally feasible given commercially reasonable construction costs. Thus, preserving the ballroom as part of a full preservation alternative would prohibit the development of new building area, including a tower addition, above the existing building.

Full Preservation Alternative with Cantilevered Tower

A full preservation alternative that would concentrate more mass directly over the historic northern section of the building by way of a cantilevered tower was considered as a potential alternative to preserve and maintain the existing historical resource, including the character-defining ballroom. The intent of this full preservation alternative was to retain the historic building, including the ballroom, while developing a two-tower project design that would align more closely with the proposed project. The concept under this alternative included two towers because there would have been no added value or advantage to a single tower over the ballroom from a tower efficiency perspective. The variant's full preservation alternative (Alternative 4) already achieves the maximum floor plate permitted by the bulk control requirements set forth in the San Francisco Planning Code. Additionally, a cantilevered design was found to be structurally infeasible, given commercially reasonable construction costs. Further, creating the two-tower design seen in the cantilevered tower study would have resulted in unconventional and inefficient tower floor plates of approximately 5,800 gross square feet for the northern tower and approximately 4,300 gross square feet for the southern tower.

Full and Partial Preservation Alternatives with No Mid-Block Passage

Full and partial preservation alternative designs without a mid-block passage were considered as design options to maintain or partially preserve the historical resource while constructing a connecting tower. However, these alternative designs were rejected because they do not meet the requirements of San Francisco Planning Code section 270.2, which states that projects with frontages more than 300 feet in length provide a "mid-block" alleyway with a minimum width of 20 feet from building face to building face, and a minimum clearance height from grade of 15 feet at all points. A setback of not less than 10 feet above a height of 25 feet would also be required (planning code section 270.2[e][14]). The purpose of this requirement is to "break up" large lots and building mass and to decrease pedestrian walking times.

The planning code does not permit a waiver of the mid-block passageway requirement. Therefore, alternatives that did not include such a passage were rejected because they did not meet the requirements of the planning code.

Full and Partial Preservation Alternatives with Reduced Height

Full and partial preservation alternatives with various configurations of a reduced tower height were considered but a shorter building would not reduce the significant and unavoidable impact of the proposed project or variant on the 10 South Van Ness historical resource. The height of the replacement construction is immaterial to the significant and unavoidable impact resulting from the demolition of the historical resource under the proposed project or variant.

Further, the Market & Octavia Area Plan encourages the development of high-density residential towers at the intersection of Market Street and Van Ness Avenue, and specifically calls out the project site as a location of future residential towers, because of the site's proximity to downtown and accessibility to local and regional transit. The Market & Octavia Area Plan increased the permitted building height at the project site from 120 to 400 feet, and the proposed Hub Plan proposes to increase the permitted building height further, to maximize the number of dwelling units that can be produced at the site. In addition, the Market & Octavia Area Plan and the proposed Hub Plan call for the construction of towers with iconic building heights, to signal the Market Street/Van Ness Avenue intersection from vantage points around the city. Finally, the Hub Plan calls for maximizing the density of dwelling units, to maximize development impact fees for affordable housing and infrastructure improvements, accordingly, alternatives that considered nonresidential towers or towers shorter than 400 feet in height were rejected.

6. OTHER CEQA CONSIDERATIONS

Chapter 6, Other CEQA Considerations, discusses growth-inducing impacts, significant unavoidable impacts, significant irreversible impacts, and areas of known controversy related to the proposed project and project variant.

6.1 GROWTH-INDUCING IMPACTS

The CEQA Guidelines require that an EIR evaluate the growth-inducing impacts of a proposed action (section 15126.2(d)). A growth-inducing impact is defined in the CEQA Guidelines section 15126.2(d) as:

> [T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth … It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can have direct and/or indirect growth-inducement potential. Direct growth inducement would result if a project involves construction of new housing that would result in new residents moving to the area. A project can have indirect growth-inducement potential if it were to establish substantial new permanent employment opportunities (e.g., commercial, industrial or governmental enterprises) or if it were to involve a substantial construction effort with substantial short-term employment opportunities and indirectly stimulate the need for additional housing and services to support the new employment demand. Similarly, under CEQA, a project would indirectly induce growth if it were to remove an obstacle to additional growth and development, such as removing a constraint on required public services, utilities, or infrastructure facility. Increases in population could tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects.

Examples of projects likely to have substantial or adverse growth-inducing effects include expansion of infrastructure systems beyond what is needed to serve current demand in the project vicinity, and development of new residential uses in areas that are currently sparsely developed or undeveloped. The following discussion considers whether implementation of the proposed project could potentially affect growth elsewhere in San Francisco and in the region. The proposed project also includes a variant that the project sponsor may choose to implement. The discussion of growth inducement for the proposed project and variant are the same.

The proposed project would intensify development on the project site by introducing new residential, commercial, and open space uses. Population growth within the project site would be a direct impact of the proposed project. Among the basic objectives of the proposed project is to increase the city's supply of housing on a site that was designated through community planning

processes for higher density due to its proximity to downtown and accessibility to local and regional transit. As such, the proposed project would contribute to the San Francisco General Plan Housing Element goals, and ABAG's Regional Housing Needs Allocation for San Francisco. Moreover, the project site is located in the Market-Octavia/Upper Market Priority Development Area of Plan Bay Area 2040.[1] If the proposed project were implemented, the addition of 984 residential units would increase the population on the project site by approximately 2,155 residents.[2] Although this increase would result in a residential population increase of approximately 39 percent over the existing population within Census Tract 201, an increase of approximately 9 percent over the existing population of the project area, and approximately 0.26 percent over the existing citywide population, population growth attributable to the proposed project would be consistent with city and regional population projections. The 984 housing units would represent a negligible percentage (0.14 percent) of the projected household growth in the region (700,067 households) between 2010 and 2040.[3] Although the new residential units would increase the city's overall housing stock, implementation of the proposed project or project variant would not represent significant growth in housing in the context of the city as a whole.

The project site is located in an urban area that is already served by the city's municipal infrastructure and public services as well as retail and other services for residential uses. No substantial expansion to municipal infrastructure or public services is included as part of the project and none would be required to accommodate new development associated with the proposed project, either directly or indirectly.

The proposed project would provide for high-density residential growth supported by existing community facilities, public services, transit service and infrastructure, and public utilities. To the extent that this growth would have been otherwise accommodated at other Bay Area locations, the proposed project would focus growth on an underused infill site near existing regional employment centers and existing and planned transit facilities, infrastructure, retail services, and cultural and recreational facilities.

The proposed project would contribute to meeting ABAG's regional housing objectives and would conform with ABAG's regional goals to focus growth and development by creating compact communities with a diversity of housing, jobs, activities, and services; increasing

[1] Association of Bay Area Governments, Priority Development Area Showcase, http://gis.abag.ca.gov/website/PDAShowcase/.
[2] Based on an average San Francisco household size of 2.19 persons. See the Initial Study, p. 67, (Appendix B to this EIR) for more detail.
[3] ABAG, Projections 2013, p. 19.

housing supply; and improving housing affordability by meeting the city's inclusionary affordable housing requirements in compliance with the city's Inclusionary Affordable Housing Program (San Francisco Planning Code Section 415).[4, 5]

As discussed in the Initial Study on pp. 69-71 under Impact C-PH-1 (see Appendix B to this EIR), the employment-related housing demand associated with the cumulative development projects could be accommodated by the city's projected housing growth of 84,910 units between 2015 and 2040. Furthermore, the cumulative development projects would add to the city's housing stock and could potentially accommodate some of the new employment-related housing demand. This estimated cumulative employment growth would account for less than 1 percent of projected citywide household growth between 2015 and 2040.

Cumulative projects would not result in the displacement of substantial numbers of housing units, as the majority of the approved and proposed projects would demolish vacant non-residential buildings, construct new buildings on surface parking lots, or otherwise intensify land uses, and the proposed project or variant would not displace any housing units. Although cumulative projects would increase the population and employment in the area, they would not induce substantial population and employment growth beyond what was planned for and anticipated.

Based on the preceding discussion and analysis, the proposed project or variant would not have a substantial growth-inducing impact, and no mitigation measures are necessary.

6.2 SIGNIFICANT UNAVOIDABLE IMPACTS

In accordance with section 21067 of CEQA and with section 15126(b) and section 15126.2(b) of the CEQA Guidelines, the purpose of this section is to identify significant environmental impacts that could not be eliminated or reduced to less-than-significant levels by implementation of mitigation measures included in the proposed project or identified in **Chapter 4, Environmental Setting and Impacts**, and set forth in a mitigation monitoring and reporting program. The findings of significance in this EIR are subject to final determination by the San Francisco Planning Commission (planning commission) as part of the certification process for this EIR. If necessary, this chapter will be revised in the Final EIR to reflect the findings of the planning commission.

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[4] Projects of five or more residential units are required to contribute to the creation of BMR housing, either through direct development of BMR residential units on the project site (equal to 12 percent of the project's overall residential units), within a separate building within 1 mile of the project site (equal to 20 percent of the project's overall residential units), or through an in-lieu payment to the Mayor's Office of Housing.

[5] ABAG administers the FOCUS program, in partnerships with the Metropolitan Transportation Commission, the Bay Conservation and Development Commission, and the Bay Area Air Quality Management District. FOCUS is a regional development and conservation strategy that promotes more compact land use patterns in the Bay Area.

The proposed project or project variant would result in significant and unavoidable project-level and cumulative impacts described below.

- **Cultural Resources Impacts (Historical Architectural Resources)**: The proposed project or variant would require demolition of the existing building at 10 South Van Ness Avenue, which is a historical resource for the purposes of CEQA. As identified in Impact CR-1 in Section 4.1, Historic Architectural Resources, the proposed project or variant would cause a substantial adverse change in the significance of a historical resource that would result in a significant impact. Implementing Mitigation Measures M-CR-1a: Documentation, M-CR-1b: Interpretation, and M-CR-1c: Salvage Architectural Materials from the Site for Public Information or Reuse, would reduce the impact, but not to a less-than-significant level.
- **Transportation and Circulation Impacts**: As identified in Impact C-TR-7 in Section 4.2, Transportation and Circulation, the duration and magnitude of temporary construction activities for the proposed project, the variant, or the straight-shot streetscape option, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in substantial interference with pedestrian, bicycle, or vehicular circulation and accessibility to adjoining areas. Therefore, the potential exists for hazardous conditions, resulting in a significant and unavoidable impact. Implementing Mitigation Measures M-C-TR-7a: Cumulative Construction Coordination, M-C-TR-7b: Construction Truck Deliveries During Off-Peak Periods, and M-C-TR-7c: Construction Management Plan would reduce the impact, but not to a less-than-significant level.
- **Wind Impacts**: The proposed project or variant, in combination with other past, present, and reasonably foreseeable future projects, would alter wind in a manner that would make a cumulatively considerable contribution to a significant cumulative wind impact. Implementing Mitigation Measure M-C-WI-1: Design Measures to Reduce Cumulative Off-Site Wind Impacts, would reduce the impact, but not to a less-than-significant level.

6.3 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL IMPACTS

In accordance with Section 21100 (b)(2)(B) of CEQA, and Section 15126.2(c) of the CEQA Guidelines, an EIR must identify any significant irreversible environmental changes that could result from implementation of the proposed project. This may include current or future uses of non-renewable resources and secondary or growth-inducing impacts that commit future generations to similar uses. According to the CEQA Guidelines, irretrievable commitments of resources should be evaluated to ensure that such current consumption is justified. The CEQA Guidelines describe three distinct categories of significant irreversible changes: 1) changes in land use that would commit future generations, 2) irreversible changes from environmental actions, and 3) consumption of nonrenewable resources. Each of these categories is discussed below in relation to the proposed project.

Changes in Land Use That Would Commit Future Generations

As described throughout this EIR, implementation of the proposed project would occur within an urbanized area and would entail the demolition of an existing building and the construction of two 41-story towers. The towers would be 400 feet tall (420 feet total, including roof screens and elevator penthouses) and would contain a total of 984 dwelling units and retail space on the ground floor. (With the project variant, a single 55-story, up to 590-foot-tall tower [610 feet total, including roof screens and elevator penthouses] over a podium structure would be constructed. The single tower would have the same number of dwelling units as the proposed project.)

The major change on the project site under the proposed project or variant would be related to the construction of new high-rise residential towers (proposed project) or single tower (variant) and the introduction of new uses (residential and ground-floor retail) on the project site. The proposed project and variant would both include 984 dwelling units. The project site is currently occupied by the San Francisco Honda dealership, a two-story, 30- to 45-foot-high building, and the southern end of the site encompasses a small, undeveloped area. Implementation of the proposed project would result in development intensification on the project site that would commit future generations living or working in San Francisco or visiting San Francisco to the environmental effects caused by the operation of the proposed new buildings for the duration of the life of the buildings. These environmental effects include an increase in residential population as discussed in this EIR and the Initial Study (EIR Appendix B). Future generations could benefit from the addition of new open space in the form of a new pedestrian-oriented right-of-way (or alley) that would run through the block from either Market Street or South Van Ness Avenue to 12th Street.

Development of the proposed project, an infill project within a developed urban area, would not substantially alter the pattern of land use or transportation in the project vicinity and therefore would not commit future generations to any particular land use or transportation pattern, nor would it mean that the project site could not be feasibly redeveloped again at some unknown date in the future. Therefore, the proposed project or variant would not constitute a significant adverse effect on changes in land use that would commit future generations.

Irreversible Changes from Environmental Actions

No significant irreversible environmental damage, such as an accidental spill or explosion of hazardous materials, is anticipated to occur with implementation of the proposed project. Compliance with federal, state, and local regulations related to residential and retail uses and the mitigation measures identified in the Initial Study, Section E, Hazards and Hazardous Materials (see Appendix B to this EIR) would reduce the possibility that hazardous substances from the demolition, construction, and operation of the proposed project would cause significant and unavoidable environmental damage. Compliance with BART's Zone of Influence guidelines for

construction would be required. The site excavation for the proposed project would not irreversibly alter the topography of the project site.

No other irreversible permanent changes such as those that might result from construction of a large-scale mining project, hydroelectric dam, or other industrial project would result from development of the proposed project.

Consumption of Nonrenewable Resources

Consumption of nonrenewable resources includes increased energy consumption, conversion of agricultural lands to urban uses, and loss of access to mineral reserves. No agricultural lands would be converted and no access to mining reserves would be lost due to construction on the project site.

Construction of the proposed project would require the use of energy, including energy produced from non-renewable resources, and energy would be consumed during the operational period of the proposed project. Construction would also require the commitment of construction materials, such as steel, aluminum, and other metals, concrete, masonry, lumber, sand and gravel, and other such materials, as well as water. However, new buildings in California are required to conform to energy conservation standards specified in *California Code of Regulations* (CCR) Title 24, which are among the most stringent in the United States. The standards establish energy budgets for different types of residential and nonresidential buildings with which all new buildings must comply. Specific aspects of the proposed project or variant would be as energy efficient as possible, as the development would be built to meet Leadership in Energy and Environmental Design (LEED) Gold certification standards.

In addition, to ensure that all buildings are healthy, sustainable places to live, work, and learn, the *San Francisco Green Building Code* requirements are designed to reduce energy and water use, divert waste from landfills, encourage alternate modes of transportation, and support the health and comfort of building occupants in San Francisco. New construction in San Francisco must meet all applicable California and local building codes, provide on-site facilities for recycling and composting, and meet the City's green building requirements tied to the LEED and GreenPoint Rated green building rating systems, all of which would ensure that natural resources are conserved or recycled to the maximum extent feasible and that greenhouse gas emissions resulting from the project would be minimized.

Even with implementation of conservation measures, the consumption of natural resources, including electricity and natural gas, would generally increase with implementation of the proposed project. However, the proposed project would not involve the wasteful, inefficient, or unnecessary consumption of energy resources, as discussed in the initial study (see Appendix B). Overall, the proposed project or variant would be expected to use less energy and water over the lifetime of the project than comparable structures not built to these same standards.

As further described in the initial study (Appendix B) under Topic E.10, Utilities and Service Systems, Impact UT-2, while the proposed project would incrementally increase the demand for water in San Francisco, the estimated increase in demand would be accommodated within available water supplies and current water supply planning. While potable water use would increase, the proposed project would be designed to incorporate water-conserving measures, such as low-flush toilets and urinals, as required by the San Francisco Green Building Ordinance and the City's Non-potable Water Ordinance. In compliance with Article 12C of the San Francisco Health Code, the proposed project or variant would employ a blackwater recycling system, which would recycle wastewater generated by the building for onsite nonpotable uses, including toilet flushing, irrigation, and HVAC/cooling demand.

During construction activities, water may be used for soil compaction and dust control activities. However, as discussed in Section 4.4, Air Quality, San Francisco Public Works Code Article 21 restricts the use of potable water for soil compaction and dust control activities undertaken in conjunction, unless permission is obtained from the San Francisco Public Utilities Commission. Therefore, while the consumption of water would increase as the result of construction and operation, the proposed project or variant would not involve the wasteful, inefficient, or unnecessary use of water resources, as discussed in the initial study (see Appendix B).

6.4 AREAS OF KNOWN CONTROVERSY AND ISSUES TO BE RESOLVED

The San Francisco Planning Department published a Notice of Preparation of an EIR on July 12, 2017 (Appendix A to this EIR), announcing its intent to prepare and distribute an EIR. Publication of the NOP initiated a 30-day public review and comment period that began on July 12, 2017, and ended on August 11, 2017. The mailing list for the notice of preparation included federal, state, and local agencies; regional and local interest groups; and property owners within 300 feet of the project site.

An initial study was published on May 2, 2018 initiating a second public review period from May 3, 2018 to June 4, 2018 **(**Appendix B to this EIR). During the public review and comment periods, 12 comment letters, comment cards, and emails were submitted to the San Francisco Planning Department by interested parties.

On the basis of public comments on the NOP and the initial study potential areas of controversy for the proposed project include the following:

- Vehicular access
- Transportation impact study
- Encroachment permit
- Parking
- Public transportation
- Building height
- Open space
- Wind
- Unit mix
- Design options
- Loading and transportation network companies
- Vehicle miles traveled
- Cumulative impacts
- Bicycle transportation
- Access to public scoping meeting
- Pedestrian transportation mode and safety
- Loading and transportation network companies
- Housing supply and affordability
- Traffic and private shuttle buses
- Parking garage hours
- Truck traffic
- Housing supply and demand
- Cultural resources mitigation

See **Chapter 1, Introduction**, pp. 1.4-1.7, for a list of issues raised by comments on the NOP/IS and where those issues are addressed in the EIR.

CEQA Section 21099(d) directs that the aesthetic and parking impacts of mixed-use residential infill projects located in transit priority areas are not considered impacts on the environment under CEQA. The proposed project meets the definition of a residential, mixed-use infill project in a transit priority area. Accordingly, this EIR does not contain a separate discussion of the topic of aesthetics. The EIR nonetheless provides visual simulations for informational purposes as part of Chapter 2, Project Description.

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

In January 2016, OPR published for public review and comment a *Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA*[6] (proposed transportation impact guidelines) recommending that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric. VMT measures the amount and distance that a project might cause people to drive, accounting for the number of passengers within a vehicle.

[6] This document is available online at: https://www.opr.ca.gov/s_sb743.php.

OPR's proposed transportation impact guidelines provides substantial evidence that VMT is an appropriate standard to use in analyzing transportation impacts to protect environmental quality and a better indicator of greenhouse gas, air quality, and energy impacts than automobile delay. Acknowledging this, San Francisco Planning Commission Resolution 19579, adopted on March 3, 2016:

- Found that automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion, shall no longer be considered a significant impact on the environment pursuant to CEQA, because it does not measure environmental impacts and therefore it does not protect environmental quality.
- Directed the Environmental Review Officer to remove automobile delay as a factor in determining significant impacts pursuant to CEQA for all guidelines, criteria, and list of exemptions, and to update the Transportation Impact Analysis Guidelines for Environmental Review and Categorical Exemptions from CEQA to reflect this change.
- Directed the Environmental Planning Division and Environmental Review Officer to replace automobile delay with VMT criteria which promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses; and consistent with proposed and forthcoming changes to the CEQA Guidelines by OPR.

Planning Commission Resolution 19579 became effective immediately for all projects that have not received a CEQA determination and all projects that have previously received CEQA determinations, but require additional environmental analysis.

Accordingly, this EIR does not contain a discussion of automobile delay impacts. Instead, a VMT and induced automobile travel impact analysis is provided in Section 4.2, Transportation and Circulation. Nonetheless, automobile delay may be considered by decision-makers, independent of the environmental review process, as part of their decision to approve, modify, or disapprove the proposed project.

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[1] Although other local, regional, state, and federal agencies are involved in the separate permitting processes related to the project, this list of agencies is limited to those that provided input and review related to data included in the EIR.

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APPENDIX A

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

SAN FRANCISCO
PLANNING DEPARTMENT

1650 Mission St
Suite 400
San Francisco,
CA 94103-2479

Reception:
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Notice of Preparation of an Environmental Impact Report and Public Scoping Meeting

Date:	July 12, 2017
Case No.:	**2015-004568ENV**
Project Title:	**10 South Van Ness Avenue Mixed-Use Project**
Zoning:	C-3-G (Downtown-General Commercial) Van Ness and Market Downtown Residential Special Use District 120-R-2/120/400-R-2 Height and Bulk Districts
Plan Area:	Market and Octavia Area Plan
Block/Lot:	3506/004 and 003A
Lot Size:	51,150 square feet (1.17 acres)
Project Sponsor:	10 SVN, LLC c/o Jim Abrams, J. Abrams Law, P.C. – (415) 999-4402 jabrams@jabramslaw.com
Lead Agency:	San Francisco Planning Department
Staff Contact:	Rachel Schuett – (415) 575-9030 rachel.schuett@sfgov.org

INTRODUCTION

The project sponsor, 10 SVN, LLC, proposes to redevelop the 1.17 acre property located at 10 South Van Ness Avenue at the southwest corner of South Van Ness Avenue and Market Street in the South of Market neighborhood of San Francisco. The proposed project would include construction of two 400-foot-tall (420 feet total, inclusive of roofs screens and elevator penthouses), 41-story buildings containing a total of 984 dwelling units and retail space on the ground floor (see Table 1). Above grade, the proposed project would consist of two separate structures, each consisting of a tower above a podium. Below grade, the two structures would be connected on basement Levels B1 and B2.

In addition, two variants are proposed: a project design variant (herein after referred to as the "single tower project variant") which would feature one tower, up to 590 feet in height (610 feet total, inclusive of roofs screens and elevator penthouses), and a streetscape variant (herein after referred to as the "straight-shot streetscape variant") for 12th Street. The single tower project variant would include construction of a single 590-foot-tall, (55-stories) tower over a podium structure, which would also contain 984 dwelling units, ground floor retail space, and two levels of underground parking. Both the proposed project and the single tower variant would include a mid-block alley, which would be open-air, accessible to the public, and would serve as a pedestrian connection across the site. Under the proposed project, the mid-block alley would provide access from South Van Ness Avenue to 12th Street. Under the single tower variant, the mid-block alley would provide access from Market Street to 12th Street.

TABLE 1
PROPOSED PROJECT CHARACTERISTICS

Lot	**Dimensions**		
Size	51,150 square feet		
Length	475 feet (South Van Ness Avenue)/288 feet (Market Street)/450 feet (12th Street)		
Proposed Building	**Area (gross square feet [gsf])**		
Residential[1]	935,745		
Ground Floor Retail	30,350		
Parking[2]	102,000		
Rooftop Mechanical	3,000		
Total	1,071,095		
Building Characteristics	**Description**		
Stories	North Tower/Podium	41 stories/12 stories	
	South Tower/Podium	41 stories /12 stories	
Height	North Tower/Podium	400 feet (up to 420 feet inclusive of the elevator penthouse[3])/114 feet	
	South Tower/Podium	400 feet (up to 420 feet inclusive of the elevator penthouse)/120 feet	
Ground Floor	Retail: 30,350 gsf multiple tenant spaces Residential: 2 residential lobbies, and 336 class I bicycle parking spaces		
Basement	518 vehicle parking spaces		
Proposed Units	**Amount (Approx. Percent)**		
Dwelling Units	984		
	North Tower	South Tower	Total
Studio	267 (27%)	108 (11%)	375 (38%)
1-Bedroom	294 (30%)	167 (17%)	461 (47%)
2-Bedroom	51 (5%)	49 (5%)	100 (10%)
3-Bedroom	19 (2%)	29 (3%)	48 (5%)
Vehicle Parking Spaces[4]	518		
Bicycle Parking Spaces[5]	397		
Open Space[6]	**Area (sf)**		
Publicly-accessible	2,975		
Common	45,176		
Private	0		

Source: 10 South Van Ness LLC, 2017.

Notes:

1 Includes first-floor non-retail uses and second-floor residential amenity uses.

2 Includes parking and basement mechanical equipment.

3 Consistent with the Planning Code Height and Bulk designations for the project site, the building height is 400 feet. Up to 20 feet for the elevator penthouse, roof screes, and other rooftop appurtenances are exempt from this height limit.

4 Vehicle parking spaces: 491 for residential use, 14 for retail use, six for car-share, seven for off-street loading.

5 Bicycle parking spaces: 336 class I bicycle parking spaces on the ground floor, 61 class II bicycle parking spaces in on-street bicycle corrals.

6 Provided in compliance with Planning Code Section 736.93 Usable Open Space Per Residential Unit.

The straight-shot streetscape variant would exceed the Market and Octavia Plan and San Francisco Planning Department streetscape standards by extending the eastern sidewalk and pedestrian promenade adjacent to the project site from 15 feet to 40 feet in width. The proposed project's streetscape design and the straight-shot streetscape variant design were a result of coordination between the project sponsor, the San Francisco Planning Department, the San Francisco Municipal Transportation Agency (SFMTA), and the project sponsor for the adjacent 1629 Market Street development to create a "Living Street"[1] on 12th Street between Market Street and South Van Ness Avenue. Both the proposed streetscape design and the straight-shot streetscape variant would adhere to the Better Streets Plan and the Better Market Street Project.[2] The straight shot streetscape design could be developed with the proposed project or the single tower project variant.

PROJECT DESCRIPTION

This section provides a description of the project location and site characteristics, the existing conditions, and the proposed project characteristics.

Project Location and Site Characteristics

As shown on Figure 1, the approximately 51,150-square-foot parcel is located at the southwest corner of Market Street and South Van Ness Avenue, and comprises the entire block bound by South Van Ness Avenue to the east, Market Street to the north, and 12th Street to the west.[3] The project site is comprised of Assessor's Block 3506, Lots 004 and 003a and is roughly triangular in shape.

The project site is located within the Market and Octavia Area Plan area, the Downtown-General (C-3-G) zoning district, and the Van Ness and Market Downtown Residential Special Use District (SUD). The northern portion of the site is in the 120-R-2 height and bulk district; and the southern portion of the site is in the 120/400-R-2 height and bulk district. These height districts allow for a building of 120 feet in height on the northern portion of the project site and a podium of up to 120 feet in height and a tower of up to 400 feet in height on the southern portion of the site. The R-2 bulk district does not set bulk restrictions for buildings under 120 feet in height. For buildings over 120 feet in height, all portions of structures above the podium height are subject to the bulk restrictions in Planning Code Section 270(e)(2).

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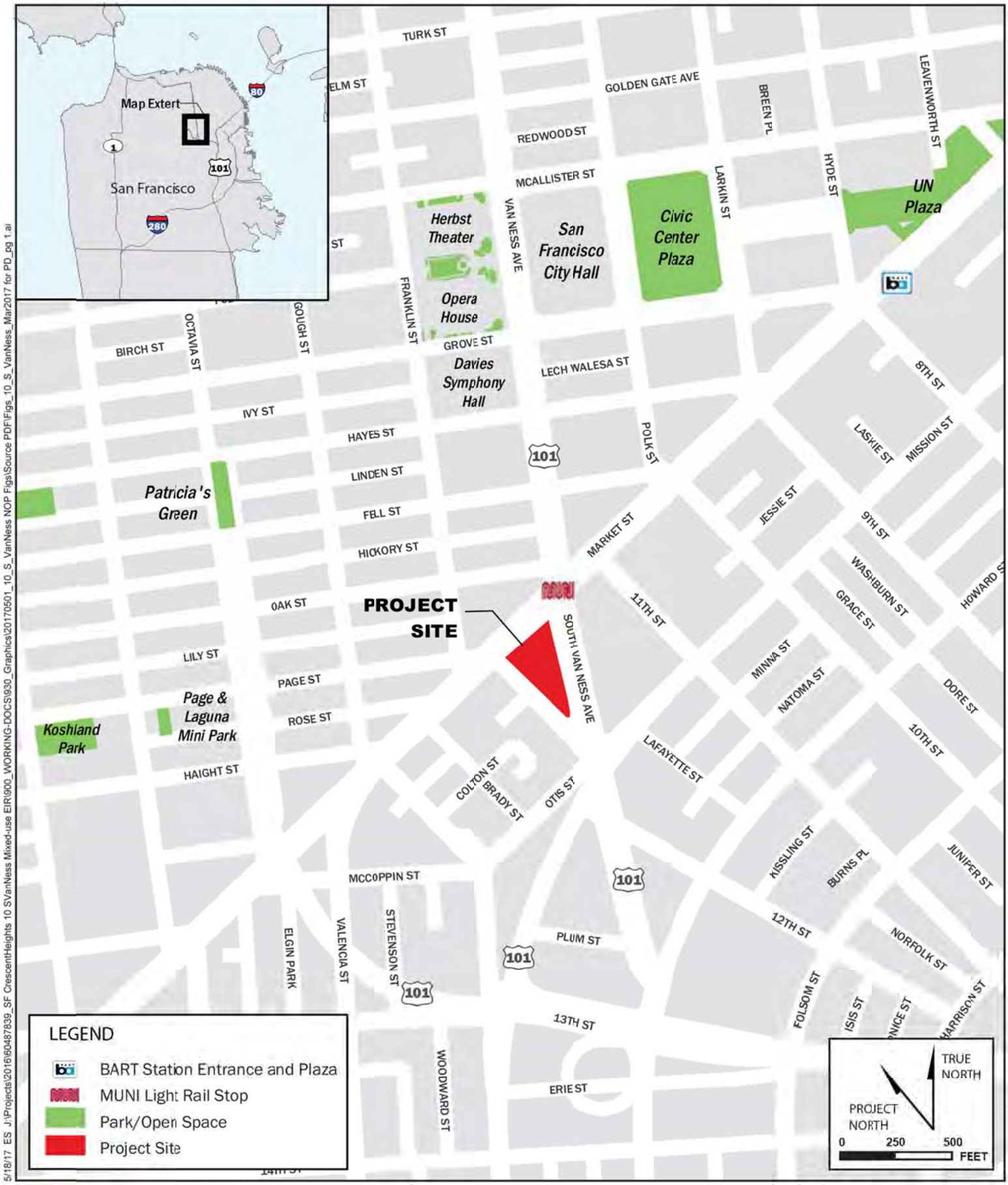
[1] A "Living Street" or "Living Alley" is an alley into which special paving, traffic calming, lighting, seating, greening, and other elements are introduced to create a shared space that prioritizes pedestrian access over vehicle use. More information is available at: http://www.sfbetterstreets.org/find-project-types/reclaiming-roadway-space/living-alleys/. Accessed June 23, 2017.

[2] The Better Market Street Project is currently undergoing environmental review. More information is available at: http://www.bettermarketstreetsf.org/. Accessed May 15, 2017.

[3] For purposes of describing project site location, this document uses a project north/south axis aligned with 12th Street, such that Market Street forms the northern boundary of the project site, 12th Street forms the western boundary, and South Van Ness Avenue forms the southwestern boundary.



Source: AECOM, 2017

Figure 1: Project Location

Per Planning Code Section 270(e)(2)(D), buildings between 351 and 550 feet in height may not exceed a plan length of 115 feet, a diagonal dimension of 145 feet, and a maximum average floor area of 10,000 gsf. Per Planning Code Section 270(e)(2)(F), to encourage tower sculpting, the gross floor area of the top one-third of the tower shall be reduced by ten percent from the maximum floor plate. A minimum distance of 115 feet must be preserved between all structures above 120 feet in height at all levels above 120 feet in height, as required by the R-2 bulk district. The permitted floor area ratio (FAR) in the C-3-G zone is 6:1.[4] The existing FAR of the project site is approximately 2:1.

Both South Van Ness Avenue and Market Street are major roadways through the Downtown/Civic Center and South of Market neighborhoods. South Van Ness Avenue, which becomes Van Ness Avenue north of Market Street, is a major north-south arterial through San Francisco and is considered U.S. Highway 101 (U.S. 101) between the Lombard Street and the Central Freeway portions of U.S. 101. Adjacent to the project site, South Van Ness Avenue has three travel lanes in each direction and parallel parking on both sides of the street. Market Street is a major east-west roadway through San Francisco that connects The Embarcadero and the Twin Peaks neighborhood. Market Street operates as a two-way roadway, generally with two travel lanes, for motorized modes of travel. Adjacent to the project site, eastbound Market Street has one mixed-flow travel lane, one dedicated-transit/taxi lane, and a bicycle lane. In the westbound direction, Market Street has two mixed-flow travel lanes[5] and bicycle lane.

The regional roadways that serve the project site are U.S. 101, Interstate 80 (I-80), and Interstate 280 (I-280). U.S. 101 provides access to and from the site vicinity via the adjacent South Van Ness Avenue, an on-ramp at South Van Ness Avenue and Division Street, and an off-ramp at Mission Street and Duboce Avenue. The intersection of South Van Ness Avenue and Market Street is also connected to the transit network via the subsurface Market Street and South Van Ness Avenue Muni station, which is accessible from an entrance located along the Market Street frontage of the project site. This Muni station is served by the J, KT, L, M, and N Muni light rail lines, and the above-ground Market Street and Van Ness Avenue Muni stops. These stops are served by the K-Owl, L-Owl, N-Owl, 6, 7, 7R, 14, 47, 49, 90, and 800 bus routes and the historic F line streetcar. The Civic Center Bay Area Rapid Transit (BART) station is also located 0.4 miles east of the project site on Market Street.

Existing Conditions

The project site slopes gently downward to the south. The ground surface elevation of the project site is approximately 40 feet above mean sea level (msl) along Market Street and approximately 32 feet above msl at the southern boundary of the site. As shown on Figure 2, the project site is currently occupied by the 91,088-square-foot San Francisco Honda Dealership and Service Center, which consists of a two-story building, ranging from 30 to 45 feet in height (Lot 004), and a small, undeveloped area at the southern end of the site (Lot 003A). The existing building was constructed in 1927. The northern third of the project site includes a subsurface easement for the existing BART tunnel, which is located 19.62 feet below grade. The invert of the BART tunnels is approximately 85 feet below ground surface.[6,7] The Muni tunnels and station are located beneath Market Street

[4] FAR is the gross floor area of a building or buildings on a zoning plot divided by the area of such zoning plot. FAR is calculated to determine whether the mass and scale of a structure is compatible with zoning district requirements. In the Van Ness & Market Downtown Residential Special Use District, increased FAR is allowed with payment of in-lieu fees (the Van Ness Inclusionary Affordable Housing Fee and the Van Ness and Market Neighborhood Infrastructure Fee).

[5] Mixed-flow travel lanes are traffic lanes that allow the use of personal vehicles, trucks, taxis, and public transportation vehicles.

[6] "Invert" refers to the bottom of the tunnels.

approximately 30 feet north of the property line. The perimeter of the project site includes six curb cuts and associated driveways: three curb cuts along South Van Ness Avenue, and three along 12th Street. There are eight street trees along South Van Ness Avenue, six along Market Street, and fourteen along 12th Street.

Along the western side of South Van Ness Avenue, there are 11 metered vehicle parking spaces, with five spaces subject to restricted hours for commuter shuttles, pursuant to the San Francisco Municipal Transportation Agency (SFMTA) Commuter Shuttle Program (6:00 a.m. to 10:00 a.m. Monday to Friday). The eastern side of 12th Street along the project frontage has 10 general metered parking spaces, and one metered commercial loading space with restricted loading hours. Across 12th Street from the project site, there are five general metered parallel parking spaces, 16 angled general metered parking spaces, three metered commercial loading spaces with restricted loading hours, one passenger loading space, and one parking space with Americans with Disabilities Act (ADA) access. Improvements to Van Ness Avenue between Aquatic Park and Mission Street are currently underway as part of the Van Ness Improvement Project. The Van Ness Improvement Project includes replacement of the water and sewer networks and infrastructure improvements to support the Van Ness Bus Rapid Transit (BRT) system.[8]

The land uses in the immediate vicinity of the project site are characterized by a mix of residential, commercial, and civic uses. The maximum permitted building heights in the vicinity of the project site (as allowed by existing height districts) range from 40 feet to 400 feet (see Figure 3). Several large, mixed-use commercial, office, and residential buildings are located along Van Ness Avenue and Market Street; they are interspersed with smaller buildings hosting office, commercial, warehouse/storage, and multifamily residential uses. The scale of the built environment generally increases in height traveling eastward along Market Street from the project site.

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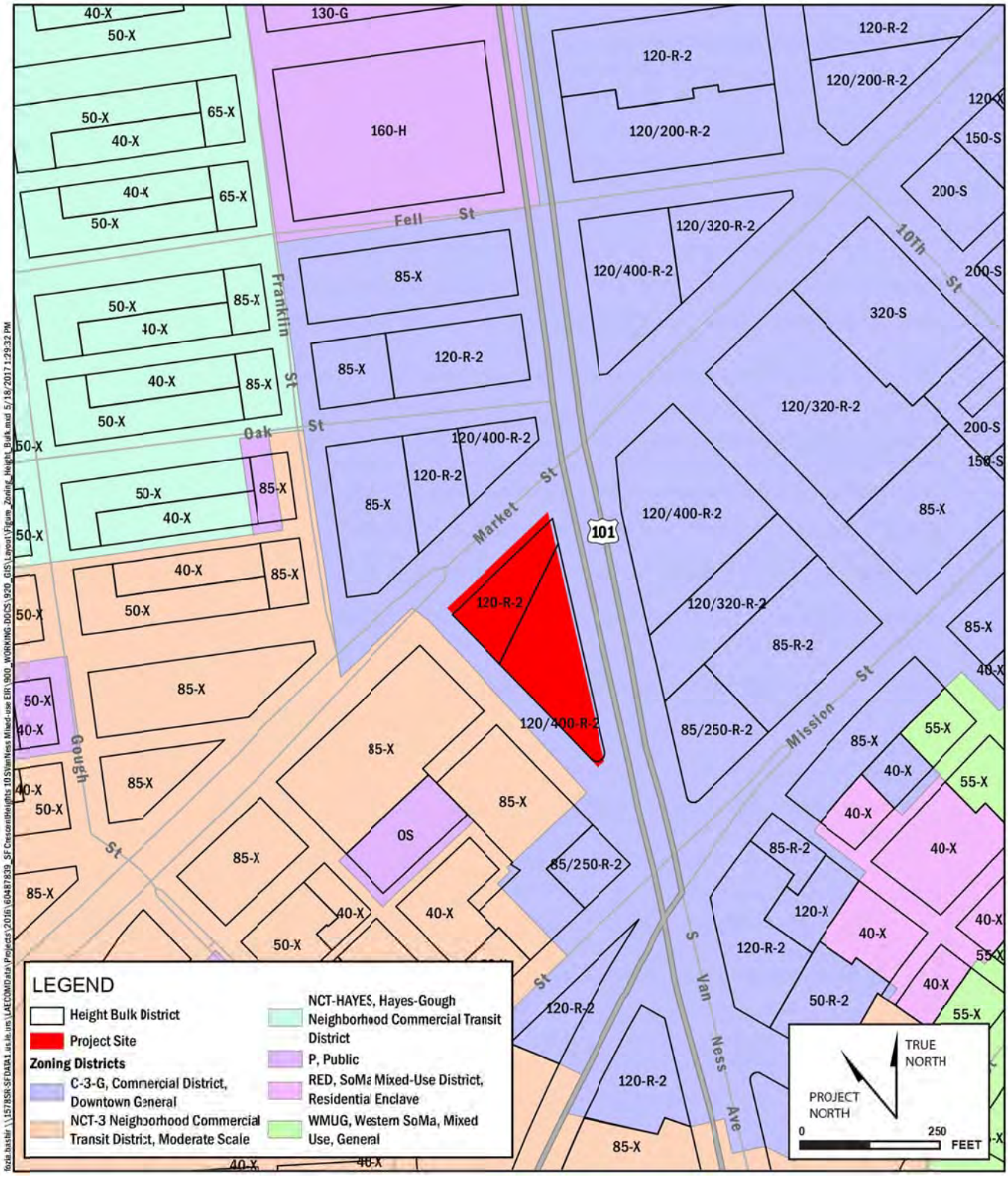
[7] Langan Treadwell Rollo, 2017. Geotechnical Consultation 10 South Van Ness Avenue. March 2017. This document and all other documents, unless otherwise noted, are available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of Case File No. 2015-004568E.

[8] https://www.sfmta.com/sites/default/files/projects/2017/VN_Newsltr_17.02_170502.pdf. Accessed July 5, 2017.

Source: Handel Architects, 2016

Figure 2: Project Site



Source: City and County of San Francisco, 2017

Figure 3: Zoning Districts and Height and Bulk Districts

Proposed Project Characteristics

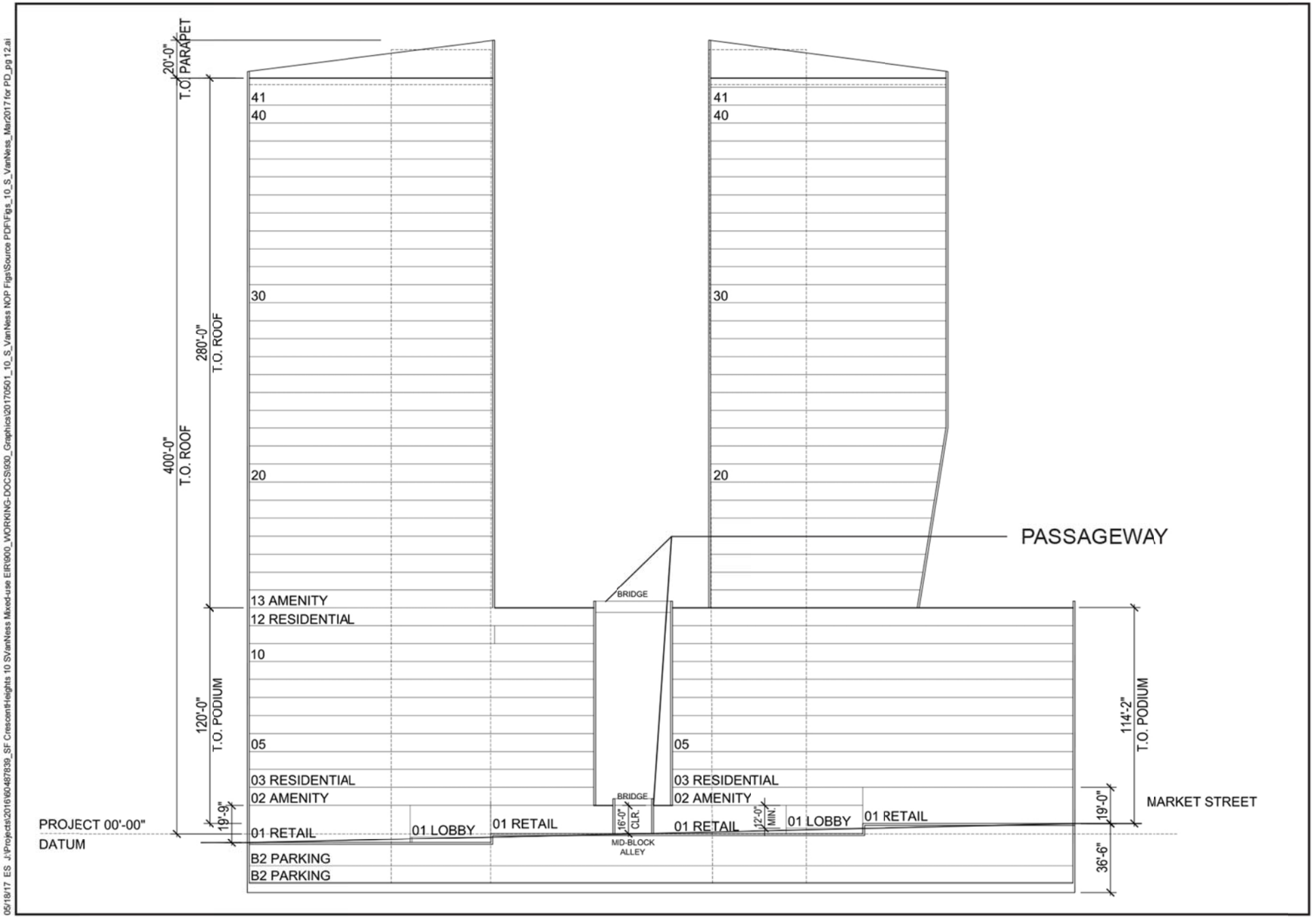
The proposed project would result in the demolition of the existing 91,088 square-foot, two-story, 30- to 45-foot-tall Honda Dealership and Service Center, and construction of a new approximately 1,071,100 gross square feet (gsf), 984-unit, 41-story mixed-use residential building. The proposed project would construct a building with one below-grade structure and two separate above-grade structures. Above grade, each structure would consist of a tower on top of a podium. A section of the proposed project is shown on Figure 4, and elevations of the proposed project are shown on Figures 5 and 6.

The tower with frontage along Market Street is referred to as the north tower, and the tower adjacent to the intersection of South Van Ness Avenue and 12th Street is referred to as the south tower. Likewise, the more northerly podium is referred to as the north tower podium, and the more southerly podium is referred to as the south tower podium. Each tower would have its own building core. Two passageways would be constructed to serve as a connection between the two podiums across the mid-block alley, one at Level 2 and one at Level 13. Below Ground Level, the building would consist of a single, two-level parking garage/basement (see Figure 7). The building would have a single foundation supporting all project structures. Each tower would have a maximum height of 400 feet (420 feet total, inclusive of roof screens and the elevator penthouse on each tower).[9] The ground floor through Level 12 would be located in the tower podiums, and Levels 13 through 41 would be located in the towers. The towers would be separated by a minimum of 115 feet. The north tower podium would be approximately 114 feet in height, and the south tower podium would be approximately 120 feet in height.[10] Both podiums would include retail uses and residential lobbies at the Ground Level (see Figure 8).

The proposed project would include a total of approximately: 935,745 gsf of residential uses, 30,350 gsf of retail uses; 3,000 gsf of rooftop mechanical equipment; and 102,000 gsf of parking with up to 518 vehicle parking spaces, as shown in Table 1.

[9] Pursuant to Planning Code Section 260(b)(1)(B), the mechanical and elevator penthouses are exempt from the Planning Code height limits, but are considered in the context of environmental review.

[10] A height of 114 feet and 120 feet for the north and south tower podiums, respectively, is consistent with the height and bulk district for this portion of the site (120-R-2).



Source: 10 SVN LLC, 2017

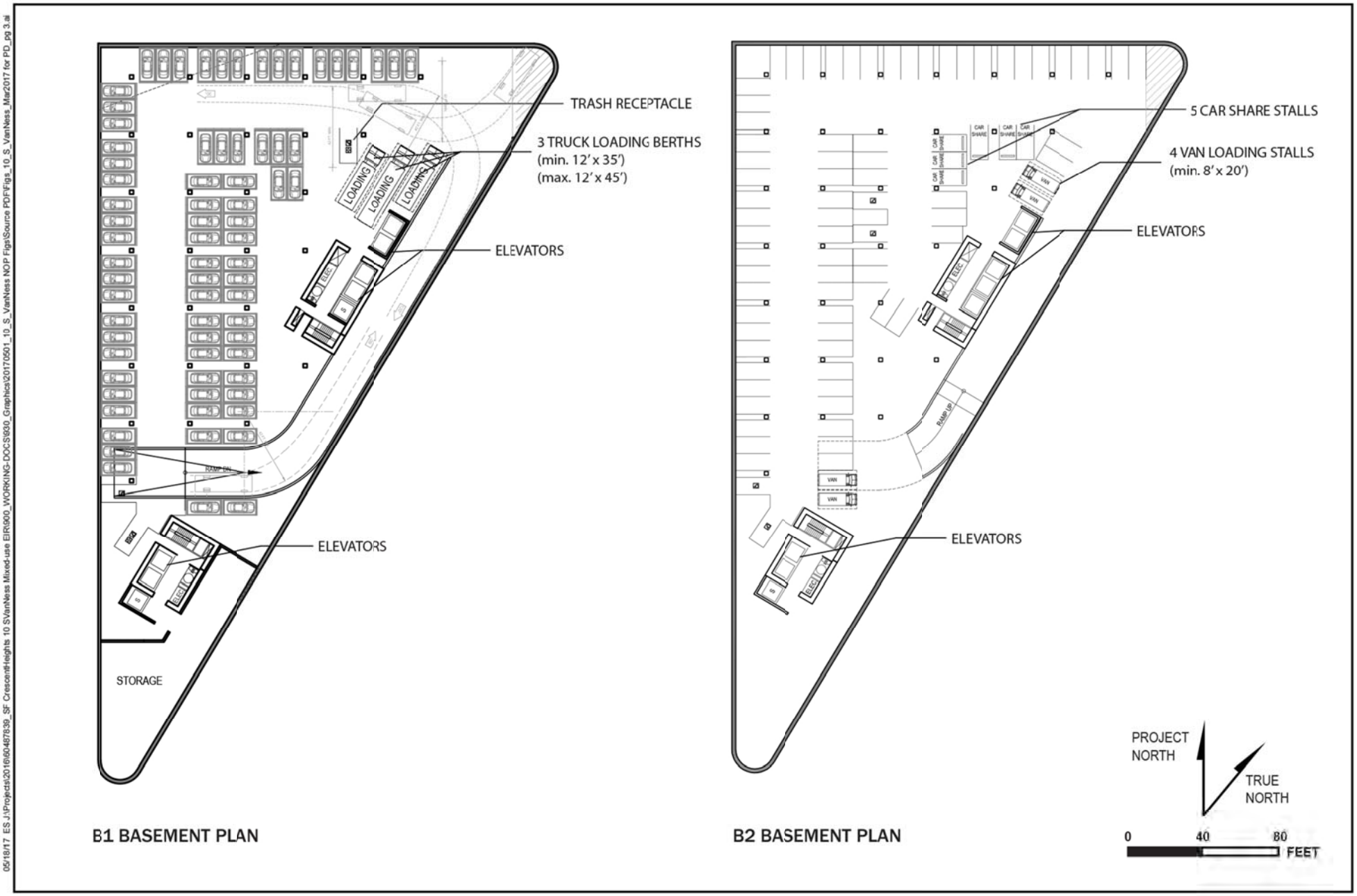
Figure 4: Proposed Project – Building Section Looking West toward Project Site from South Van Ness Avenue

Source: 10 SVN LLC, 2017

Figure 5: Proposed Project – Building Elevation Looking West toward Project Site from South Van Ness Avenue

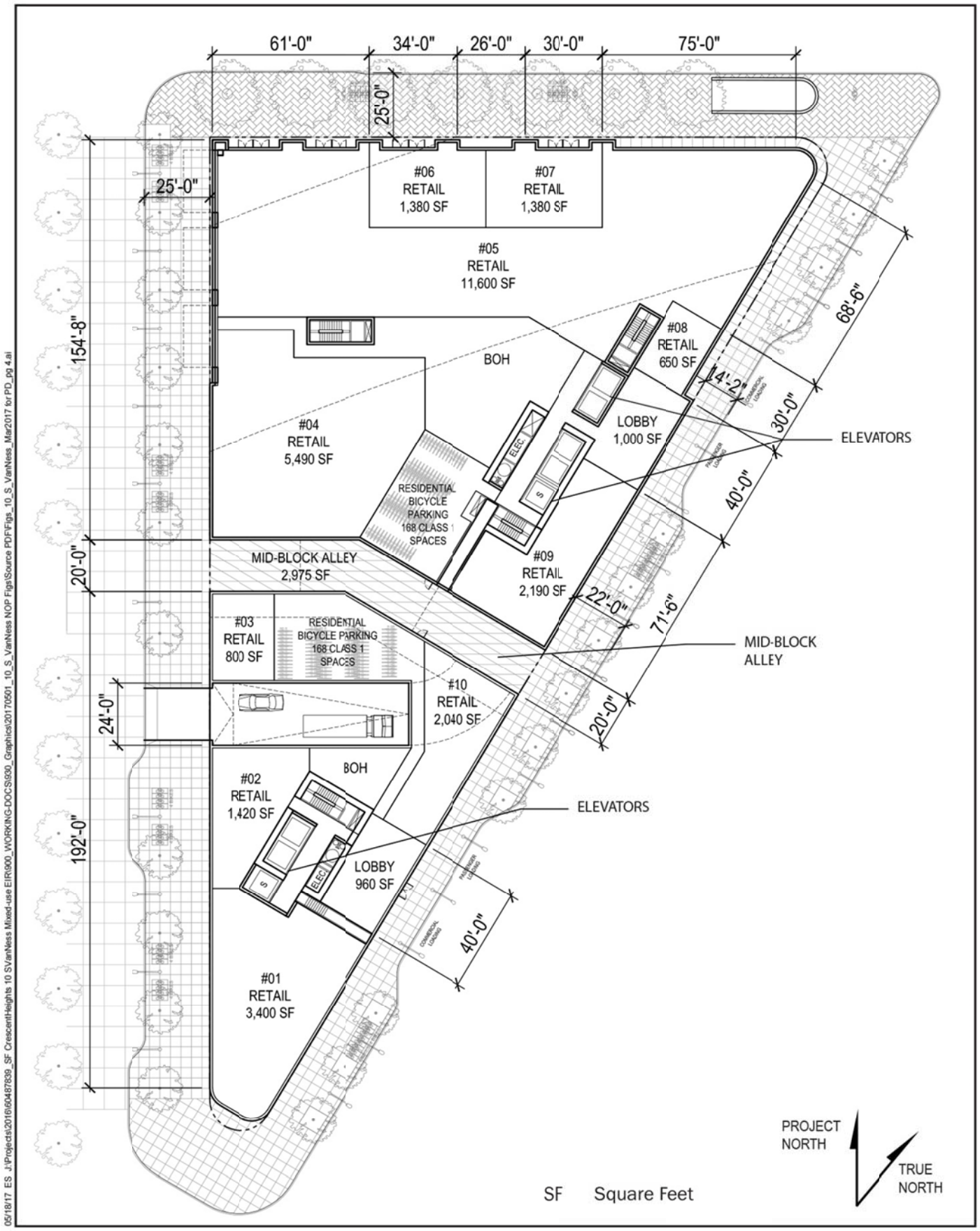
Source: 10 SVN LLC, 2017

Figure 6: Proposed Project – Building Elevation Looking South Toward Project Site from Market Street



Source: Handel Architects, 2016 and SITELAB Urban Studio, 2017

Figure 7: Proposed Project – Parking Garage/Basement Plan



Source: Handel Architects, 2016

Figure 8: Proposed Project – Ground Floor Plan

The proposed project would include up to 984 residential units comprised of: 375 studios, 461 one-bedroom units, 100 two-bedroom units, and 48 three-bedroom units. The north tower would include approximately: 267 studios, 294 one-bedroom units, 51 two-bedroom units, and 19 three-bedroom units. The south tower would include approximately: 108 studios, 167 one-bedroom units, 49 two-bedroom units, and 29 three-bedroom units. In both towers, residential amenities would be provided on Level 2, and residential units would be provided on Levels 3-41 (see Figures 9 through 12). Residential lobbies and building services would comprise approximately 16,670 gsf. The residential entrances would be at the approximate center of each tower podium's frontage on South Van Ness Avenue.

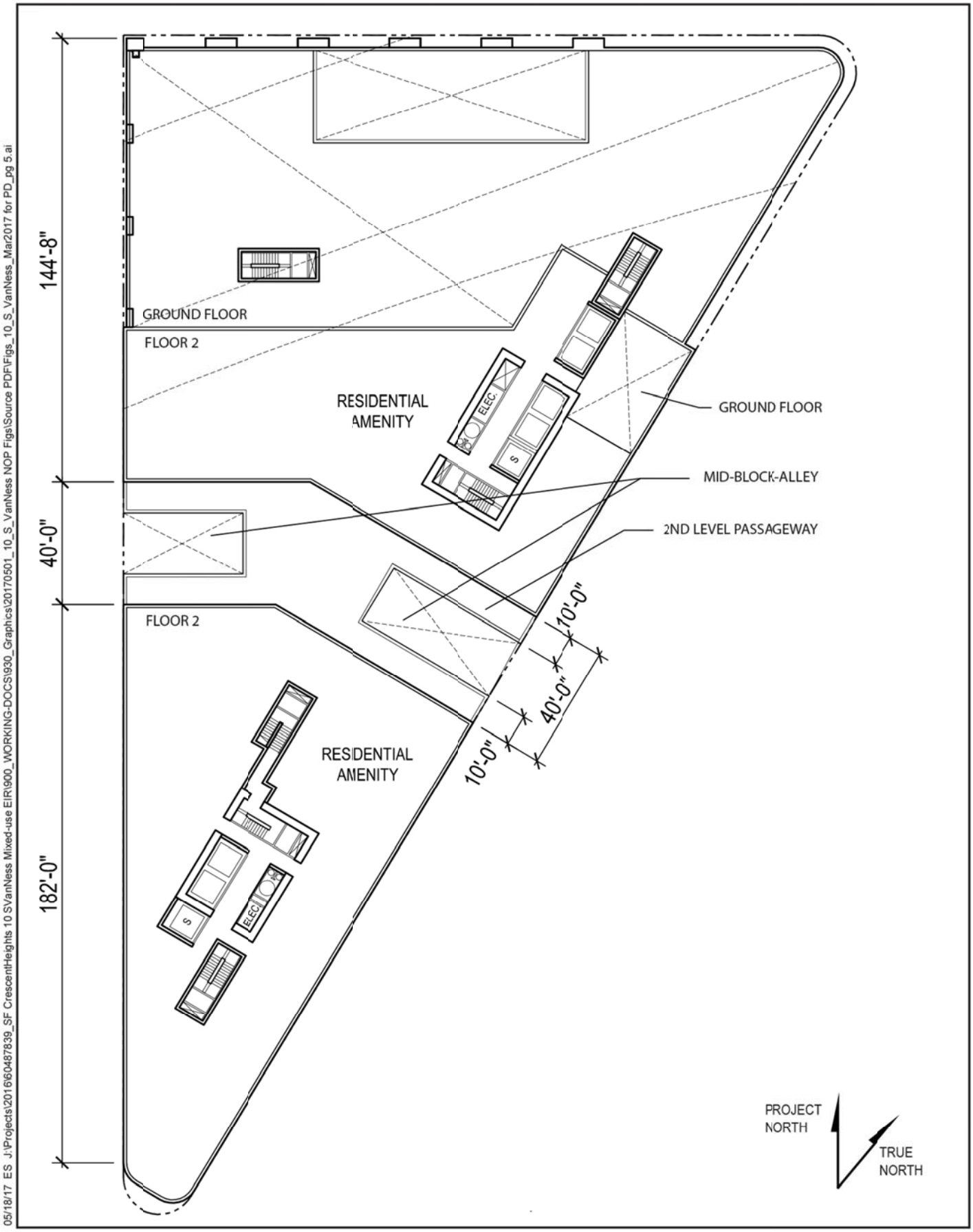
The ground floor of each tower podium would include approximately 30,350 gsf of retail space for use by multiple tenants. The retail spaces, as currently designed, are illustrated in Figure 8; there are a total of ten retail spaces ranging from 800 square feet to 11,600 square feet. The retail uses would front onto South Van Ness Avenue, Market Street, 12th Street, and the proposed mid-block alley. The retail spaces would have a minimum floor-to-ceiling height of 19 feet in both tower podiums.

Open Space. The proposed project would include approximately 48,150 square feet of usable open space per Planning Code Section 736.93, which would be provided through a combination of publically-accessible open spaces, and common useable open spaces.[11,12] As shown on Figures 4 and 8, publicly-accessible open space would include the 2,975-square-foot mid-block alley between the two tower podiums, which would provide a pedestrian connection between South Van Ness Avenue and 12th Street. Private common open spaces would include amenity terraces on Level 2 of both tower podiums, Levels 3 and 11 of the north tower, Level 13 of the south tower, and on the roofs of both towers, as depicted in Figure 13.

Parking/Loading and Mechanical Equipment. The proposed project would include 102,000 gsf of parking and building services, with up to 519 vehicle parking spaces, in two basement levels, as shown on Figure 7. Ingress and egress to the secured garage/basement would be provided through a single curb cut on 12th Street. The building owner would provide a valet service within the on-site garage ramp to manage resident and employee parking maneuvers within the building, with the intent of facilitating inbound vehicle flow and reducing queue spillover onto 12th Street. The 24-hour, fully-staffed valet would serve residents, visitors, and car-share users. Valet staff would also direct delivery and moving trucks.

[11] As defined in Planning Code section 135, common useable open space includes open space that is easily accessible from a dwelling unit or from a common area of a building or lot. Common useable open space is accessible to building occupants only, but, as opposed to private useable open space, is accessible to all building occupants rather than a select group of units. In C-3 Districts, new buildings are required to provide privately-owned public open spaces (POPOS) meeting the requirements of Planning Code Section 138. These open spaces must be accessible to the general public.

[12] Planning Code Section 135 requires the provision of 36 square feet of private open space or 47.88 square feet of commonly accessible open space per residential unit. The proposed project would require 47,114 square feet of common usable open space.

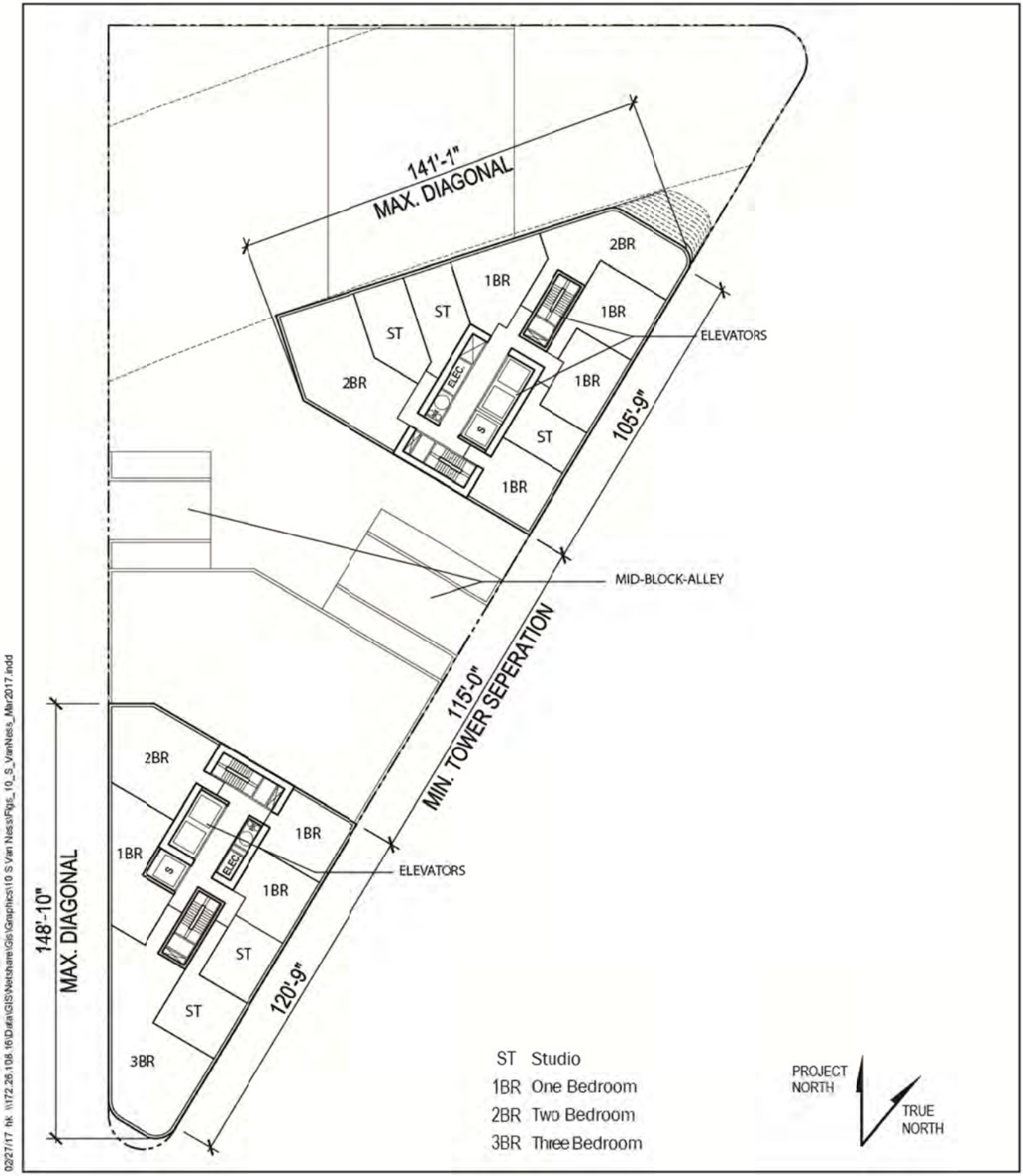


Source: Handel Architects, 2016

Figure 9: Proposed Project – Level 2 Floor Plan

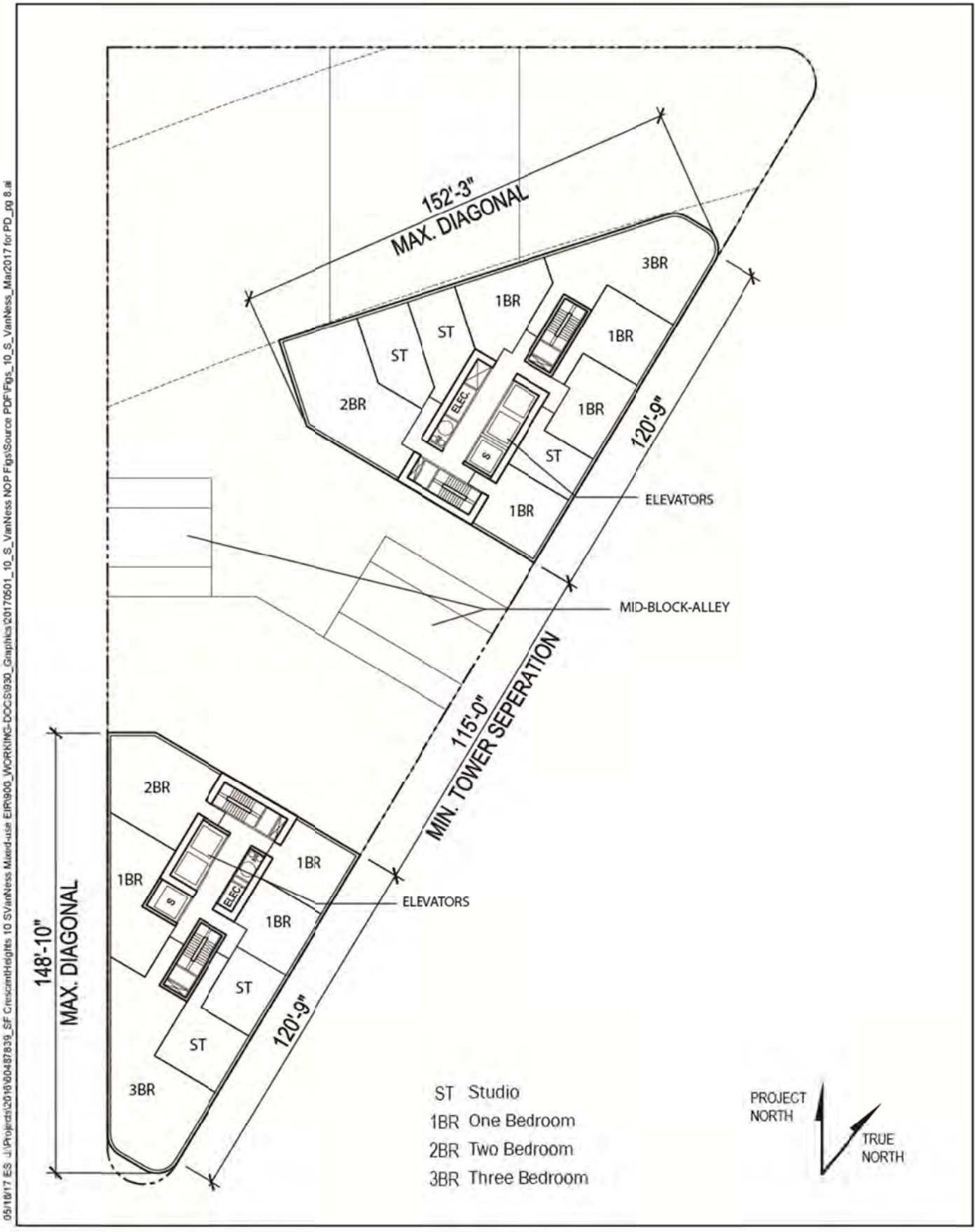
Source: Handel Architects, 2016

Figure 10: Proposed Project – Levels 3 through 12 Representative Floor Plan



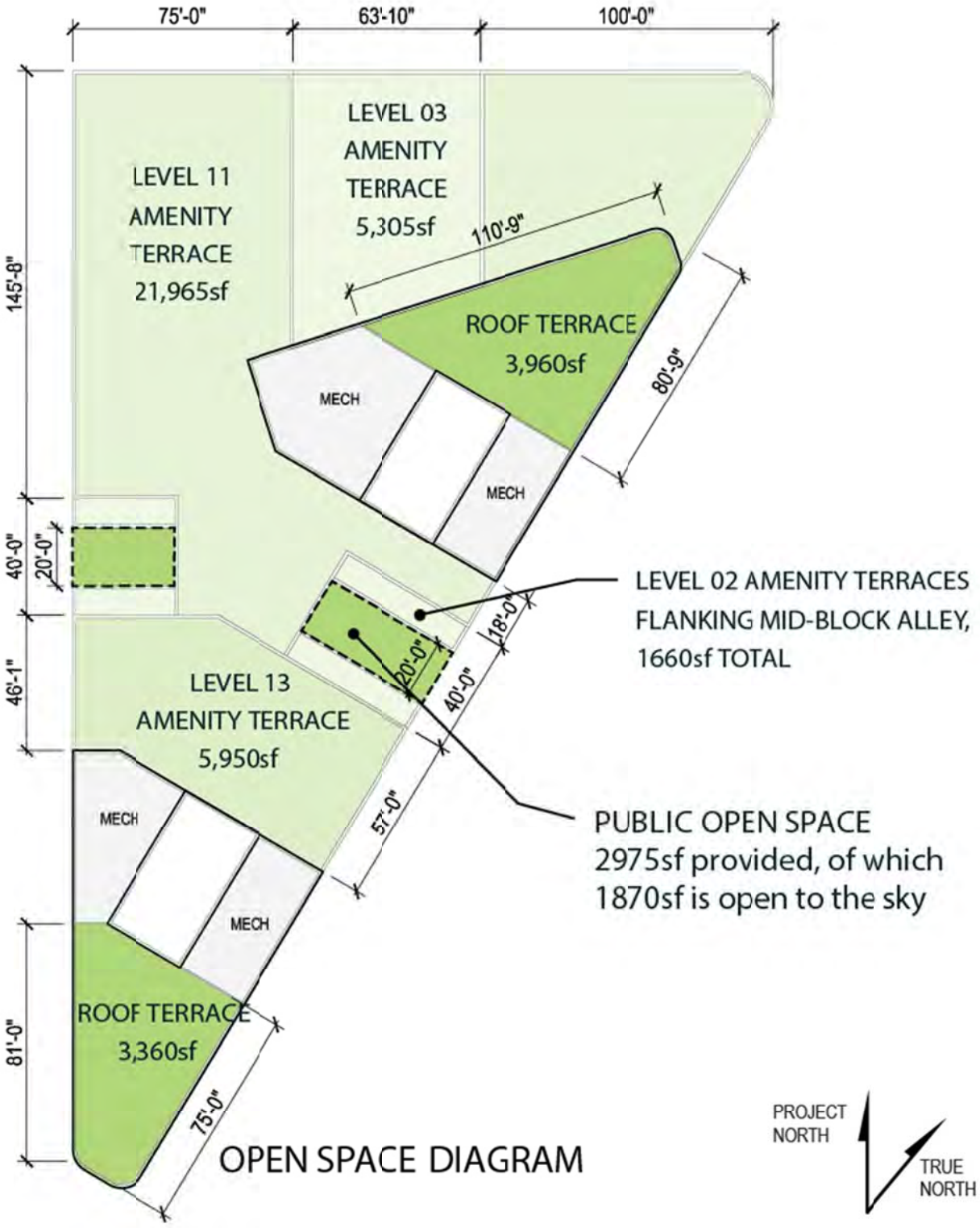
Source: Handel Architects, 2016

Figure 11: Proposed Project – Levels 13 through 22 Representative Floor Plan



Source: Handel Architects, 2017

Figure 12: Proposed Project – Levels 23-41 Representative Floor Plan



Source: 10 SVN LLC, 2017

Figure 13: Proposed Project – Open Space Plan

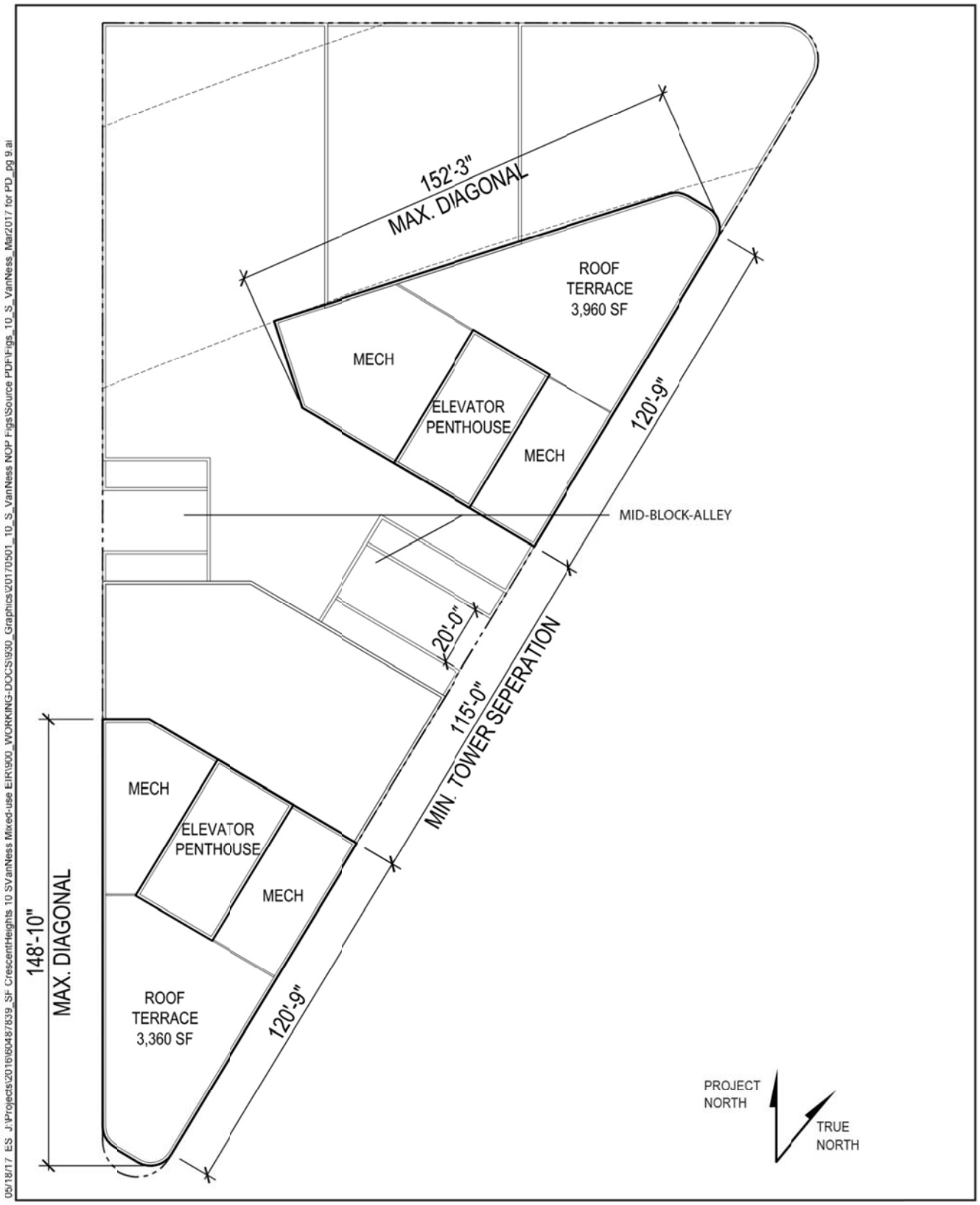
Up to 518 off-street vehicle parking spaces would be provided for the proposed project, consisting of 491 spaces for residential use, 14 spaces for retail use, and six spaces for car-share vehicles. In addition, a total of seven off-street freight-loading spaces would be located in the two basement levels, three of which would be standard freight-loading spaces, and four of which would be service vehicle spaces. One freight-loading space would accommodate up to a 45-foot-long vehicle. On the ground floor of the north tower podium, 336 class I bicycle parking spaces[13] would be provided: 332 for residential use and four for retail use. On-street bicycle parking would include 61 class II bicycle parking spaces: 49 for residential use and 12 for retail use.

The proposed project would include one 1,500-kW diesel-powered emergency generator and other mechanical equipment in the garage/basement. Trash storage would also be located in the garage/basement, adjacent to an accessible loading area. The garage/basement would be secured, and would be accessible only to residents and retailers. Approximately 3,000 gsf of the roof area would be reserved for heating, ventilation, and air conditioning (HVAC) mechanical equipment. The proposed project's roof plan is shown on Figure 14.

Circulation and Access. The project site currently has six curb cuts, three of which are along South Van Ness Avenue and three of which are on 12th Street. The proposed project would remove the three existing curb cuts on South Van Ness Avenue, and the three curb cuts on 12th Street. A new curb cut would be installed along 12th Street to provide vehicle access to the two-level, below-grade parking garage/basement, as shown on Figure 7. Vehicular access to the proposed building, for both retail and residential users would be provided by a new, 20-foot curb cut on 12th Street, which would allow access to the 24-hour valet service in the garage.

In addition to stairs, two elevators would provide access to the residential lobbies from the parking garage/basement. From the residential lobbies, a second elevator would provide access to each tower. Elevator access may also be available between the below-grade parking garage/basement and the ground-floor retail space. As described above, two street-level residential entrances, one for each tower, would be located along South Van Ness Avenue. Access to the retail spaces would be from South Van Ness Avenue, Market Street, 12th Street, and the proposed mid-block alley. The proposed mid-block alley would also provide public access through the project site between South Van Ness Avenue and 12th Street.

[13] Section 155.1(a) of the Planning Code defines class I bicycle spaces as "spaces in secure, weather-protected facilities intended for use as long-term, overnight, and work-day bicycle storage by dwelling unit residents, nonresidential occupants, and Employees" and defines class II bicycle spaces as "spaces located in a publicly-accessible, highly visible location intended for transient or short-term use by visitors, guests, and patrons to the building or use."



Source: Handel Architects, 2017

Figure 14: Proposed Project – Roof Plan

Transportation Demand Management. The proposed project would result in more than 10 dwelling units; therefore, the proposed project would be required to comply with San Francisco Planning Code Section 169, Transportation Demand Management Program (added by Ordinance 34-17, approved February 2017). As required under Planning Code Section 169, the project sponsor is required to develop a Transportation Demand Management (TDM) plan describing strategies the project sponsor/property owner would adopt to reduce single-occupancy driving to/from the project site, promote car-sharing, and promote use of nearby transit, bicycle, and pedestrian facilities to access the project site. Compliance with the project's TDM plan would be included as a Condition of Approval for the proposed project and would be monitored by Planning Department staff for the life of the project.[14]

The project sponsor has agreed to implement the following TDM measures; these measures comprise the required TDM plan:

PKG-1: Unbundle Parking
Unbundle[15] parking in transportation analysis zone (TAZ) 578, where the project site is located.

PKG-4: Parking Supply
Provide parking at a rate that is less than or equal to 80 percent and greater than 70 percent of the neighborhood residential parking rate. The project parking rate is 0.5 vehicles per unit, which is 76 percent of the neighborhood residential parking rate of 0.65 vehicles per unit in transportation analysis zone 578 where the project site is located.

ACTIVE-1: Improve Walking Conditions
Complete streetscape improvements consistent with the Better Streets Plan and any local streetscape plan so that the public right-of-way is safe, accessible, convenient, and attractive to persons walking by: widening the sidewalk along the east side of 12th Street, providing a mid-block pedestrian alley to allow public access through the project site, and providing sidewalk bulb-outs along the east side of 12th Street to shorten the crossing distances at intersections with Market Street and South Van Ness Avenue, and to reduce vehicle speed.

[14] Planning Code Section 169 requires, prior to issuance of a certificate of occupancy, that a property owner facilitate a site inspection by the Planning Department and document implementation of applicable aspects of the TDM Plan, maintain a TDM Coordinator, allow for Department inspections, and submit periodic compliance reports throughout the life of the project.

[15] Where the cost of a parking space is separated from the cost of rent, lease or ownership.

The streetscape improvements would meet TDM ordinance criteria by providing the following ten streetscape elements defined in Table 1 of Planning Code Section 138.1:[16]

- High-visibility crosswalks; Special crosswalk treatments; Midblock crosswalks; Raised crosswalks; Extended bulbouts; Midblock bulbouts; Reuse of porkchops and excess right-of-way; Shared public ways; Pedestrian-only streets; and Above-ground landscaping.

ACTIVE-2: Bicycle Parking
Provide class I and class II bicycle parking spaces as required by the Planning Code. The proposed project is providing 332 Class I and 49 class II bicycle spaces for the residential use, and four class I and 12 class II bicycle spaces for the retail use, both of which meet the Planning Code, and TDM measure requirements.

ACTIVE-5A: Bicycle Repair Station
Provide on-site tools and space for bicycle repair. The proposed project would provide this repair station within the class I bicycle parking area on the building's ground floor.

CSHARE-1: Car-Share Parking
Provide car-share space parking as required by the Planning Code. To meet this requirement, the proposed project would provide six car-share spaces, to be located on Level B2.

DELIVERY-1: Delivery Supportive Amenities
The proposed project would facilitate delivery services by providing a staffed reception area for receipt of deliveries, and offering one of the following: (1) clothes lockers for delivery services, or (2) temporary storage for package deliveries, laundry deliveries, and other deliveries. These amenities would be provided on Level B1.

FAMILY-1: Family TDM Amenities
The proposed project would provide an on-site secure location on Level B1 for storage of personal car seats, strollers, and cargo bicycles or other large bicycles.

INFO-1: Multimodal Wayfinding Signage
The proposed project would provide multimodal wayfinding signage in key locations to support access to transportation services and infrastructure, including: transit, bike share, car-share parking, bicycle parking and amenities (including repair stations and fleets), showers and lockers, taxi stands, and shuttle/carpool/vanpool pick-up/drop-off locations.

INFO-2: Real Time Transportation Information Displays
The proposed project would provide real time transportation information on displays in prominent locations on the project site and within the buildings to highlight sustainable transportation options and support informed trip-making.

[16] Table 1: Pedestrian and Streetscape Elements per the Better Streets Plan (Section 138.1) http://library.amlegal.com/nxt/gateway.dll/California/planning/planningcode?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$sync=1

INFO-3: Tailored Transportation Marketing Services
The property owner would provide promotions and welcome packets to all new residents/employees, personal consultation for each new resident/employee, and request commitment to try new transportation options.

Streetscape Improvements. The proposed project's streetscape plan called the "Market Octavia Streetscape Plan" would conform to Market and Octavia Plan and San Francisco Planning Department Standards and is shown on Figures 15 and 16. The eastern and western sidewalks of 12th Street would be expanded from 15 feet to a width of 21 feet (four feet of frontage, eight feet of pedestrian throughway, and nine feet of pedestrian furnishing space), as shown on Figure 16. Eight-foot-wide bulb-outs would be installed at the intersection of 12th and Market streets. A raised crosswalk would be installed at the intersection of 12th and Stevenson streets. The "pedestrian island" at the intersection of 12th Street and South Van Ness Avenue would be removed and replaced by bulb-outs on both sides of 12th Street and a pedestrian plaza on the southwest side of the intersection.

Two 60-foot-long white and yellow loading zones[17] are proposed along the South Van Ness Avenue frontage, near the entrances to the residential lobbies, to provide an area for passenger drop-off and pick up, and commercial loading activities. Proposed changes to the right-of-way are described below. Four passenger and commercial loading zones are proposed on 12th Street, one 100-foot-long loading zone and one 40-foot -long loading zone on each side of 12th Street. Each 100 foot loading zone would be comprised of one ADA loading space, one ADA parking space, one passenger loading space, one commercial loading space, and one regular parking space. Each 40 foot loading zone would be comprised of one passenger loading space and one commercial loading space.

In addition to the streetscape improvements described above, the proposed project would install 33 net new street trees and class II bicycle racks along South Van Ness Avenue, Market Street, and 12th Street, in compliance with the City's Better Streets Plan.

Sustainability. The San Francisco Building Code includes a chapter on Green Building Requirements; these requirements establish either Leadership in Energy and Environmental Design (LEED)[18] certification levels or Green Point Rated[19] system points for types of proposed residential and commercial buildings. The proposed project would seek LEED silver certification, which includes measures applicable to both construction and operation of the proposed project. The proposed project would incorporate a number of sustainability features, including stormwater and rainwater collection features and a wastewater treatment system. The wastewater treatment system would be sized to treat and utilize recycled water from the proposed building for non-potable uses in the building, including flushing toilets, irrigation, and make-up water for the HVAC system. The proposed project would remove the existing 28 trees along the project frontage. In compliance with Public Works Code Section 806(c)(2), the proposed project would install new 61 street trees at every 20 feet along the proposed project frontage for a total of 33 net new street trees along the project frontage.

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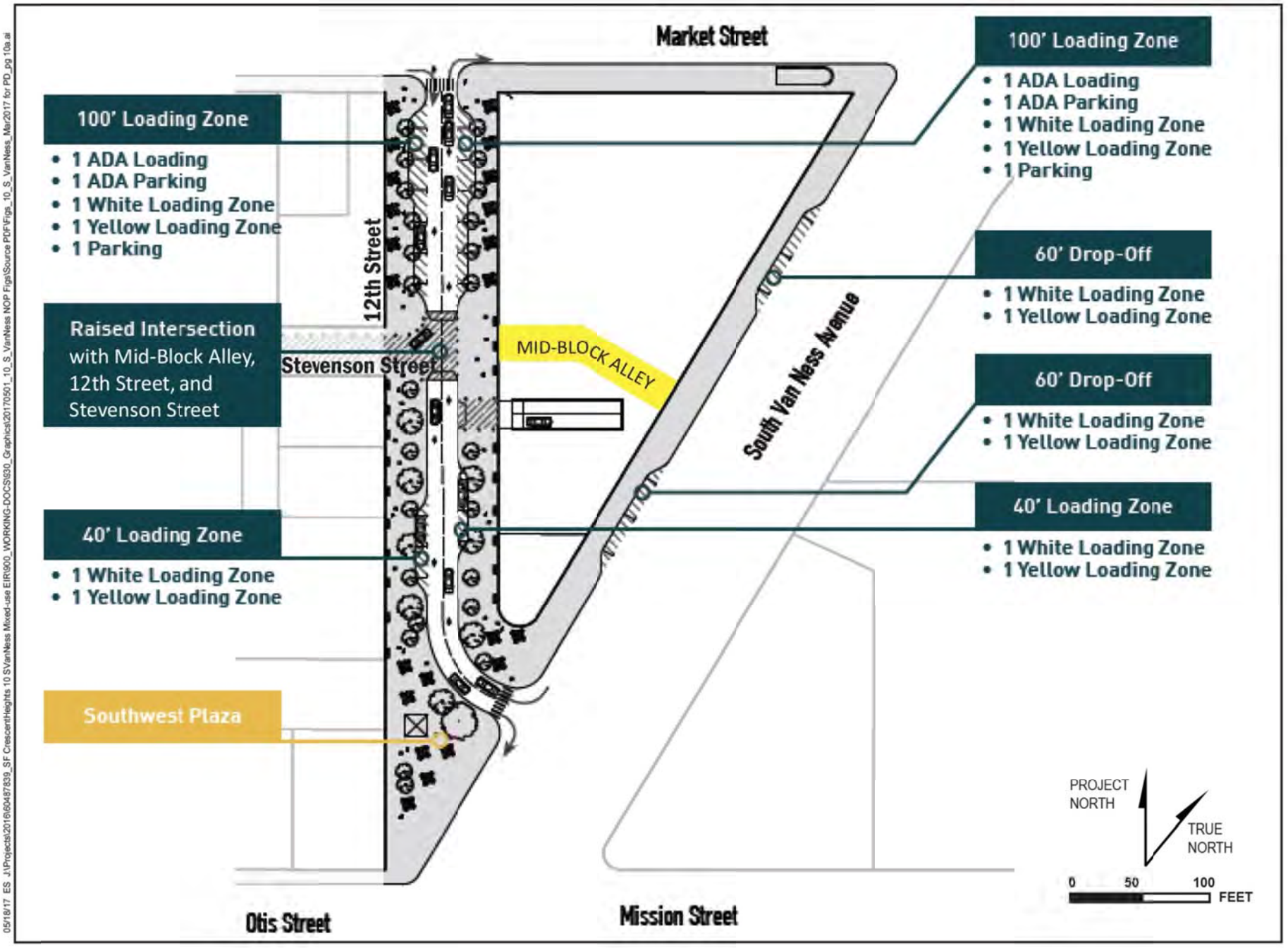
[17] White zones are for passenger loading and unloading during certain hours, with a time limit of 5 minutes. Yellow zones are for commercial loading activities.

[18] LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council, which involves third-party verification that a building or community was designed and built using strategies aimed at improving performance across metrics that include energy savings, water efficiency, indoor air quality, use of recycled materials, and proximity to public transportation.

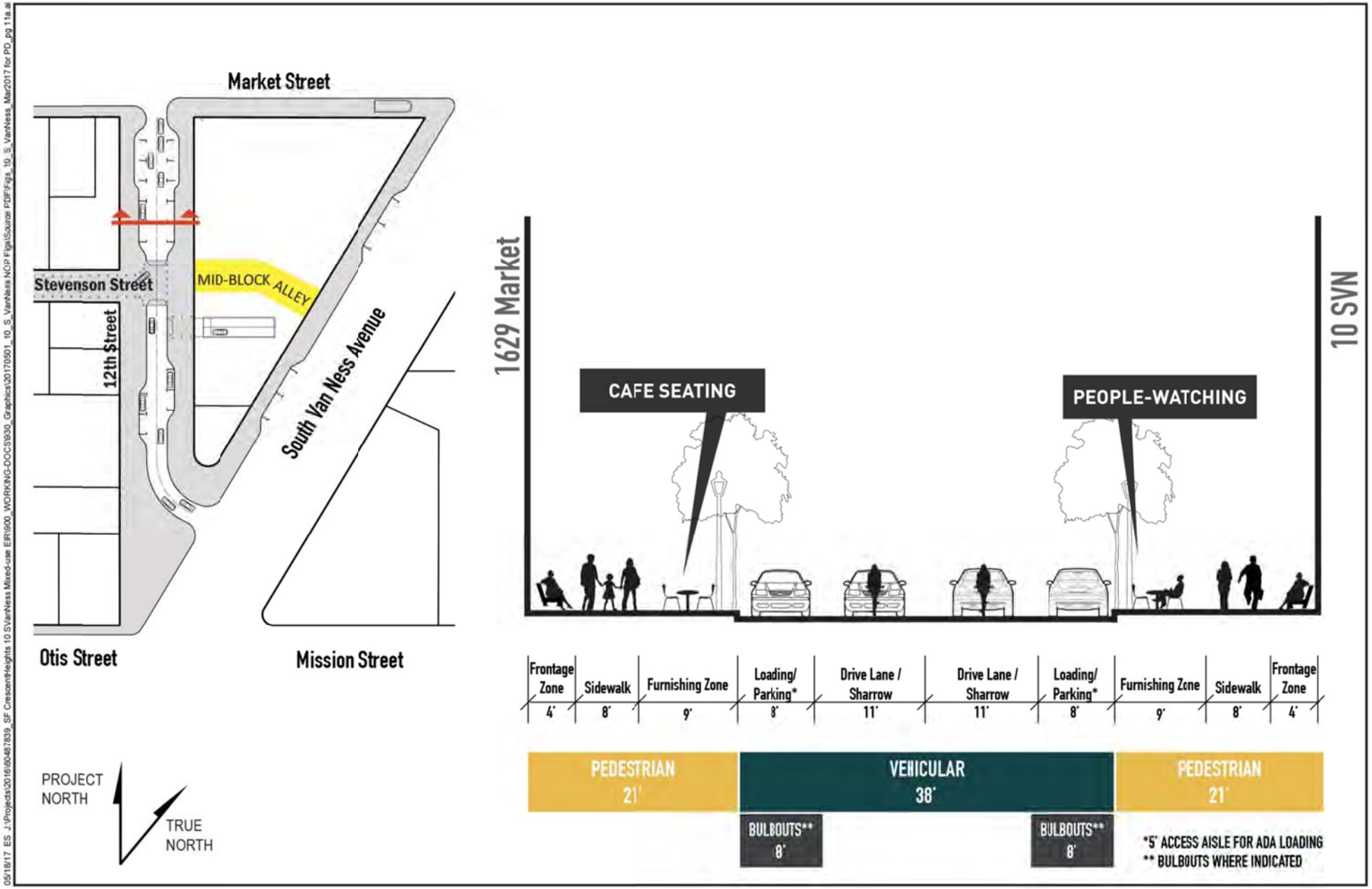
[19] Green Point Rated is a program of Build it Green, established for evaluating residential building performance in the areas of resource conservation, indoor air quality, water conservation, energy efficiency, and livable communities (infill development, increased density, diversity of land uses).

The project sponsor plans to submit an application to the Governor's office seeking certification of the proposed project as an Environmental Leadership Development Project (ELDP) pursuant to Assembly Bill 900, Jobs and Economic Improvement through Environmental Leadership Act of 2011, and CEQA Section 21178 et seq. An ELDP is a project that does not result in any net greenhouse gas (GHG) emissions and achieves a 10 percent higher standard for transportation efficiency than comparable projects. The ELDP certification process is separate from the environmental review process conducted for the proposed project.



Source: SITELAB Urban Studio, 2017

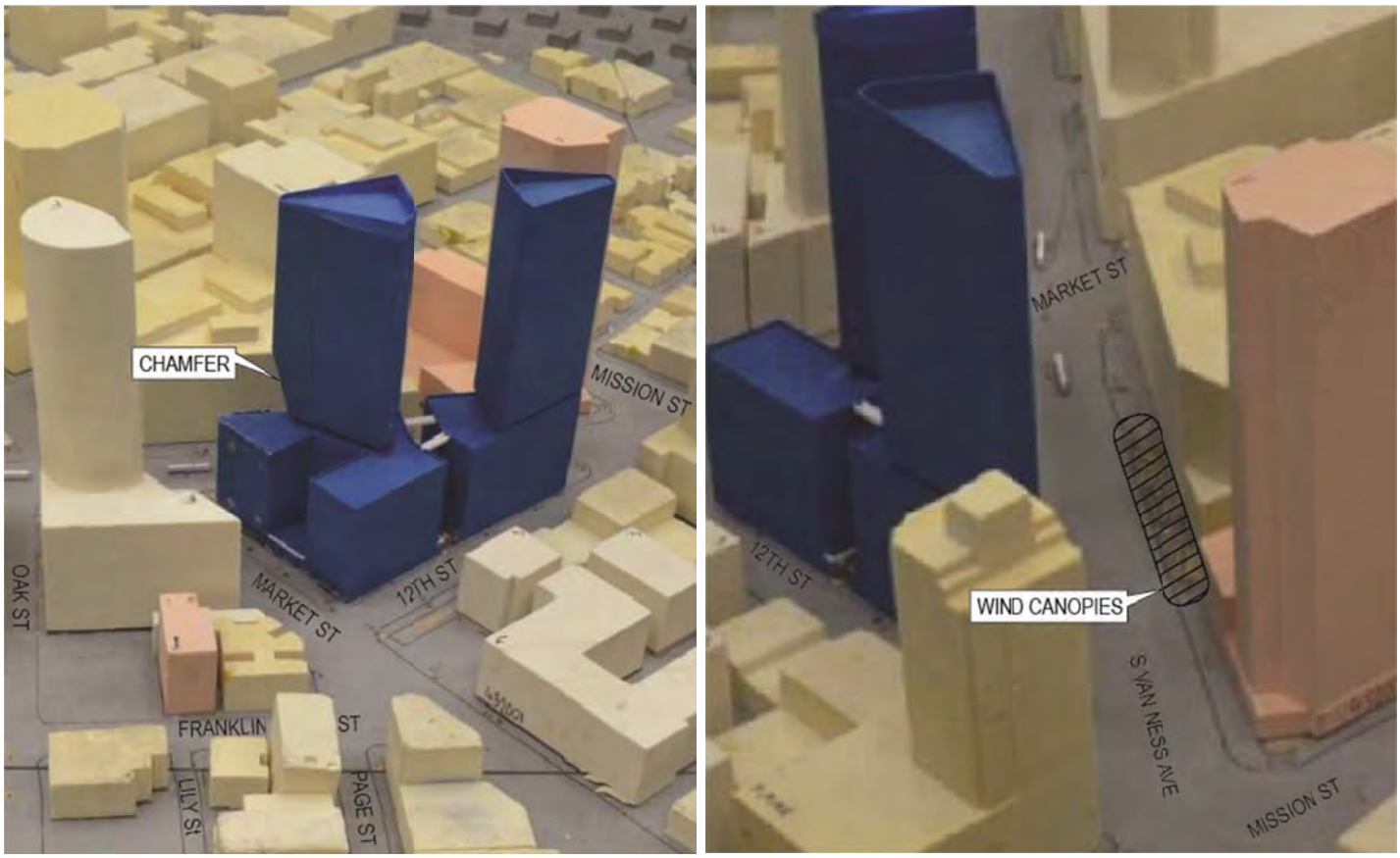
Figure 15: Proposed Project - Market Octavia Streetscape Plan (Plan View)



Source: SITELAB Urban Studio, 2017

Figure 16: Proposed Project - Market Octavia Streetscape Plan (12th Street Right-of-Way Section)

Other Design Features. As a result of preliminary wind test modelling in accordance with Planning Code Section 148, the north face of the proposed north tower would be chamfered[20] from Level 13 to Level 22, and 75% porous wind canopies would be constructed at the sidewalk level along the east side of South Van Ness Avenue between Market Street and Mission Street to provide protection to the public from hazardous wind conditions, as shown in Figure 17. The canopies would be freestanding trellis-like structures with cantilevered segments, supported by vertical columns. The grouping of discontinuous canopies would measure approximately 230 feet long in total from northeast to southwest at the sidewalk and would be up to approximately 15 to 20 feet tall. The proposed project also includes construction of similar porous canopies at both ends of the proposed mid-block alley in between the two towers. A porous free-standing canopy would also be located at the northwest corner of the proposed project and a solid awning would extend from the northwest corner of the north tower for approximately 10 feet on the ground floor.



Source: BMT Fluid Mechanics 2017

Figure 17: Proposed Project Design Features

[20] A chamfer is a flat surface resulting from cutting off the edge of a volume or a symmetrical sloping surface at an edge or corner.

Construction. This section describes the construction activities associated with the proposed project. Construction is anticipated to occur over approximately 36 months, and would include the following phases: (1) demolition; (2) shoring and excavation; (3) foundation and podium construction; (4) superstructure/skin; and (5) interior work. Construction hours would typically be from 7:00 a.m. to 8:00 p.m., Monday through Thursday; and 7:00 a.m. to 5:00 p.m. on Fridays and Saturdays. Limited evening work (between 8:00 p.m. to 7:00 a.m.) and work on weekends (7:00 a.m. to 5:00 p.m.) would be required for Phases 3 and 4.

As discussed previously, a subsurface BART easement runs underneath the northern portion of the project site, as shown on Figure 2. In this portion of the site, structural loads associated with the proposed project must remain equal to or less than existing loads on the BART tunnels. The northern half of the project site is within the BART zone of influence (ZOI). The portion of the structure within the BART easement would be supported by a concrete mat foundation, which would ensure that the existing load imposed on the BART tunnels is maintained. Outside of the easement, but within the BART ZOI, the tower and podium structures would be supported by a deep foundation consisting of double-cased, drilled cast-in-place piers. The installation of drilled cast-in-place piers involves digging cylindrical shafts and then filling them with wet concrete. Thus, no pile driving is required. Outside of the BART ZOI, the tower and podium structures could be supported by either a deep foundation system or a mat foundation.[21]

The project site would be excavated up to approximately 40 feet below grade in the northern portion and 50 feet below grade in the southern portion of the site. The deep foundation cast-in-place piers would be constructed well below 50 feet, to the appropriate design depth. Excavation in the northern portion would be to a shallower depth due to the presence of the subsurface BART easement. The project would require approximately 100,000 cubic yards of excavated soil be removed from the project site and disposed of at an appropriate facility.

Construction activities would require temporary sidewalk and parking-lane closures for the entire construction period. The proposed project would develop and implement a construction management plan to anticipate and minimize transportation-related impacts of various construction activities associated with the proposed project. The construction management plan would ensure that overall circulation in the project area is maintained to the extent possible, with particular focus on ensuring transit, pedestrian, and bicycle access and connectivity. The program would supplement and expand, rather than modify or supersede, any manual, regulations, or provisions set forth by the SFMTA, the Department of Public Works or other City departments and agencies, and the California Department of Transportation.

[21] Langan Treadwell Rollo, 2017a. Geotechnical Consultation 10 South Van Ness Avenue. March 2017. This document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of Case File No. 2015-004568E.

PROJECT VARIANTS

This section describes the proposed single tower project variant and the straight-shot streetscape variant. As discussed above, the straight shot streetscape design could be included with the proposed project or with the single tower project variant.[22]

Single Tower Project Variant

The project sponsor is also considering a taller building design consisting of a single tower and podium (see Figure 18). The single tower project variant would include construction of a 590-foot-tall, 55-story building (see Table 2).[23] Similar to the proposed project, the single tower project variant would have stair/elevator penthouses extending up to 20 feet above the roof height, for a total height of 610 feet.[24] The podium would vary in height, from approximately 90 to 139 feet along the Market Street frontage and up to approximately 164 feet along the southern frontage of the site, as shown on Figure 18.

The ground floor would contain the same uses as the proposed project, with comparable retail uses (see Figure 19), and a single residential lobby. As with the proposed project, 336 class I bicycle spaces would be provided on the ground floor for project residents and ground-floor retail spaces, and 61 class II bicycle spaces would be provided on the sidewalk adjacent to the project site. These bicycle spaces would meet Planning Code requirements. Vehicle parking would be the same as under the proposed project, with 518 vehicle parking spaces provided in a two-level subgrade parking garage/basement with an entrance off of 12th Street.

The single tower project variant would include up to approximately 984 dwelling units in a combination of studios and one-, two-, and three-bedroom units, similar to the proposed project. However, with the single tower project variant, the mix of units would consist of approximately 347 studios, 449 one-bedroom units, 166 two-bedroom units, and 22 three-bedroom units (typical floor plans are shown on Figures 20 and 21). Residential uses would be provided on Levels 3 through 55, with Level 2 serving as an amenity floor for the proposed residential uses. The pedestrian entrances to the residential lobby would be located on South Van Ness Avenue, and on the mid-block alley. One elevator from the parking garage/basement would provide access to the residential lobby. From the residential lobby, a second elevator would provide access to the tower. Elevator access may be available between the below-grade parking garage/basement and the retail spaces.

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[22] Although on Figures 22 and 23, the straight-shot streetscape variant is shown with a mid-block alley connecting South Van Ness Avenue to 12th Street, if the straight-shot streetscape variant were combined with the single tower project variant, the mid-block alley would be reconfigured to connect Market Street with 12th Street, as shown on Figure 19.

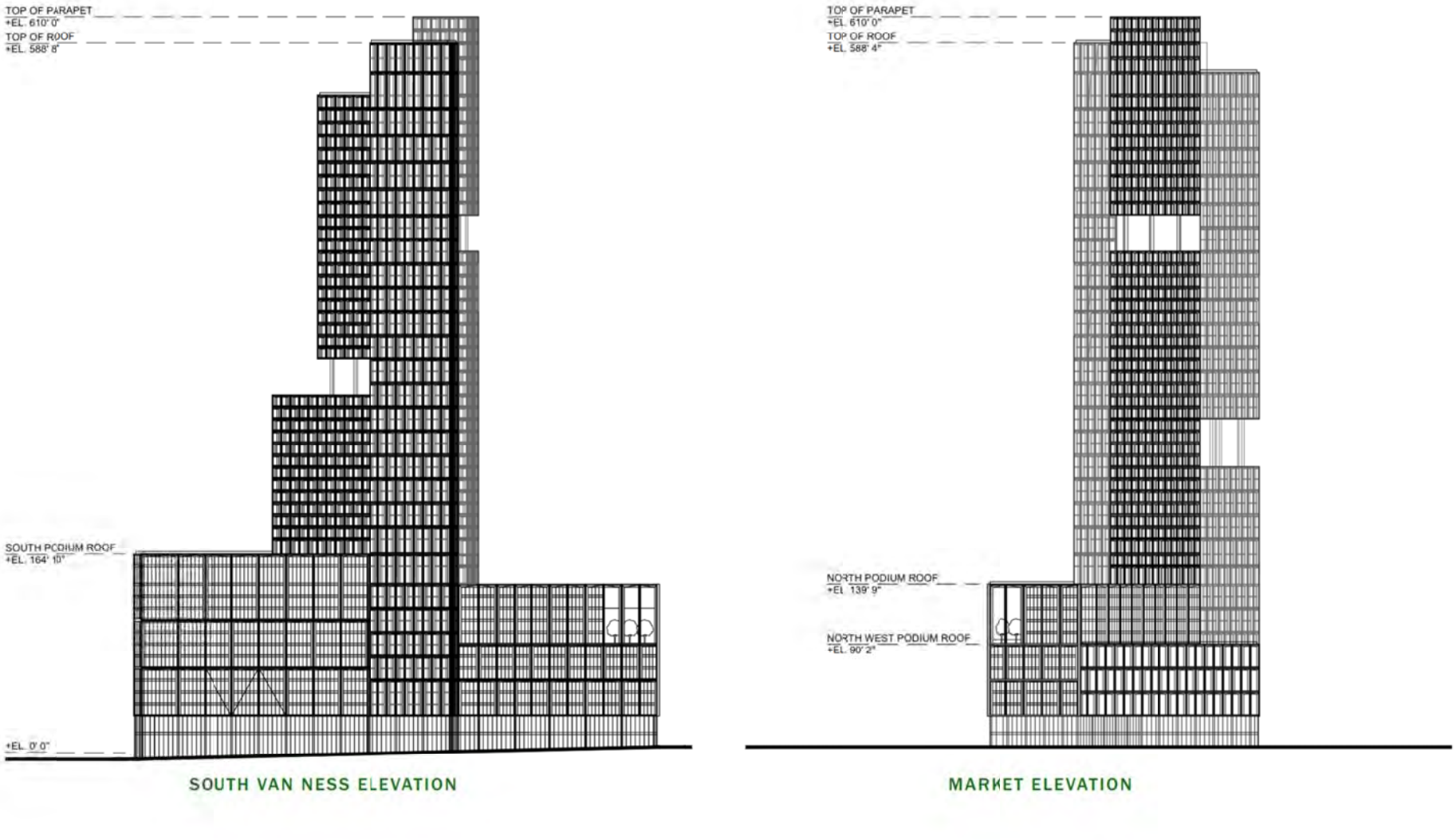
[23] The Van Ness and Market Downtown Residential Special Use District (SUD) encourages transit-oriented, high-density, mixed-use residential neighborhood development around the intersections of Market Street and Van Ness Avenue and Mission Street and Van Ness. The current height limit for building towers ranges from 250 to 400 feet. The Project Variant is intended to reflect the potential changes to the existing height limits proposed by the Market Street Hub Project (Hub Project). The Hub Project is expected to propose changes to existing height limits on certain parcels, including the project site, to provide greater variation in the heights of buildings proposed at the intersection of Market Street and Van Ness Avenue and to better ensure that the area's growth supports the City's goals for housing, transportation, the public realm, and the arts. The specific changes to the existing height limits proposed by the Hub Project have not yet been established.

[24] Pursuant to Planning Code Section 260(b)(1)(B), the mechanical and elevator penthouses are exempt from the Planning Code height limits, but are considered in the context of environmental review.

TABLE 2
PROPOSED PROJECT AND SINGLE TOWER PROJECT VARIANT CHARACTERISTICS

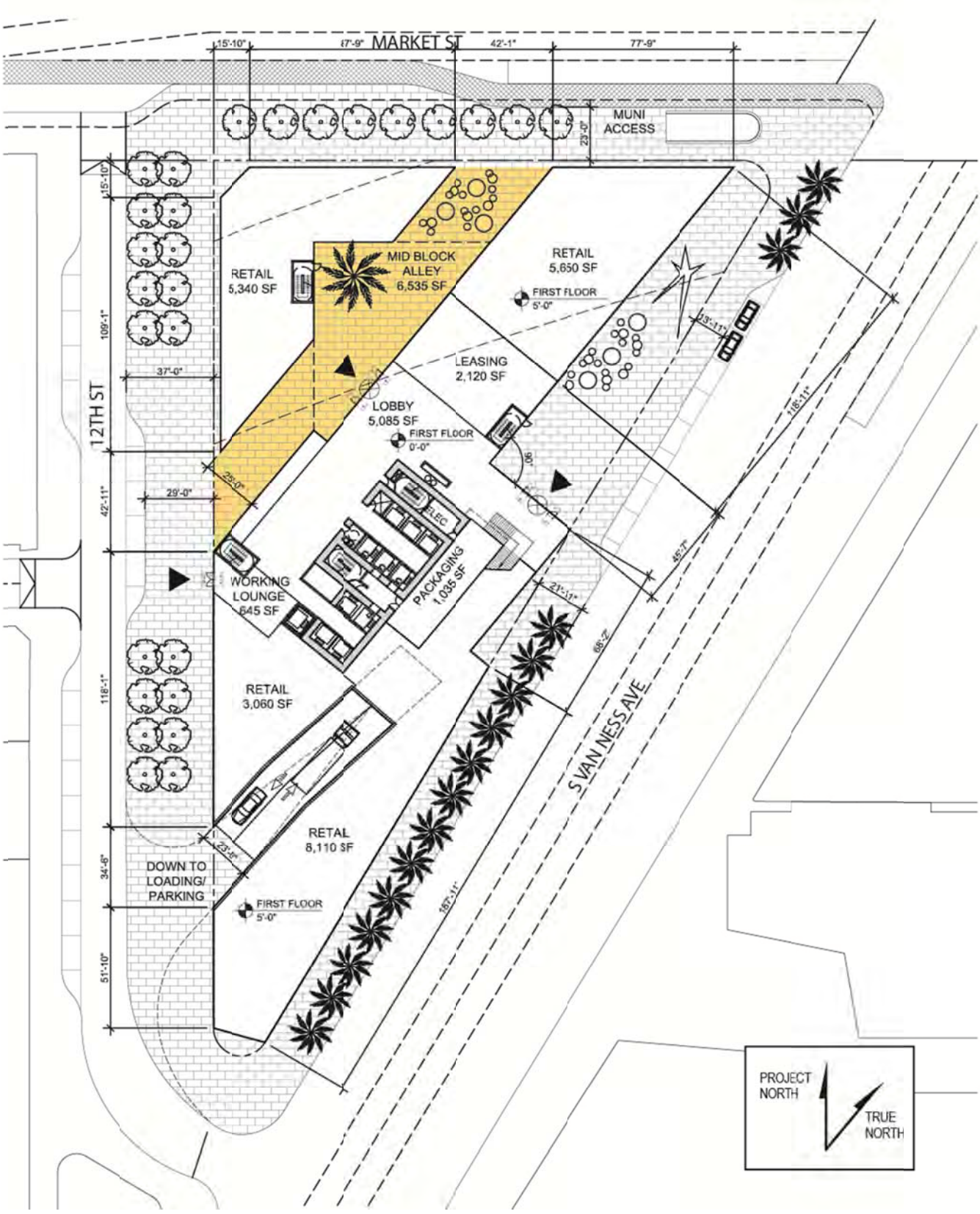
Lot	*Proposed Project*			*Single Tower Project Variant*
	Dimensions			
Size	51,150 square feet			
Length	475 feet (South Van Ness Avenue)/288 feet (Market Street)/450 feet (12th Street)			
Proposed Building	**Area (gsf)**			
Residential[1]	935,745			935,250
Ground Floor Commercial (Retail)	30,350			30,450
Parking[2]	102,000			101,992
Rooftop Mechanical	3,000			5,297
Total	1,071,095			1,072,989
Building Characteristics	**Description**			
Stories	North Tower/Podium	41 stories/12 stories		55 stories /15 stories (Tower/Podium)
	South Tower/Podium	41 stories /12 stories		
Height	North Tower/Podium	400 feet (up to 420 feet inclusive of the elevator penthouse[3])/114 feet		590 feet (up to 610 feet inclusive of the elevator penthouse[3])/164 feet (Tower/Podium)
	South Tower/Podium	400 feet (up to 420 feet inclusive of the elevator penthouse)/120 feet		
Ground Floor	Retail: 30,350 gsf multiple tenant spaces Residential: 2 residential lobbies, and 336 class I bicycle parking spaces			Retail: 30,450 gsf multiple tenant spaces Residential: 1 residential lobby, and 336 class I bicycle parking spaces
Basement	518 vehicle parking spaces			518 vehicle parking spaces
Proposed Units	**Amount (Approx. Percent)**			
Dwelling Units	984			984
	North Tower	South Tower	Total	
Studio	267 (27%)	108 (11%)	375 (38%)	347 (35%)
1-Bedroom	294 (30%)	167 (17%)	461 (47%)	449 (46%)
2-Bedroom	51 (5%)	49 (5%)	100 (10%)	166 (17%)
3-Bedroom	19 (2%)	29 (3%)	48 (5%)	22 (2%)
Vehicle Parking Spaces[4]	518			518
Bicycle Parking Spaces[5]	397			397
Open Space[6]	**Area (sf)**			
Publicly-accessible	2,975			12,091
Common	45,176			25,565
Private	0			9,550

Source: 10 South Van Ness LLC, 2017.
Notes:
1 Includes first-floor non-retail uses and second-floor residential amenity uses.
2 Includes parking and basement mechanical equipment.
3 The Planning Code Height and Bulk designations for the project site exempt elevator penthouse, roof screes, and other rooftop appurtenances from height limits.
4 Vehicle parking spaces: 491 for residential use, 14 for retail use, six for car-share, seven for off-street loading.
5 Bicycle parking spaces: 336 class I bicycle parking spaces on the ground floor, 61 class II bicycle parking spaces in on-street bicycle corrals.
6 Provided in compliance with Planning Code Section 736.93 Usable Open Space Per Residential Unit.



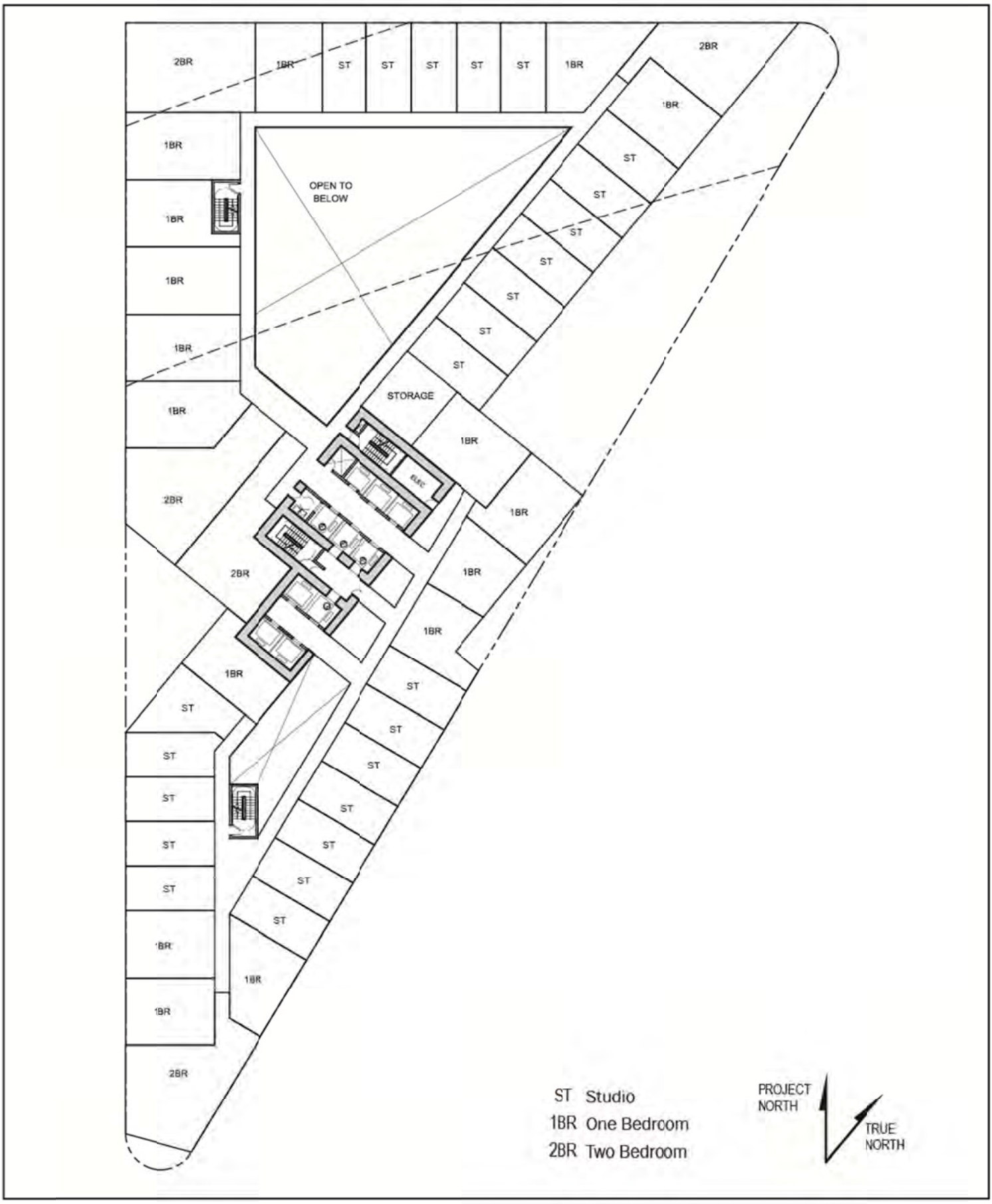
Source: KPF Associates, 2017

Figure 18: Single Tower Project Variant – Building Elevations Looking West and South Toward Project Site from South Van Ness Avenue and Market Street



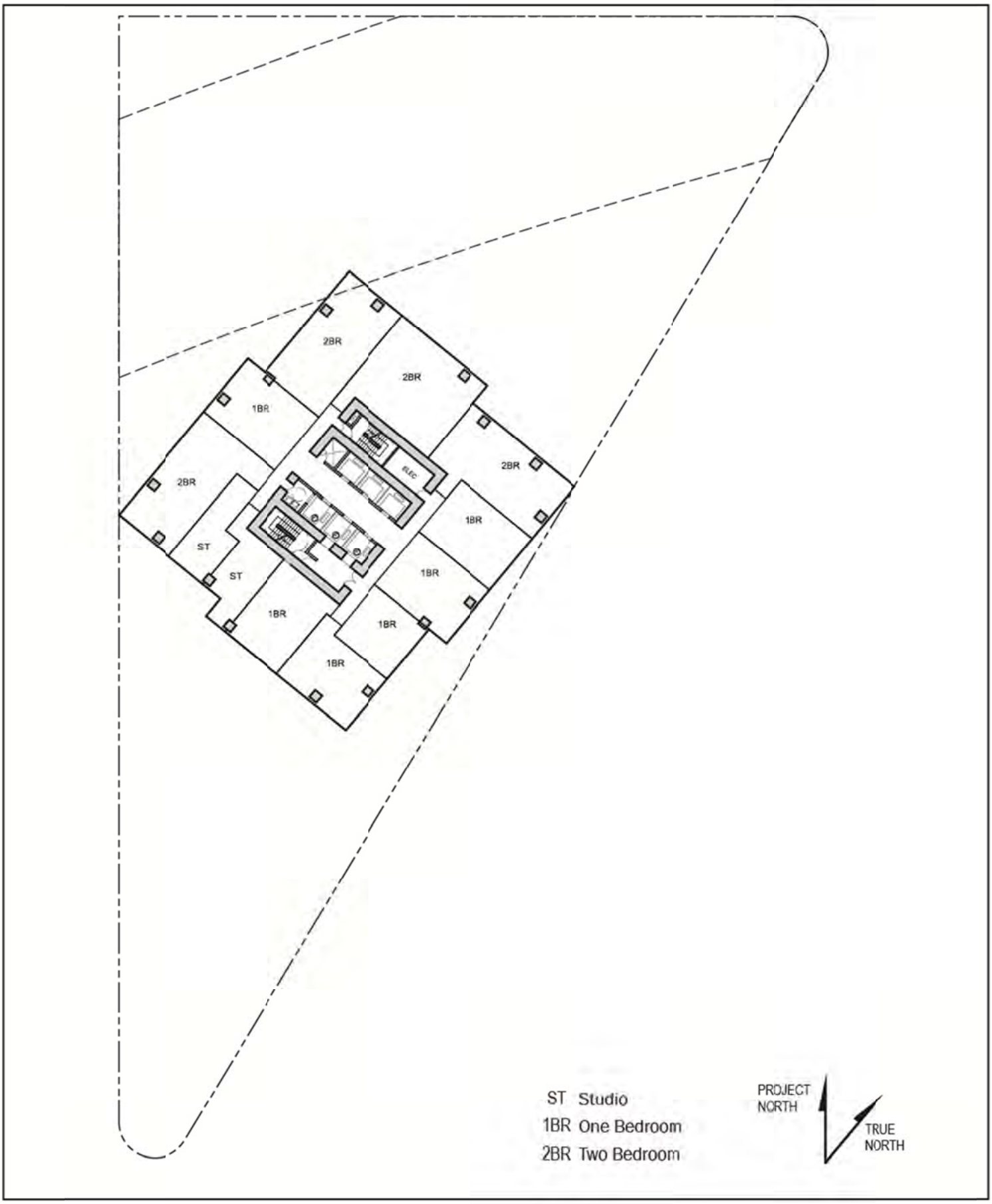
Source: KPF Associates, 2017

Figure 19: Single Tower Project Variant – Ground Floor Plan



Source: KPF Associates, 2017

Figure 20: Single Tower Project Variant – Levels 3-8 Representative Floor Plans



Source: KPF Associates, 2017

Figure 21: Single Tower Project Variant – Levels 29-48 Representative Floor Plans

Open Space. The project variant would include usable open space in a combination of publically-accessible open spaces (12,091 square feet), common useable open spaces (25,565 square feet), and private open space (9,550 square feet) for a total of 47,206 square feet.[25] The publically-accessible open space would consist of a mid-block alley connecting Market Street to 12th Street and a pedestrian plaza along the northeasterly South Van Ness Avenue frontage , as shown on Figure 19. The common useable open space would be provided on Levels 14, 16, 29, 37, and 49.

Parking/Loading and Mechanical Equipment. The single tower project variant would include the same parking and loading facilities and mechanical equipment as the proposed project. As with the proposed project the generator would be located in the basement with the intake at the ground level.

Circulation and Access. The single tower project variant would include the same circulation and access as the proposed project, with the exception of the location of lobby entrances and the configuration of the mid-block alley. For the project variant, there would be two entrances to the single residential lobby provided, one off of the mid-block alley and one off of South Van Ness Avenue. The proposed mid-block alley would provide public access through the project site between Market Street and 12th Street.

Transportation Demand Management. The single tower project variant would include the same TDM plan as the proposed project.

Streetscape Improvements and On-Street Parking. The single tower project variant would include the same streetscape improvements and on-street parking and loading as the proposed project.

Sustainability. The single tower project variant would incorporate the same sustainability features as the proposed project. The project sponsor would also seek ELDP certification for the single tower project variant.

Other Design Features. Wind features for the single tower project variant would be designed, if needed, as part of the final wind tunnel testing for the variant.

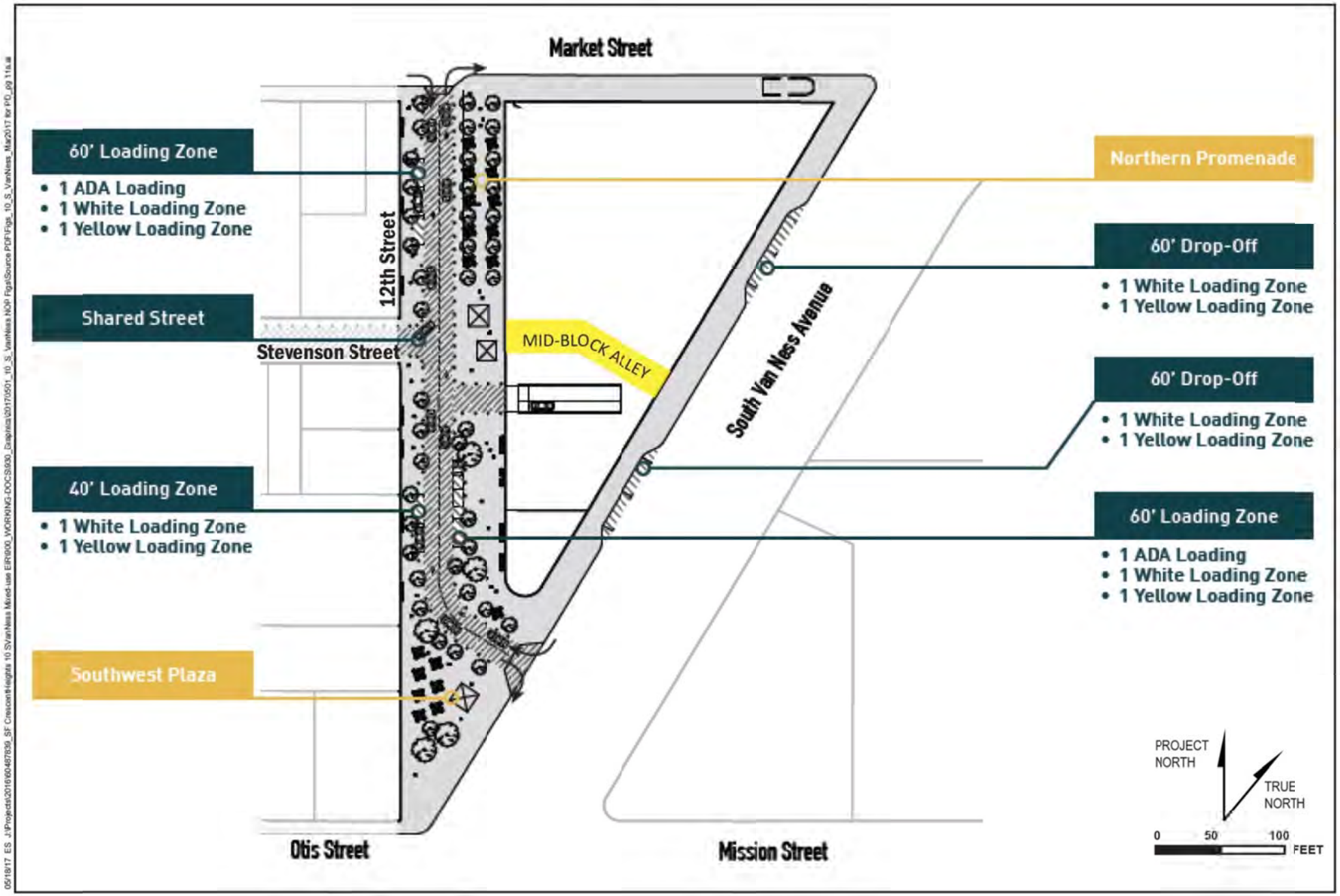
Construction. Construction activities would be the same under the single tower project variant as under the proposed project, in terms of phasing, duration and potential for temporary sidewalk and roadway closures. Like the proposed project, the portion of the structure within the BART easement would be supported by a concrete mat foundation. Outside of the easement, but within the BART ZOI, the tower and podium structures would be supported by a deep foundation consisting of double-cased, drilled cast-in-place piers. Outside of the BART ZOI, the tower and podium structures could be supported by either a deep foundation system or a mat foundation.[26] During construction of the single tower project variant, pile driving would not be performed.

[25] Private open space is open space only accessible to one unit or a certain group of units.

[26] Langan Treadwell Rollo, 2017b. Geotechnical Investigation 10 South Van Ness Avenue. June 2017. This document is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of Case File No. 2015-004568E.

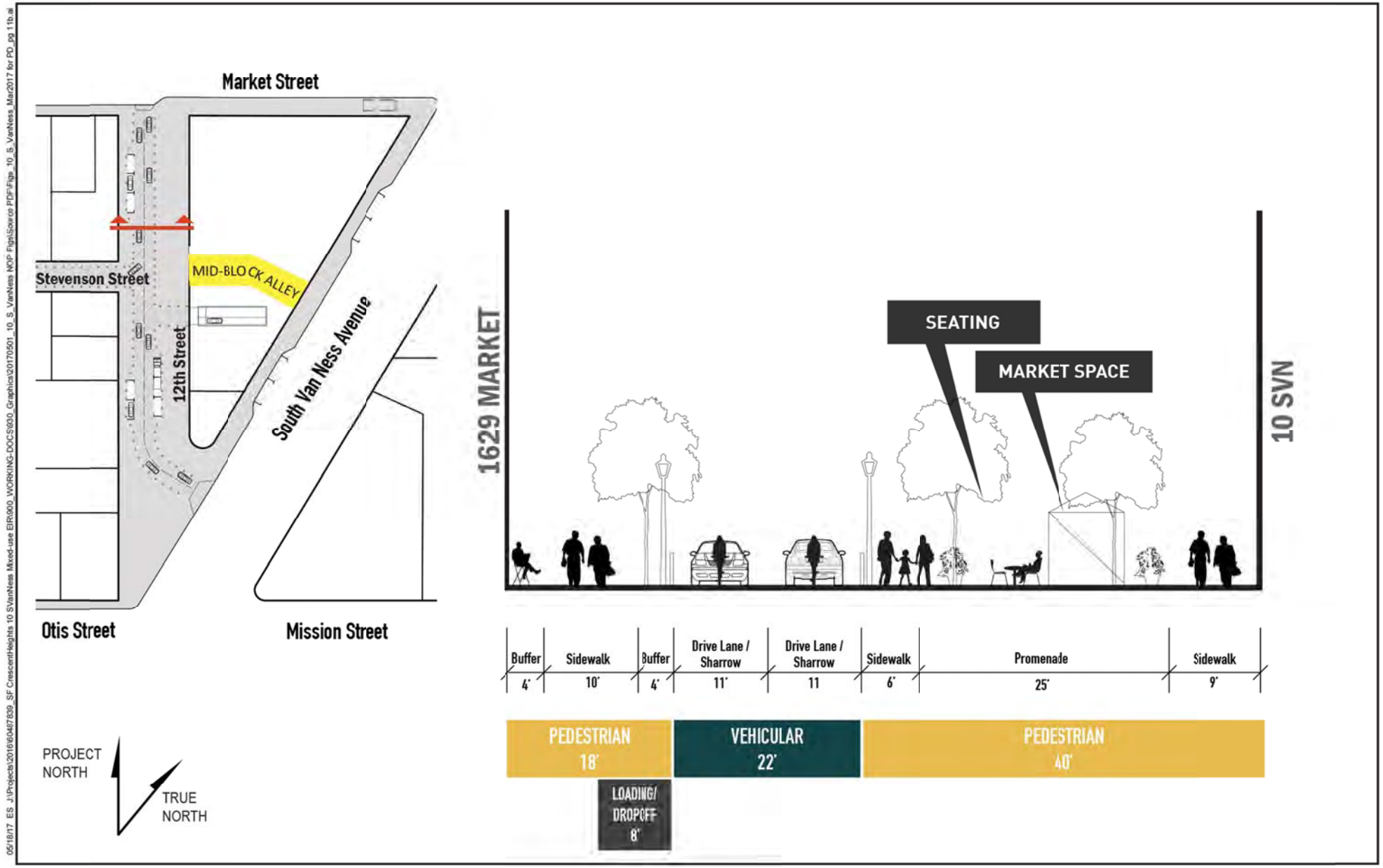
Straight-shot Streetscape Variant

The straight-shot streetscape variant, shown on Figures 22 and 23, would exceed Market and Octavia Plan and San Francisco Planning Department standards by extending the eastern sidewalk and pedestrian promenade adjacent to the proposed project on 12th Street to 40 feet in width (see Figure 23). The design would include one 60-foot-long loading zone, comprised of one ADA loading space, one passenger loading space, and one commercial loading space on each side of 12th Street, as well as one 40-foot-long loading zone, comprised of one commercial loading space and one passenger loading space on the west side of 12th Street. The straight-shot streetscape variant would also include a pedestrian plaza on the southwest corner of the project site as is proposed under the Market Octavia Streetscape Plan. On 12th Street, the eastern sidewalk would be expanded to a width of 40 feet (nine feet of pedestrian throughway, 25 feet for a pedestrian plaza, and an additional six feet of pedestrian throughway), while the western sidewalk would be expanded to a width of 18 feet (four feet of buffer, 10 feet of pedestrian throughway, and an additional four feet of buffer), as shown on Figure 23. There would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction.



Source: SITELAB Urban Studio, 2017

Figure 22: Straight-Shot Streetscape Variant (Plan View)



Source: SITELAB Urban Studio, 2017

Figure 23: Straight-Shot Streetscape Variant (12th Street Right-of-Way Section)

REQUIRED APPROVALS

This section describes the approvals that would be required for the proposed project and variants.

Approvals Required for the Proposed Project and Variants

Actions by the Planning Commission

- Approval of a Downtown Project Authorization by the Planning Commission per *Planning Code* Section 309 for projects within a C-3 zoning district more than 50,000 square feet in area or more than 75 feet in height, and for granting an exception to the requirements of certain sections of *Planning Code* Section 146(a) related to sunlight access to certain sections of Market Street.

- Approval of a Conditional Use Authorization by the Planning Commission per Planning Code Section 309(a)(4) to permit accessory residential parking in an amount greater than one car parked for each four dwelling units. Planning Code Section 309(a)(4).

- Approval of the project under Planning Code Section 309, including possible exceptions with regard to ground-level winds.

- Approval of an In-Kind Improvements Agreement under Planning Code Section 424.3(c) for community improvements for the neighborhood infrastructure portion of the Van Ness and Market Downtown Residential Special Use District Neighborhood Infrastructure Fee.

Actions by Other City Departments

- *Planning Department and Department of Building Inspection (DBI)* – Approval of the site permit and addenda thereto.

- *DBI* – Approval of demolition, grading, and building permits for the demolition of the existing buildings and construction of the new building. Permit for underpinning of adjacent structures. Night Noise Permit for nighttime construction.

- *SFMTA Board of Directors* – Approval of the proposed curb modifications, parking space removal, and bicycle corrals on South Van Ness Avenue, Market Street, and 12th Street;

- *SFMTA Department of Parking and Traffic* - Approval of a Special Traffic Permit for use of a public street space during project construction; approval of foundation, shoring, and dewatering systems as they relate to the Muni Zone-of-Influence.

- *SFMTA Color Cub Program* - Approval of a request for on-street loading spaces on South Van Ness Avenue and 12th Street.

- *Bureau of Streets and Mapping, San Francisco Public Works* – Subdivision and condominium map approval and encroachment permits for sidewalk underground vaults. Permit for removal and planting of street trees; approval of a Street Space Permit for use of a public street space during project construction (including construction of the proposed wind canopies); street and sidewalk permits for any modifications to public streets, sidewalks, or curb cuts.

- *Department of Public Works* - Street Encroachment Permit, to be approved by the Director of Public Works, and by the Board of Supervisors if required by the Director, for a wind canopy to be located in the public right-of-way.

- *San Francisco Public Utilities Commission* – Approval of any changes to sewer laterals. Approval of an erosion and sediment control plan prior to commencing construction, and compliance with post-construction stormwater design guidelines, including a stormwater control plan.

- *San Francisco Department of Public Health* – Approval of a dust control plan because the site is in excess of 0.5 acre (Article 22B). Approval of a ventilation plan, in compliance with San Francisco Health Code, Article 38, because the proposed project site is located within an area that is identified in the Air Pollutant Exposure Zone Map.[27] Approval of a Site Mitigation Plan under the Maher Ordinance (Article 22A), since the proposed project is located within the Maher Ordinance Area.[28]

- *Board of Supervisors* – Approval of sidewalk widening.

- *Recreation and Park Commission* - Joint determination with the Planning Commission that the project complies with the requirements of Planning Code Section 295.

Actions by Other Agencies

- *Bay Area Air Quality Management District* – Issuance of permits for the installation and operation of an emergency generator.

- *BART* – Plan review and approval of shoring and foundation within the BART ZOI, and issuance of a permit to work within or adjacent to the right-of-way.

- Governor's approval of project sponsor's Assembly Bill 900 (AB 900) application.

Additional Approvals Required for the Single Tower Project Variant

Actions by the Board of Supervisors

- *Planning Code Amendments for Height District Reclassification*: The building height of the single tower project variant would exceed the height limit of the existing 400-R-2 Height and Bulk District. The Board of Supervisors would need to approve an amendment to the Zoning Map Height and Bulk Districts (Sheet HT07) pursuant to Planning Code Section 302.

Actions by the Planning Commission

- *Planning Code Amendments for Height District Reclassification*: Recommendation to the Board of Supervisors to Approve the Amendments for Height District Reclassification, as described above.

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[27] SFDPH, 2014. Air Pollutant Exposure Zone Map. https://www.sfdph.org/dph/files/EHSdocs/AirQuality/AirPollutantExposureZoneMap.pdf

[28] SFDPH, 2015. Maher Ordinance Map. https://www.sfdph.org/dph/eh/HazWaste/hazWasteSiteMitigation.asp

SUMMARY OF POTENTIAL ENVIRONMENTAL ISSUES

The proposed project, single tower project variant, and straight-shot streetscape variant, could result in potentially significant environmental impacts. This section describes how the San Francisco Planning Department (Planning Department) will prepare an initial study and environmental impact report (EIR) to evaluate the potential physical environmental impacts of the proposed project and project variants. An initial study will assess both project-specific and cumulative impacts for all topics required under the California Environmental Quality Act (CEQA). As required by CEQA, an EIR will further examine those issues identified in the initial study to have potentially significant impacts, identify mitigation measures, and analyze whether the proposed mitigation measures would reduce potentially significant environmental impacts to a less-than-significant level. The Initial Study will be published as a separate document with a 30-day public review period and will also be included as an appendix to the EIR.

The Planning Department will convene a public scoping meeting at which public comment will be solicited on the issues that will be covered in the EIR (see "Public Scoping Process" of this Notice of Preparation (NOP) for more details). It is anticipated that the EIR will address the following environmental topics: cultural resources (specifically historic resources), transportation and circulation, and wind. Environmental impacts related to land use and land use planning, population and housing, cultural resources (specifically archaeological resources, tribal resources, and human remains), noise, air quality, greenhouse gas emissions, shadow, recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials, mineral and energy resources, and agricultural and forest resources are anticipated to be analyzed in the initial study, unless significant impacts are identified that cannot be mitigated to a less-than-significant level, in which case, analysis of any such impacts will be included in the EIR. The environmental issues to be addressed in the initial study are described briefly below. For all topics below, whether included in the initial study or also in the EIR, the analysis will consider the impacts of the proposed project and the variants impacts individually as well as cumulative impacts resulting from other reasonably foreseeable projects.

Since the proposed project and variant meet the requirements of a transit-oriented infill development project under Senate Bill 743, aesthetics and parking will not be considered in determining if the proposed project or variant has the potential to result in potentially significant environmental impacts. However, visual renderings will be included within the initial study and EIR project description for reference.

Land Use and Land Use Planning

The Land Use and Land Use Planning initial study analysis will describe existing land uses on the project site and in the project vicinity and analyze whether the proposed project or variants would physically divide an established community or result in conflicts with the Market and Octavia Area Plan or other land use plans adopted for the purpose of mitigating an environmental effect.

Population and Housing

The Population and Housing initial study analysis will analyze the potential for the proposed project or variants to result in impacts related to direct or indirect population growth, employment and housing provision and balance, and residential displacement.

Cultural Resources

The Cultural Resources initial study analysis will address historic resources, archaeological resources, tribal resources, and human remains. The building on the project site is considered a historic resource for the purpose of CEQA review. The proposed project and single tower project variant would demolish the existing building onsite. The historic significance of the existing building and the proposed project's impacts on the resource are described in the Historic Resource Evaluation (HRE) report,[29] prepared by a qualified consultant and independently evaluated by the Planning Department's Preservation staff, who issued a Historic Resource Evaluation Response (HRER).[30] The EIR will describe the historic resources on the project site, summarize applicable portions of the HRE and HRER, and identify the potential impacts on historic resources. The initial study will analyze potential effects on archaeological resources, tribal cultural resources, and human remains.

Transportation and Circulation

The proposed project and single tower project variant would generate new vehicle trips, generating additional vehicle miles traveled (VMT) to and from the project site. The proposed project and variant would also result in increases in transit ridership, pedestrian and bicycle activity, and loading demand. A Transportation Impact Study (TIS) has been prepared for the proposed project and variant in accordance with the Planning Department's Transportation Impact Analysis Guidelines for Environmental Review (October 2002) and the Planning Commission Resolution 19579, which established VMT as the appropriate transportation review metric. The initial study will analyze transit conditions, vehicle miles traveled, traffic hazards, pedestrian and bicycle conditions, freight loading, emergency vehicle access, and construction-related transportation impacts and determine mitigation measures for impacts that are determined to be significant. The EIR will include an analysis of potentially significant operation and construction impacts on the transportation and circulation system.

Noise

The Noise initial study analysis will include analysis of short-term construction-related noise and vibration impacts that could result from the proposed project and the single tower project variant. The analysis will evaluate the potential for noise generated by the proposed project to adversely affect nearby sensitive land uses and include a discussion of noise compatibility standards for the proposed residential and retail land uses.

Air Quality

The Air Quality initial study analysis will include an analysis of the proposed project's and variant's consistency with applicable air quality plans and a quantitative analysis of the potential for the proposed

[29] SWCA Environmental Consultants/Turnstone, 2016. Part I Historic Resources Evaluation. Final. September 2016.

[30] San Francisco Planning Department, 2016. Historic Resource Evaluation Response, 10 South Van Ness Avenue. November 16, 2016.

project to result in emissions of criteria air pollutants and other toxic air contaminants (TACs) that may affect sensitive populations. The analysis will also discuss the potential for the proposed project or variant to result in sources of odor. The Air Quality analysis will discuss air pollutant emissions during both construction and operation. The analysis will also summarize the results of a health risk assessment, which will be prepared to evaluate potential long-term health effects of emissions from both project construction and operation.

Greenhouse Gas Emissions

The Greenhouse Gas Emissions initial study analysis will address the proposed project's and variant's consistency with the City's Greenhouse Gas Reduction Strategy. The analysis will determine if the proposed project or variant could result in greenhouse gas emissions that would result in a significant impact on the environment.

Wind and Shadow

The proposed project and variant would change wind conditions at the project site and in the vicinity in such a way that would substantially affect public areas. A Wind Microclimate Study (WMS) will be prepared for the proposed project and variant to evaluate the existing wind conditions at and around the project site and the extent to which the proposed project or variant would result in wind conditions substantially affecting public areas. The EIR will summarize the results of the WMS, include an analysis of ground-level wind impacts, and determine mitigation measures for wind impacts that are determined to be significant.

The Shadow initial study analysis will include an evaluation of the potential for the proposed project or variant to result in shadow impacts on City parks and other publically-accessible open spaces. The analysis will be supported by a Shadow Technical Memorandum, evaluating the extent to which shadows cast by the proposed project or variant could adversely affect City parks and publically-accessible open spaces.

Recreation

The Recreation initial study analysis will analyze whether the proposed project or variant would physically degrade existing parks and recreational facilities or require the construction or expansion of parks and recreational facilities that could have a physical effect on the environment.

Utilities and Service Systems

The Utilities and Service Systems initial study analysis will include a discussion of potable water and wastewater treatment capacity as well as disposal capacity of solid waste that would be generated by the proposed project or variant. This topic will also include an assessment of whether the proposed project or variant would require the construction of new water supply, wastewater treatment, and/or stormwater drainage facilities, and, if so, whether that construction could result in adverse environmental impacts. A

Water Supply Assessment was adopted for the proposed project and variant in accordance with CEQA Guidelines Section 15155 and sections 10910 to 10915 of the California Water Code.[31]

Public Services

The Public Services initial study analysis will analyze whether existing public service providers (e.g., police and fire protection, schools, etc.) would be adversely affected by the proposed project and variant so as to require new or physically altered facilities, the construction of which could cause significant environmental impacts.

Biological Resources

The Biological Resources initial study analysis will discuss the existing biological resources or habitats that could be affected by the proposed project or variant, such as trees or the movement of any native resident or migratory bird species, and the potential for the proposed project or variant to result in a substantial adverse effect on these biological resources or habitats.

Geology and Soils

The Geology and Soils initial study analysis will evaluate the susceptibility of the project site to seismic activity, liquefaction, landslides, erosion, soil stability, and risks to life or property. The analysis will also include whether or not the proposed project or variant would substantially change the topography or any unique geologic or physical features of the site, or directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. In addition, the analysis will also discuss plan review requirements with respect to construction above the BART tunnels that pass beneath the project site. Because the project site is located within the BART zone of influence (ZOI), BART engineering would review the project plans as well as supporting documentation, including but not limited to the geotechnical report, dewatering monitoring and recharging plans, a vibration monitoring plan, a foundation plan, and an excavation plan for any area within the ZOI.

Hydrology and Water Quality

The Hydrology and Water Quality initial study analysis will evaluate the proposed project's or variant's potential to violate water quality standards or waste discharge requirements or result in adverse effects to groundwater supplies. The analysis will also consider any affects to drainage patterns resulting from the proposed project or variant and evaluate the potential to create water runoff that could affect stormwater drainage systems. The analysis will also consider the potential of the proposed project or variant to place housing within an identified flood hazard area.

Hazards and Hazardous Materials

The Hazards and Hazardous Materials initial study analysis will evaluate the potential for the proposed project or variants to create a significant hazard to the public or the environment related to hazards hazardous materials through location on a hazardous materials site, the routine transport, use, or disposal of hazardous materials, the emission or release of hazardous soils or groundwater, or interference with an emergency response plan.

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[31] San Francisco Public Utilities Commission (SFPUC), 2017. Water Supply Assessment for the 10 South Van Ness Project. February 2, 2017.

Mineral and Energy Resources

The Mineral and Energy Resources initial study analysis will analyze potential impacts of the proposed project and variants related to existing mineral and energy resources.

Agricultural and Forest Resources

The Agricultural and Forest Resources initial study analysis will analyze potential impacts of the proposed project and varianst related to existing agricultural and forest resources.

FINDING

This project may have a significant effect on the environment and an EIR is required. This determination is based upon the criteria of the State CEQA Guidelines, Sections 15064 (Determining Significant Effect) and 15065 (Mandatory Findings of Significance). The purpose of the EIR is to provide information about potential significant physical environmental impacts of the proposed project and variant, to identify possible ways to minimize the potentially significant impacts, and to describe and analyze possible alternatives to the proposed project. Preparation of an EIR notice of preparation, initial study, or EIR does not indicate a decision by the City to approve or disapprove a proposed project. However, prior to making any such decision, the decision makers must review and consider the information contained in the EIR.

ALTERNATIVES

Alternatives to be evaluated in the EIR for the proposed project will include, but not be limited to, a No Project Alternative, which will assume no change to the existing conditions on the project site, one or more alternatives that preserve all or most of the historic resources on the project site, and additional alternatives to address other significant effects of the proposed project or variants that are identified in the EIR. The alternatives considered and the analysis thereof is based upon the criteria of the State CEQA Guidelines, Section 15126.6 (Consideration and Discussion of Alternatives to the Proposed Project).

PUBLIC SCOPING PROCESS

Pursuant to the State of California Public Resources Code Section 21083.9 and California Environmental Quality Act Guidelines Section 15206, a public scoping meeting will be held to receive oral comments concerning the scope of the EIR. The meeting will be held on **August 2, 2017, from 6 p.m. to 8 p.m.** at **One South Van Ness Avenue, 2nd Floor Atrium.** To request a language interpreter or to accommodate persons with disabilities at the scoping meeting, please contact the staff contact listed above at least 72 hours in advance of the meeting. Written comments will also be accepted at this meeting and until 5 p.m. on **August 11, 2017**. Written comments should be sent or emailed to Rachel Schuett, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103 or rachel.schuett@sfgov.org and should reference the project title and case number that is provided on the front of this notice.

State Agencies: If you work for a responsible State agency, we need to know the views of your agency regarding the scope and content of the environmental information that is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency may need to use the EIR

when considering a permit or other approval for this project. Please include the name of a contact person in your agency.

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

July 6, 2017
Date

for Lisa Gibson
Environmental Review Officer

APPENDIX B

Notice of Availability/Initial Study

SAN FRANCISCO
PLANNING DEPARTMENT

PUBLIC NOTICE
Availability of Initial Study

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

Date:	May 2, 2018
Case No.:	2015-004568ENV
Project Title:	10 South Van Ness Avenue Mixed-Use Project
Zoning:	C-3-G (Downtown-General Commercial) Van Ness and Market Downtown Residential Special Use District 120-R-2/120/400-R-2 Height and Bulk Districts
Plan Area:	Market and Octavia Area Plan
Block/Lot:	3506/004 and 003A
Lot Size:	51,150 square feet (1.17 acres)
Project Sponsor:	10 SVN, LLC c/o Jim Abrams, J. Abrams Law, P.C. – (415) 999-4402 jabrams@jabramslaw.com
Lead Agency:	San Francisco Planning Department
Staff Contact:	Rachel Schuett – (415) 575-9030 rachel.schuett@sfgov.org

To Responsible Agencies, Trustee Agencies, and Interested Parties:

RE: NOTICE OF AVAILABILITY OF THE INITIAL STUDY FOR THE 10 SOUTH VAN NESS AVENUE MIXED-USE PROJECT; PLANNING DEPARTMENT CASE NO. 2015-004568ENV; STATE CLEARINGHOUSE NO. 2017072018

This notice is to inform you of the availability of the Initial Study for the 10 South Van Ness Avenue Mixed-Use Project, described below. The Planning Department previously determined that this project could have a significant effect on the environment, and required that an Environmental Impact Report (EIR) be prepared. A Notice of Preparation of an EIR was circulated for a 30-day public review period on July 12, 2017. The Planning Department held a public scoping meeting to receive comments on the scope and content of the environmental analysis on August 2, 2017. An Initial Study has now been prepared to provide more detailed information regarding the impacts of the proposed project and to identify the environmental issues to be considered in the Draft EIR. The Initial Study is either attached or is available upon request from **Rachel Schuett**, the project environmental review coordinator, whom you may reach at **(415) 575-9030**, at rachel.schuett@sfgov.org, or at the address to the right. The report may also be viewed on-line at http://www.sf-planning.org/index.aspx?page=1570, starting on May 2, 2018. Referenced materials are available for review by appointment at the Planning Department's office at 1650 Mission Street, Suite 400 (call 415-558-6377).

Project Description: The project sponsor proposes to redevelop the 51,150-square-foot (1.17-acre) property at South Van Ness Avenue and Market Street in the South of Market (SoMa) neighborhood of San Francisco. The project site is occupied by a two-story, up to 45-foot-high building, and a small vacant lot. The northern portion of the on-site building was constructed in 1927, and is considered an individual historical resource. The building is occupied by the San Francisco Honda Dealership.

The project sponsor proposes to demolish the building and construct a mixed-use, 984-unit residential building with ground-floor retail space and two below-grade levels for parking and loading, accessed from 12th Street. Up to 518 vehicle parking spaces and seven freight loading spaces would be provided. Two project design options are being considered: a two-tower design (the "proposed project") with two separate 41-story 400-foot- tall towers (420 feet at the top of the elevator penthouses) on top of podiums; and a "project variant" with a single 55-story, 590-foot-tall tower (610 feet at the top of the elevator penthouses) on top of a podium. The proposed project would be approximately 1,071,100 gsf, with 48,150 sf of open space including a mid-block pedestrian alley between South Van Ness Avenue and 12th Street. The project variant would be approximately 1,073,000 gsf, with 47,210 sf of open space including a similar mid-block pedestrian alley between Market and 12th streets. Additional details regarding the project and its variant are in this Initial Study and will be subsequently analyzed in the EIR.

A Notice of Preparation of an EIR and Public Scoping Meeting was issued on July 12, 2017, and a public scoping meeting was held on August 2, 2017. Based on the comments received, the Planning Department has determined that preparation of an Initial Study would be appropriate to focus the scope of the EIR. Preparation of an Initial Study or EIR does not indicate a decision by the City to approve or to disapprove the project.

Further comments concerning environmental review of the proposed project and the scope of the EIR are welcomed, based on the content of the Initial Study. In order for your comments to be considered fully, we would appreciate receiving them by **June 4, 2018**. Please send written comments to **Rachel Schuett,** Senior Planner, San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, CA 94103. Comments may also be submitted via e-mail to rachel.schuett@sfgov.org.

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

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

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Acronyms and Other Abbreviations

ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
ADRP	archeological data recovery plan
ATP	archeological testing plan
BART	Bay Area Rapid Transit
bgs	below ground surface
BMP	best management practice
BMR	below-market-rate
CARB	California Air Resources Board
C-3-G	Downtown-General zoning
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
DBI	Department of Building Inspection
EIR	environmental impact report
EO	Executive Order
ERO	Environmental Review Officer
FAR	floor area ratio
GHG	greenhouse gas
gsf	gross square feet
Housing Element	Housing and Urban Design Element
Hub Project	Market Street Hub Project
HVAC	heating, ventilation, and air conditioning
K–12	kindergarten through 12th grade
LEED	Leadership in Energy and Environmental Design
MGD	million gallons per day
Muni	San Francisco Municipal Railway
PCB	polychlorinated biphenyl
RPD	San Francisco Recreation and Parks Department
sf	square foot/feet
SFMTA	San Francisco Municipal Transportation Agency
SFPUC	San Francisco Public Utilities Commission
SFUSD	San Francisco Unified School District
SoMa	South of Market
SUD	special use district
SWPPP	storm water pollution prevention plan
TDM	transportation demand management
U.S. 101	U.S. Highway 101
VMT	vehicle miles traveled
ZOI	zone of influence

A. PROJECT DESCRIPTION

The project sponsor, 10 SVN, LLC, proposes to redevelop the 1.17-acre (51,150-square-foot) triangle-shaped property located at 10 South Van Ness Avenue at the southwest corner of South Van Ness Avenue and Market Street in the South of Market (SoMa) neighborhood of San Francisco. The project site is currently occupied by the San Francisco Honda dealership, a two-story, 30- to 45-foot-high building at the northern end of the site, and by a small, undeveloped area at the southern end of the site. The proposed project would involve the construction of two 41-story buildings that would be 400 feet tall (420 feet total, including roof screens and elevator penthouses) and would contain a total of 984 dwelling units and retail space on the ground floor (Table 1). Above grade, the proposed project's two separate towers would be above a podium. Below grade, the two structures would be connected on basement Levels B1 and B2 with a single foundation.

In addition, a project design variant (hereinafter the "variant") is proposed that would feature one tower, up to 590 feet in height (610 feet total, including roof screens and elevator penthouses). The proposed variant would involve constructing a single 55-story tower over a podium structure. The proposed variant would also contain 984 dwelling units, ground-floor retail space, and two levels of underground parking. Both the proposed project and the variant would include a mid-block alley, which would be open-air and accessible to the public, and would serve as a pedestrian connection across the site. Under the proposed project, the mid-block alley would provide access from South Van Ness Avenue to 12th Street. Under the proposed variant, the mid-block alley would provide access from Market Street to 12th Street.

A streetscape option (the "straight-shot streetscape option") is also proposed for 12th Street. The straight-shot streetscape option would exceed the Market & Octavia Area Plan and Planning Department streetscape standards by extending the eastern sidewalk and pedestrian promenade adjacent to the project site from 15 feet to 40 feet in width on 12th Street. The western sidewalk on 12th Street would be expanded to a width of 18 feet. There would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction. The straight-shot streetscape option could be developed with either the proposed project or the variant.

Project Location and Site Characteristics

As shown in Figure 1, the 51,150-square-foot parcel is located at the southwest corner of Market Street and South Van Ness Avenue, and comprises the entire block bounded by South Van Ness Avenue to the east, Market Street to the north, and 12th Street to the west (Figure 2).[1] The project site comprises Assessor's Block 3506, Lots 004 and 003a, and is roughly triangular in shape.

Both South Van Ness Avenue and Market Street are major roadways through the Downtown/Civic Center and SoMa neighborhoods. South Van Ness Avenue, which becomes Van Ness Avenue north of Market Street, is a major north-south arterial through San Francisco and is considered U.S. Highway 101 (U.S. 101) between the Lombard Street and the Central Freeway portions of U.S. 101. Adjacent to the project site, South Van Ness Avenue has three travel lanes in each direction and parallel parking on both sides of the street. Market Street is a major east-west roadway through San Francisco that connects The Embarcadero and the Twin Peaks neighborhood. Market Street operates as a two-way roadway, generally with two travel lanes, for motorized modes of travel. Adjacent to the project site, eastbound Market Street has one mixed-flow travel lane, one

[1] For purposes of describing project site location, this document uses a project north/south axis aligned with 12th Street, such that Market Street forms the northern boundary of the project site, 12th Street forms the western boundary, and South Van Ness Avenue forms the southwestern boundary.

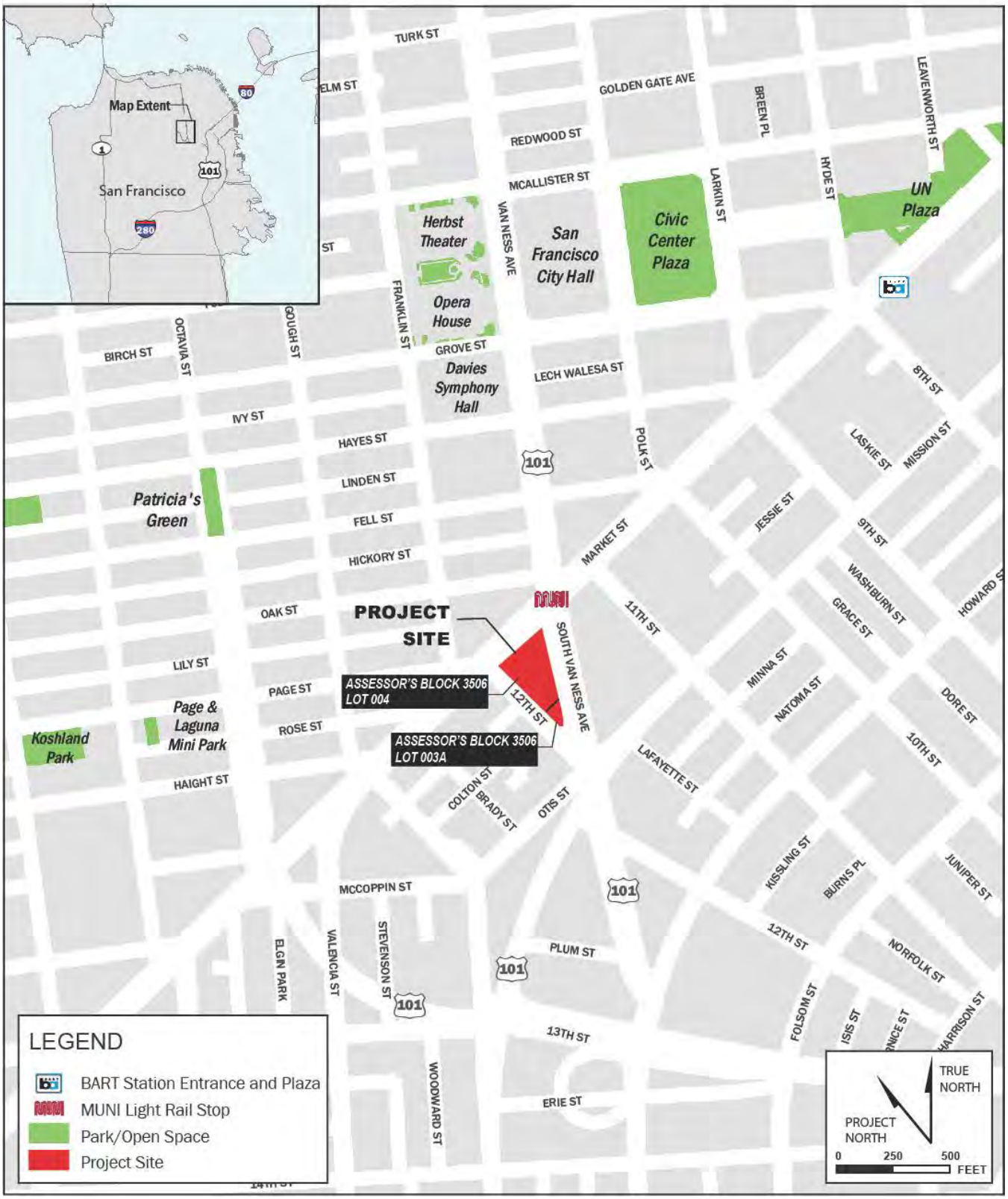
dedicated-transit/taxi lane, and a bicycle lane. In the westbound direction, Market Street has two mixed-flow travel lanes[2] and a bicycle lane.

The regional roadways that serve the project site are U.S. 101, Interstate 80, and Interstate 280. U.S. 101 provides access to and from the site via the adjacent South Van Ness Avenue, an on-ramp at South Van Ness Avenue and Division Street, and an off-ramp at Mission Street and Duboce Avenue. The intersection of South Van Ness Avenue and Market Street is also connected to the transit network via the subsurface San Francisco Municipal Railway (Muni) station at Market Street and South Van Ness Avenue, which is accessible from an entrance located along the Market Street frontage of the project site. This Muni station is served by the J, KT, L, M, and N Muni light rail lines, and the aboveground Market Street and South Van Ness Avenue Muni stops. These stops are served by the K-Owl, L-Owl, N-Owl, 6, 7, 7R, 14, 47, 49, 90, and 800 bus routes and the historic F line streetcar. The Civic Center Bay Area Rapid Transit (BART) station is also located 0.4 mile east of the project site on Market Street.

Existing Zoning/Height & Bulk Requirements

The project site is within the South of Market (SoMa) neighborhood of San Francisco, which borders the Civic Center neighborhood. The project site is also within the Market & Octavia Area Plan area, the Downtown-General (C-3-G) zoning district, and the Van Ness and Market Downtown Residential Special Use District (SUD). The northern portion of the site is in the 120-R-2 height and bulk district; and the southern portion of the site is in the 120/400-R-2 height and bulk district (see Figure 3). These height and bulk districts allow for a building of 120 feet in height on the northern portion of the project site and a podium of up to 120 feet in height and a tower, or towers, of up to 400 feet in height on the southern portion of the site. For buildings over 120 feet in height, all portions of structures above the podium height are subject to the bulk restrictions in Planning Code section 270(e)(2).

[2] Mixed-flow travel lanes are traffic lanes that allow the use of personal vehicles, trucks, taxis, and public transportation vehicles.



Source: AECOM, 2017

Figure 1: Project Location

Source: Handel Architects, 2016

Figure 2: Project Site

Source: City and County of San Francisco, 2017

Figure 3: Zoning Districts and Height and Bulk Districts

Per Planning Code section 270(e)(2)(D), buildings between 351 and 550 feet in height may not exceed a plan length of 115 feet, a diagonal dimension of 145 feet, and a maximum average floor area of 10,000 gross square feet (gsf). Per Planning Code section 270(e)(2)(F), to encourage tower sculpting, the gross floor area of the top one-third of the tower shall be reduced by 10 percent from the maximum floor plate, unless the overall tower floor plate is reduced by an equal or greater volume. A minimum distance of 115 feet must be preserved between all structures above 120 feet in height at all levels above 120 feet in height, as required by the controls for the R-2 bulk district. The permitted floor area ratio (FAR) in the C-3-G zone is 6:1.[3] The existing FAR of the project site is approximately 2:1.

Existing Conditions

The project site slopes gently downward to the south. The ground surface elevation of the project site is approximately 40 feet above mean sea level along Market Street and approximately 32 feet above mean sea level at the southern boundary of the site. As shown in Figure 2, the project site is currently occupied by the 91,088-square-foot San Francisco Honda dealership, which consists of a two-story building, ranging from 30 to 45 feet in height (Lot 004), and a small, undeveloped area at the southern end of the site (Lot 003A). The existing building, which was constructed in 1927, was the former home of the Fillmore West concert venue, and is considered to be a historic resource.[4] The Muni tunnel and station are located beneath Market Street approximately 30 feet north of the property line. The northern third of the project site includes a subsurface easement for the existing BART tunnel, which is located 19.62 feet below grade. The invert of the BART tunnel is approximately 85 feet below ground surface.[5, 6] The perimeter of the project site includes six curb cuts and associated driveways: three curb cuts along South Van Ness Avenue, and three along 12th Street. There are no curb cuts along Market Street.

Along the west side of South Van Ness Avenue, there are 11 metered vehicle parking spaces, with five spaces subject to restricted hours for street cleaning (no parking between 12:01 a.m.–6:00 a.m.). The east side of 12th Street along the project frontage has 10 general metered parking spaces, and one metered commercial loading space with restricted loading hours. Across 12th Street from the project site, there are five general metered parallel parking spaces, 16 angled general metered parking spaces, three metered commercial loading spaces with restricted loading hours, one passenger loading space, and one parking space with Americans with Disabilities Act (ADA) access. Improvements to Van Ness Avenue between Aquatic Park and Mission Street are currently underway as part of the Van Ness Improvement Project. The Van Ness Improvement Project includes

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3 FAR is the gross floor area of a building or buildings on a zoning plot divided by the area of such zoning plot. FAR is calculated to determine whether the mass and scale of a structure is compatible with zoning district requirements. In the Van Ness and Market Downtown Residential SUD, increased FAR is allowed with payment of in-lieu fees (the Van Ness inclusionary affordable housing fee and the Van Ness and Market Neighborhood infrastructure fee).

4 The Historic Resources Evaluation (*Part I Historic Resource Evaluation, Final Version: 10 South Van Ness Avenue [2015-004568ENV] City and County of San Francisco, California*) prepared for the project found the existing Honda dealership and service center at 10 South Van Ness Avenue to be eligible for listing in the California Register of Historic Places under Criterion 1 (events) for its association with the Fillmore West concert venue and Criterion 2 (persons) for its association with prominent San Francisco music promoter Bill Graham.

5 "Invert" refers to the bottom of the tunnel.

6 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation, 10 Van Ness Avenue,* March 16, 2017. This document (and all other documents cited in this report, unless otherwise noted) is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400 as part of Case File No. 2015-004568ENV.

replacement of the water and sewer networks and infrastructure improvements to support the Van Ness Bus Rapid Transit system, which is currently under construction.[7]

The land uses in the immediate vicinity of the project site are characterized by a mix of residential, commercial, and civic uses. The maximum permitted building heights in the vicinity of the project site (as allowed by existing height and bulk districts) range from 40 feet to 400 feet (see Figure 3). Several large, mixed-use commercial, office, and residential buildings are located along Van Ness Avenue and Market Street; they are interspersed with smaller buildings hosting office, commercial, warehouse/storage, and multifamily residential uses. The scale of the built environment generally increases in height traveling eastward along Market Street from the project site.

Proposed Project Characteristics

The proposed project is at the site of the San Francisco Honda dealership. The service center relocated in 2017, but the dealership remains open. To construct the proposed project, the dealership would also relocate and the existing 91,088-square-foot, two-story, 30- to 45-foot-tall building would be demolished. The proposed project would result in construction of a new 1,071,095-gsf, 984-unit development consisting of two 41-story, mixed-use residential buildings. The proposed project would construct two separate above-grade towers that are connected below grade. Above grade, each structure would consist of a tower on top of a podium. A section of the proposed project is shown in Figure 4, and elevations of the proposed project are shown in Figures 5 and 6.

The tower with frontage along Market Street is referred to as the north tower, and the tower adjacent to the intersection of South Van Ness Avenue and 12th Street is referred to as the south tower. Likewise, the more northerly podium is referred to as the north tower podium, and the more southerly podium is referred to as the south tower podium. Each tower would have its own building core. Two passageways would be constructed to serve as a connection between the two podiums across the mid-block alley, one at Level 2 and one at Level 13. The buildings would be connected below ground via a single, two-level parking garage/basement (see Figure 7).

The proposed project would have a single foundation supporting all of the project structures. Each tower would have a maximum height of 400 feet (420 feet total, including roof screens and the elevator penthouse on each tower).[8] The ground floor through Level 12 would be located in the tower podiums, and Levels 13–41 would be located in the towers. The towers would be separated by a minimum of 115 feet. The north tower podium would be 114 feet in height, and the south tower podium would be 120 feet in height.[9] Both podiums would include retail uses and residential lobbies at the ground level (see Figure 8).

As shown in Table 1 below, the proposed project would include a total of 935,745 gsf of residential uses, 30,350 gsf of retail uses; 3,000 gsf of rooftop mechanical equipment; and 102,000 gsf of parking with up to 518 accessory vehicle parking spaces. In both towers, residential amenities would be provided on Level 2, and residential units would be provided on Levels 3–41 (see Figures 9 through 12). Residential amenities would include a community space, a game room, a children's room, and a music room. Level 2 of both towers would also include a retail mezzanine space. Residential lobbies and building services would occupy 16,670 gsf. The

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7 San Francisco Municipal Transportation Agency, Van Ness Improvement Project, Spring 2017, *https://www.sfmta.com/sites/default/files/projects/2017/VN_Newsltr_17.02_170502.pdf*, accessed August 9, 2017.

8 Pursuant to Planning Code section 260(b)(1)(B), the mechanical and elevator penthouses are exempt from the Planning Code height limits, but are considered in the context of environmental review.

9 A height of 114 feet and 120 feet for the north and south tower podiums, respectively, is consistent with the height and bulk district for the site (120-R-2).

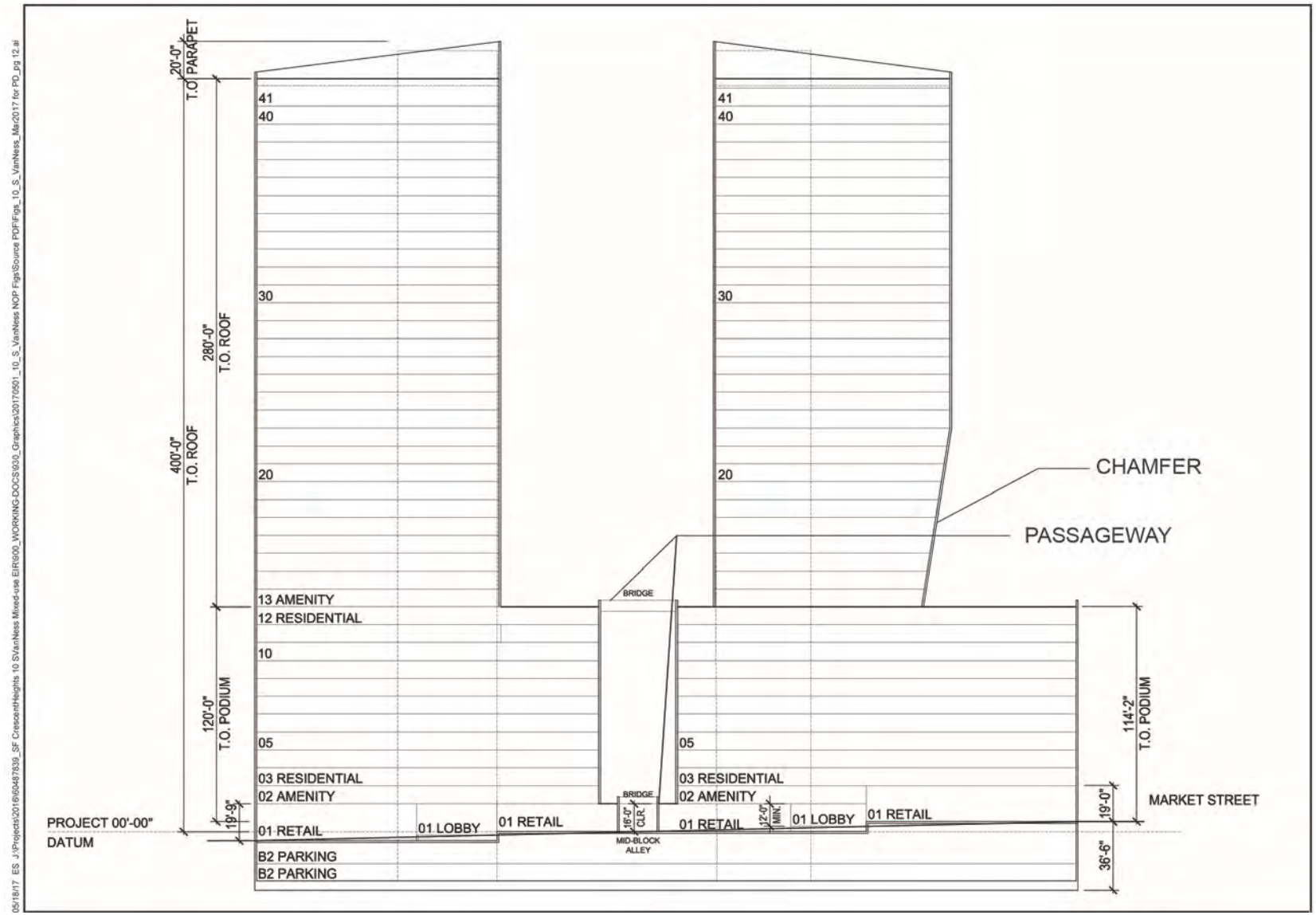
residential entrances would be at the approximate center of each tower podium's frontage on South Van Ness Avenue.

Table 1: Proposed Project Characteristics

Lot	**Dimensions**		
Size	51,150 square feet		
Length	475 feet (South Van Ness Avenue)/288 feet (Market Street)/450 feet (12th Street)		
Proposed Building	**Area (gross square feet)**		
Residential[1]	935,745		
Ground-Floor Retail	30,350		
Parking[2]	102,000		
Rooftop Mechanical	3,000		
Total	1,071,095		
Building Characteristics	**Description**		
Stories	North Tower/Podium	41 stories/12 stories	
	South Tower/Podium	41 stories /12 stories	
Height	North Tower/Podium	400 feet (up to 420 feet including the elevator penthouse[3])/114 feet	
	South Tower/Podium	400 feet (up to 420 feet including the elevator penthouse)/120 feet	
Ground Floor	Retail: 30,350 gross square feet with multiple tenant spaces Residential: Two residential lobbies and 336 class I bicycle parking spaces		
Basement	518 vehicle parking spaces		
Proposed Units	**Amount (Approx. Percent)**		
Dwelling Units	984		
	North Tower	South Tower	Total
Studio	267 (27%)	108 (11%)	375 (38%)
1-Bedroom	294 (30%)	167 (17%)	461 (47%)
2-Bedroom	51 (5%)	49 (5%)	100 (10%)
3-Bedroom	19 (2%)	29 (3%)	48 (5%)
Vehicle Parking Spaces[4]	518		
Bicycle Parking Spaces[5]	397		
Open Space[6]	**Area (square feet)**		
Publicly accessible	2,975		
Common	45,176		
Private	0		

Notes:
1. Includes first-floor nonretail uses and second-floor residential amenity uses.
2. Includes parking and basement mechanical equipment.
3. Consistent with the Planning Code height and bulk designations for the project site, the building height is 400 feet. Up to 20 feet for the elevator penthouse, roof screens, and other rooftop appurtenances are exempt from this height limit.
4. Vehicle parking spaces: 491 for residential use, 14 for retail use, six for car-share, seven for off-street loading.
5. Bicycle parking spaces: 336 class I bicycle parking spaces on the ground floor, 61 class II bicycle parking spaces in on-street bicycle corrals.
6. Provided in compliance with Planning Code section 736.93, Usable Open Space Per Residential Unit.

Source: 10 South Van Ness LLC, 2017



Source: 10 SVN LLC, 2017

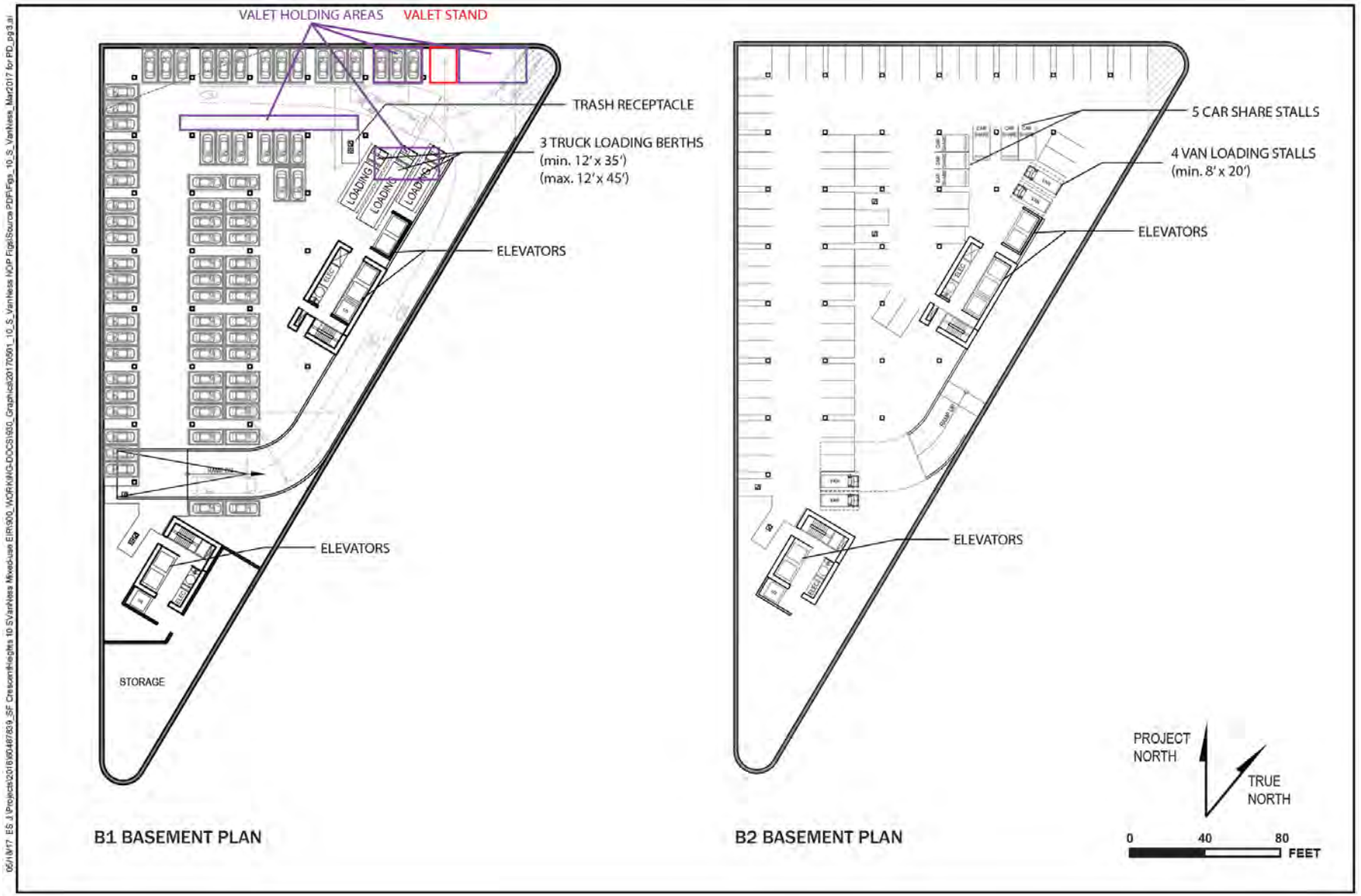
Figure 4: Proposed Project – Building Section Looking West toward Project Site from South Van Ness Avenue

Source: 10 SVN LLC, 2017

Figure 5: Proposed Project – Building Elevation Looking West toward Project Site from South Van Ness Avenue

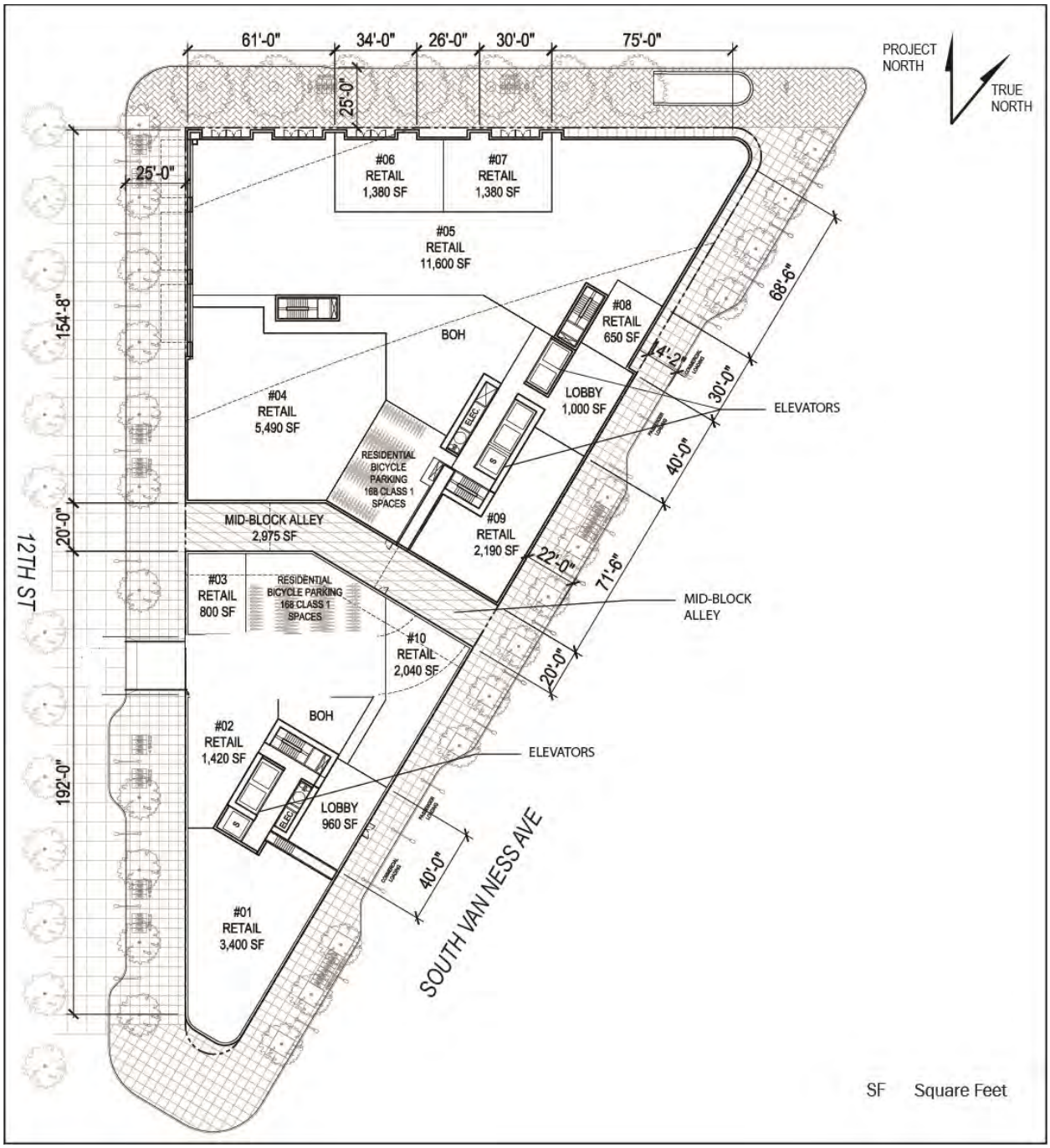
Source: 10 SVN LLC, 2017

Figure 6: Proposed Project – Building Elevation Looking South toward Project Site from Market Street



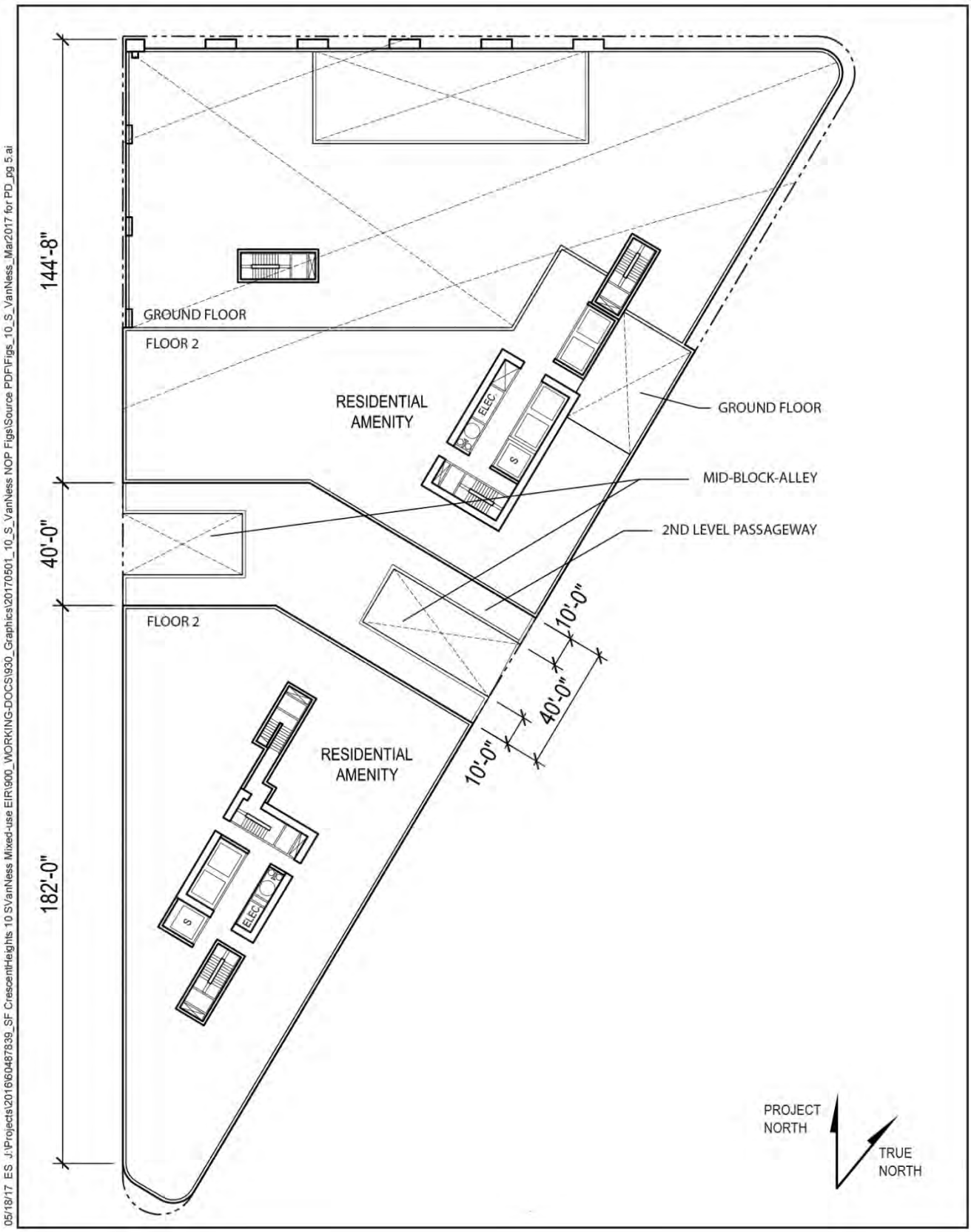
Source: Handel Architects, 2016 and SITELAB Urban Studio, 2017

Figure 7: Proposed Project – Parking Garage/Basement Plan



Source: Handel Architects, 2016

Figure 8: Proposed Project – Ground-Floor Plan

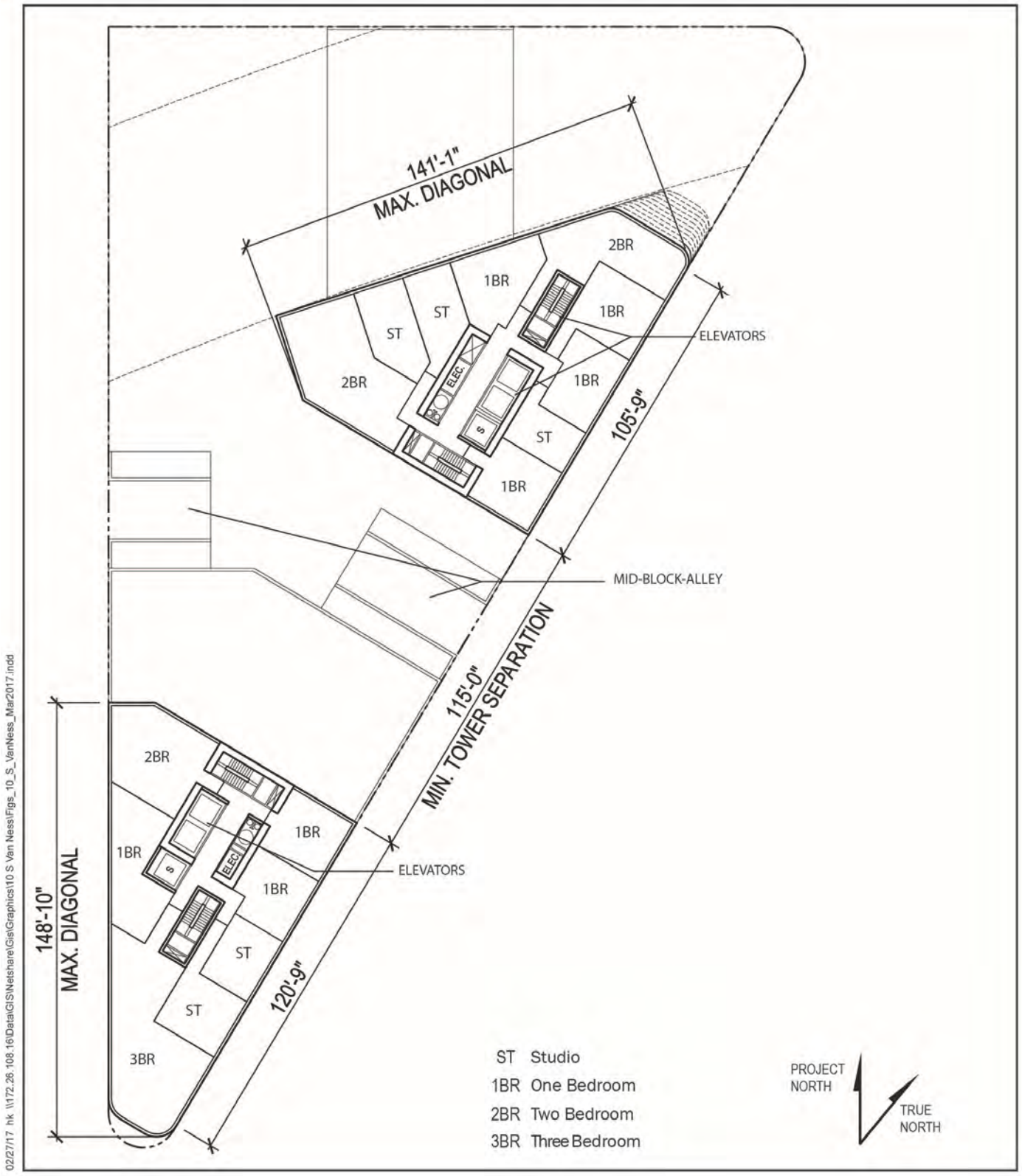


Source: Handel Architects, 2016

Figure 9: Proposed Project – Level 2 Floor Plan

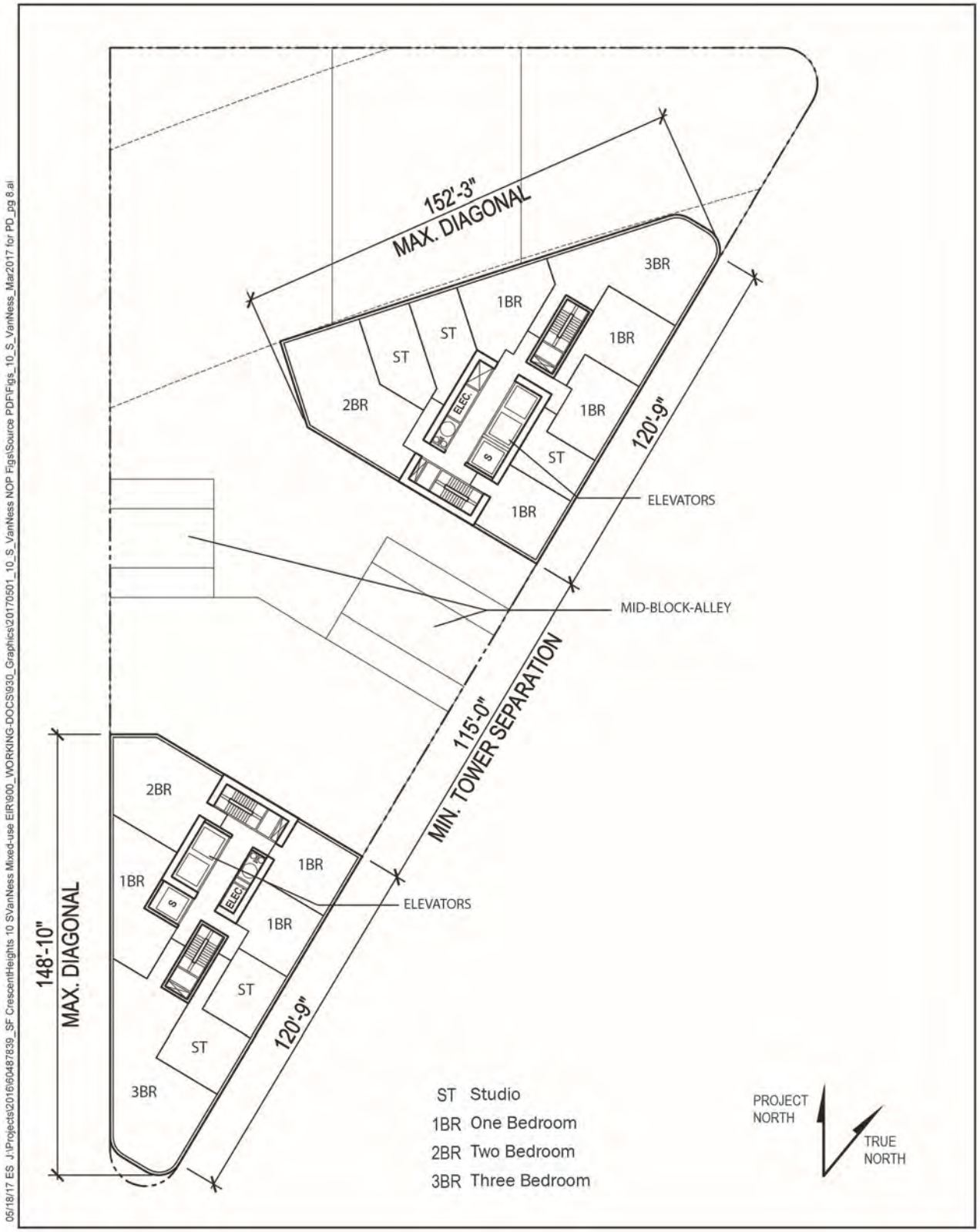
Source: Handel Architects, 2016

Figure 10: Proposed Project – Representative Floor Plans for Levels 3–12



Source: Handel Architects, 2016

Figure 11: Proposed Project – Representative Floor Plans for Levels 13–22



Source: Handel Architects, 2017

Figure 12: Proposed Project – Representative Floor Plans for Levels 23–41

The ground floors of the tower podiums, considered together, would include 30,350 gsf of retail space for use by multiple tenants. The retail spaces, as currently designed, include 10 retail spaces ranging in size from 800 square feet (sf) to 11,600 sf, as shown in Figure 8. The retail uses would front onto South Van Ness Avenue, Market Street, 12th Street, and the proposed mid-block alley. The retail spaces would all have a minimum floor-to-ceiling height of 19 feet.

Open Space. The proposed project would include 48,150 sf of usable open space per Planning Code section 736.93, which would be provided through a combination of publicly accessible open spaces, and common usable open spaces.[10,11] As shown in Figures 4 and 8, publicly accessible open space would include the 2,975-square-foot mid-block alley between the two tower podiums, which would provide a pedestrian connection between South Van Ness Avenue and 12th Street. Privately accessible common open spaces would include amenity terraces on Level 2 of both tower podiums, Levels 3 and 11 of the north tower, Level 13 of the south tower, and on the roofs of both towers, as shown in Figure 13.

Parking/Loading and Mechanical Equipment. The proposed project would include 102,000 gsf of parking and building services, with up to 518 accessory vehicle parking spaces, in two basement levels, as shown in Figure 7. Ingress and egress for the secured garage would be provided via a single curb cut on 12th Street. The proposed project would include 491 spaces for residential use, 14 spaces for retail use, and six spaces for car-share vehicles. In addition, a total of seven off-street freight-loading spaces would be located in the two basement levels, three of which would be standard freight-loading spaces, and four of which would be service vehicle spaces. One freight-loading space would accommodate up to a 45-foot-long vehicle.

The majority of the parking spaces would be provided in stackers and would not be independently accessible. The garage would be staffed 24 hours per day, seven days per week by a valet service, via a valet station within the garage to manage resident and employee parking maneuvers, with the intent of facilitating inbound vehicle flow. The valet would serve residents, visitors, and car-share users. Valet staff would also direct delivery and moving trucks.

The proposed project would also provide 336 class I bicycle parking spaces,[12] which would be provided in two secure bicycle rooms on the north tower podium ground floor: 332 for residential use and four for retail use. On-street bicycle parking would include 61 class II bicycle parking spaces: 49 for residential use and 12 for retail use, which would be located with the public right-of-way along Market Street, 12th Street and South Van Ness Avenue.

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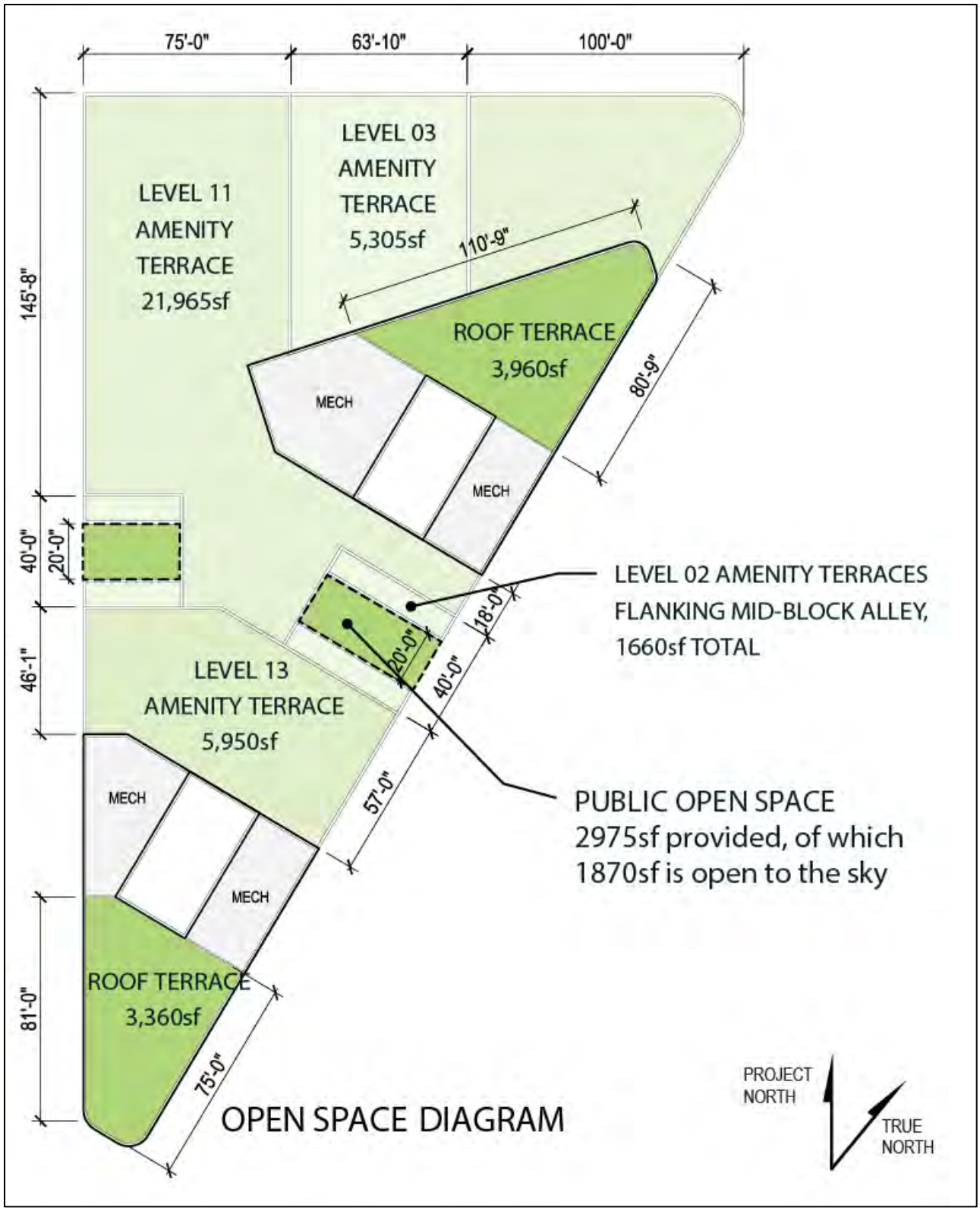
10 As defined in Planning Code section 135, common usable open space includes open space that is easily accessible from a dwelling unit or from a common area of a building or lot. Common usable open space is accessible to building occupants only, but, as opposed to private usable open space, is accessible to all building occupants rather than a select group of units. In C-3 districts, new buildings are required to provide privately owned public open spaces meeting the requirements of Planning Code section 138. These open spaces must be accessible to the general public.

11 Planning Code section 135 requires the provision of 36 square feet of private open space or 47.88 square feet of commonly accessible open space per residential unit. The proposed project would require 47,114 square feet of common usable open space.

12 Section 155.1(a) of the Planning Code defines class I bicycle spaces as "spaces in secure, weather-protected facilities intended for use as long-term, overnight, and work-day bicycle storage by dwelling unit residents, nonresidential occupants, and Employees" and defines class II bicycle spaces as "spaces located in a publicly-accessible, highly visible location intended for transient or short-term use by visitors, guests, and patrons to the building or use."



Source: 10 SVN LLC, 2017

Figure 13: Proposed Project – Open Space Plan

The proposed project would include one 1,500-kilowatt diesel-powered emergency generator and other mechanical equipment in the garage/basement. Trash storage would also be located in the garage/basement, adjacent to an accessible loading area. The garage/basement would be secured, and would be accessible only to residents and retailers. Approximately 3,000 gsf of the roof area would be reserved for heating, ventilation, and air conditioning (HVAC) mechanical equipment. The proposed project's roof plan is shown in Figure 14.

Circulation and Access. The proposed project would remove the existing curb cuts along South Van Ness Avenue and 12th street and replace them with a new 20-foot-wide curb cut along 12th Street. This would provide vehicle access to the parking garage, for both retail and residential users (two 10-foot-wide lanes for two-way, bi-directional traffic). In addition to stairs, two elevators would provide access to the residential lobbies from the parking garage/basement. From the residential lobbies, a second elevator would provide access to each tower. Elevator access would also be available between the below-grade parking garage/basement and the ground-floor retail space. As described above, two street-level residential entrances, one for each tower, would be located along South Van Ness Avenue. Pedestrian access to the retail spaces would be from South Van Ness Avenue, Market Street, 12th Street, and the proposed mid-block alley. The proposed mid-block alley would also provide public access through the project site between South Van Ness Avenue and 12th Street.

Class I and II bicycle facilities currently run along Market Street in both directions. Access to the class I bicycle parking spaces would be provided via a secured doorway on the mid-block alleyway to the bicycle room located near 12th Street. The class I bicycle parking spaces would be for residents and retail users and the bicycle storage room would also be connected to the building's lobby. A bicycle repair station would be located within the building. The location of the class II bicycle parking would be along Market Street, 12th Street, and South Van Ness Avenue and would be installed within the sidewalk areas. The nearest San Francisco Bike Share station is approximately 120 feet to the east of the project site on the east side of South Van Ness Avenue, directly across the street from the project site. The on-site class 1 bicycle parking is accessible to the Market Street bike lane via 12th Street and the mid-block alley.

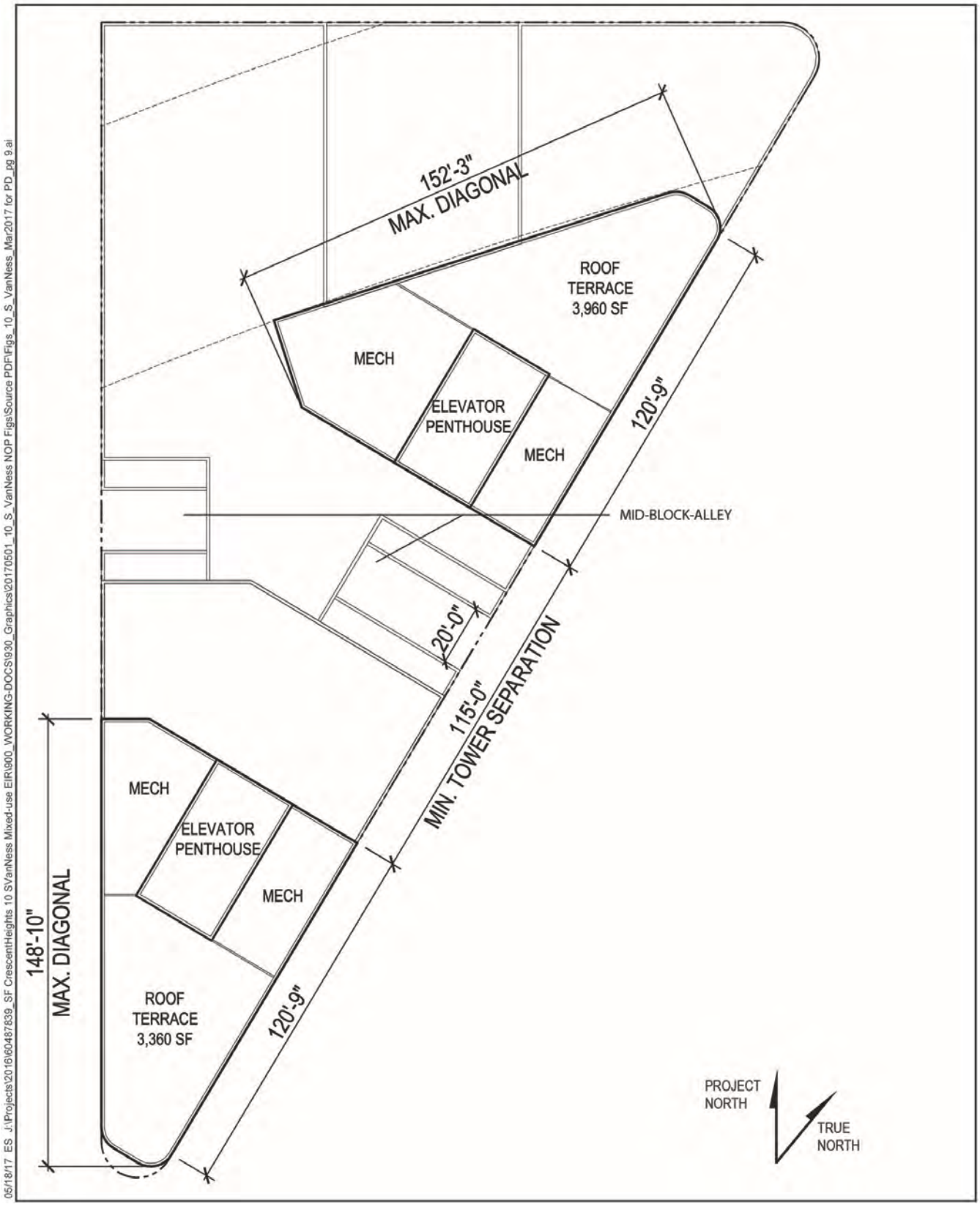
Transportation Demand Management. The proposed project would result in more than 10 dwelling units and, thus, would be required to comply with San Francisco Planning Code section 169, Transportation Demand Management Program. As required under Planning Code section 169, the project sponsor is required to develop a transportation demand management (TDM) plan including measures that the property owner would implement to reduce single-occupancy driving to and from the project site. Compliance with the project's TDM plan would be included as a Condition of Approval for the proposed project and would be subject to monitoring by the Planning Department for the life of the project.[13]

The following TDM measures would comprise the TDM plan for the proposed project:

PKG-1: Unbundle Parking
Unbundle[14] parking in transportation analysis zone 578, where the project site is located.

[13] According to Planning Code section 169, a property owner must facilitate a site inspection by the Planning Department before issuance of a certificate of occupancy, and must document implementation of applicable aspects of the TDM plan, maintain a TDM coordinator, allow for department inspections, and submit periodic compliance reports throughout the life of the project.

[14] Where the cost of a parking space is separated from the cost of rent, lease, or ownership.



Source: Handel Architects, 2017

Figure 14: Proposed Project – Roof Plan

PKG-4: Parking Supply
Provide parking at a rate that is less than or equal to 80 percent and greater than 70 percent of the neighborhood residential parking rate. The project parking rate is 0.5 accessory parking spaces per unit, which is 76 percent of the neighborhood residential parking rate of 0.65 parking spaces per unit in transportation analysis zone 578 where the project site is located.

ACTIVE-1: Improve Walking Conditions
Complete streetscape improvements consistent with the Better Streets Plan and any local streetscape plan so that the public right-of-way is safe, accessible, convenient, and attractive to persons walking by: widening the sidewalk along the east side of 12th Street, providing a mid-block pedestrian alley to allow public access through the project site, and providing sidewalk bulb-outs along the east side of 12th Street to shorten the crossing distances at intersections with Market Street and South Van Ness Avenue, and to reduce vehicle speed.

The streetscape improvements would meet TDM ordinance criteria by providing the following 10 streetscape elements defined in Table 1 of Planning Code section 138.1:[15]

- High-visibility crosswalks
- Special crosswalk treatments
- Mid-block crosswalks
- Raised crosswalks
- Extended bulb-outs[16]
- Mid-block bulb-outs
- Reuse of "pork chop islands"[17] and excess right-of-way
- Shared public ways
- Pedestrian-only streets
- Aboveground landscaping

ACTIVE-2: Bicycle Parking
Provide class I and class II bicycle parking spaces as required by the Planning Code. The proposed project is providing 332 class I and 49 class II bicycle spaces for the residential use, and four class I and 12 class II bicycle spaces for the retail use, both of which meet the Planning Code, and TDM measure requirements.

ACTIVE-5A: Bicycle Repair Station
Provide on-site tools and space for bicycle repair. The proposed project would provide this repair station within the class I bicycle parking area on the building's ground floor.

CSHARE-1: Car-Share Parking
Provide car-share space parking as required by the Planning Code. To meet this requirement, the proposed project would provide six car-share spaces, to be located on Level B2.

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15 Table 1, Pedestrian and Streetscape Elements per the Better Streets Plan, in section 138.1 of the San Francisco Planning Code, *http://library.amlegal.com/nxt/gateway.dll/California/planning/planningcode?f=templates$fn=default.htm$3.0$vid=amlegal:sanfrancisco_ca$sync=1*, accessed August 3, 2017.

16 A bulb-out is a traffic calming measure that reduces the crossing distance for pedestrians by extending the sidewalk.

17 Pork chop islands are irregularly shaped, raised islands placed between a right-turn slip lane and through-travel lanes.

DELIVERY-1: Delivery Supportive Amenities
The proposed project would facilitate delivery services by providing a staffed reception area for receipt of deliveries, and offering one of the following: (1) clothes lockers for delivery services, or (2) temporary storage for package deliveries, laundry deliveries, and other deliveries. These amenities would be provided on Level B1.

FAMILY-1: Family TDM Amenities
The proposed project would provide an onsite secure location on Level B1 for storage of personal car seats, strollers, and cargo bicycles or other large bicycles.

INFO-1: Multimodal Wayfinding Signage
The proposed project would provide multimodal wayfinding signage in key locations to support access to transportation services and infrastructure, including: transit, bike share, car-share parking, bicycle parking and amenities (including repair stations and fleets), showers and lockers, taxi stands, and shuttle/carpool/vanpool pick-up/drop-off locations.

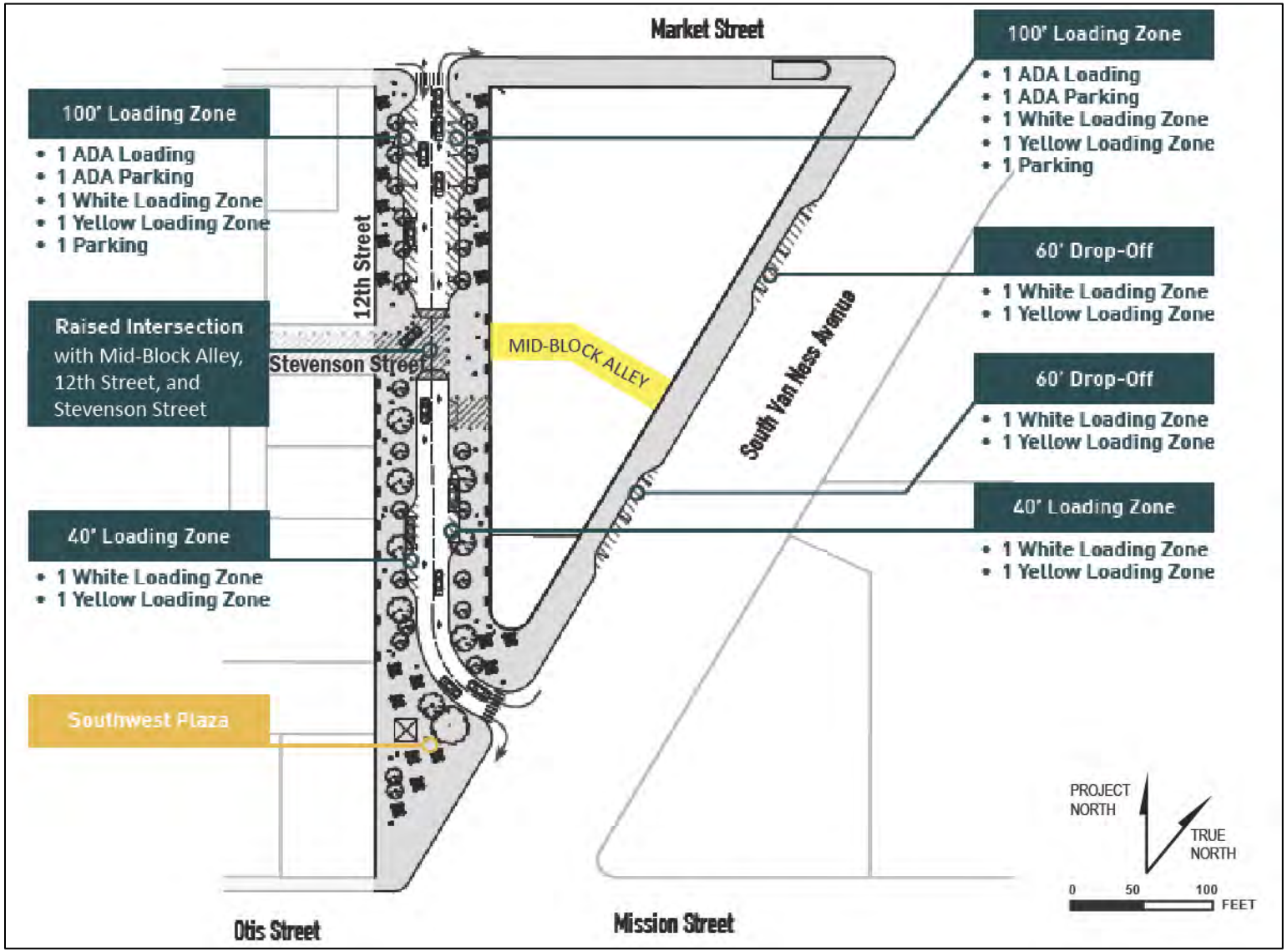
INFO-2: Real Time Transportation Information Displays
The proposed project would provide real time transportation information on displays in prominent locations on the project site and within the buildings to highlight sustainable transportation options and support informed trip-making.

INFO-3: Tailored Transportation Marketing Services
The property owner would provide promotions and welcome packets to all new residents/employees, personal consultation for each new resident/employee, and request commitment to try new transportation options.

Streetscape Improvements. The proposed streetscape plan, called the "Market Octavia Streetscape Plan," would conform to Market & Octavia Area Plan and Planning Department standards and is shown in Figures 15 and 16. Under the Market Octavia Streetscape Plan, the eastern and western sidewalks along 12th Street would be expanded from 15 feet to a width of 21 feet (4 feet of frontage, 8 feet of pedestrian throughway, and 9 feet of pedestrian furnishing space), as shown in Figure 16. Eight-foot-wide bulb-outs would be installed at the intersection of 12th and Market streets. A raised crosswalk would be installed at the intersection of 12th and Stevenson streets. The "pedestrian island" at the intersection of 12th Street and South Van Ness Avenue would be removed and replaced by bulb-outs on both sides of 12th Street and a pedestrian plaza on the southwest side of the intersection.

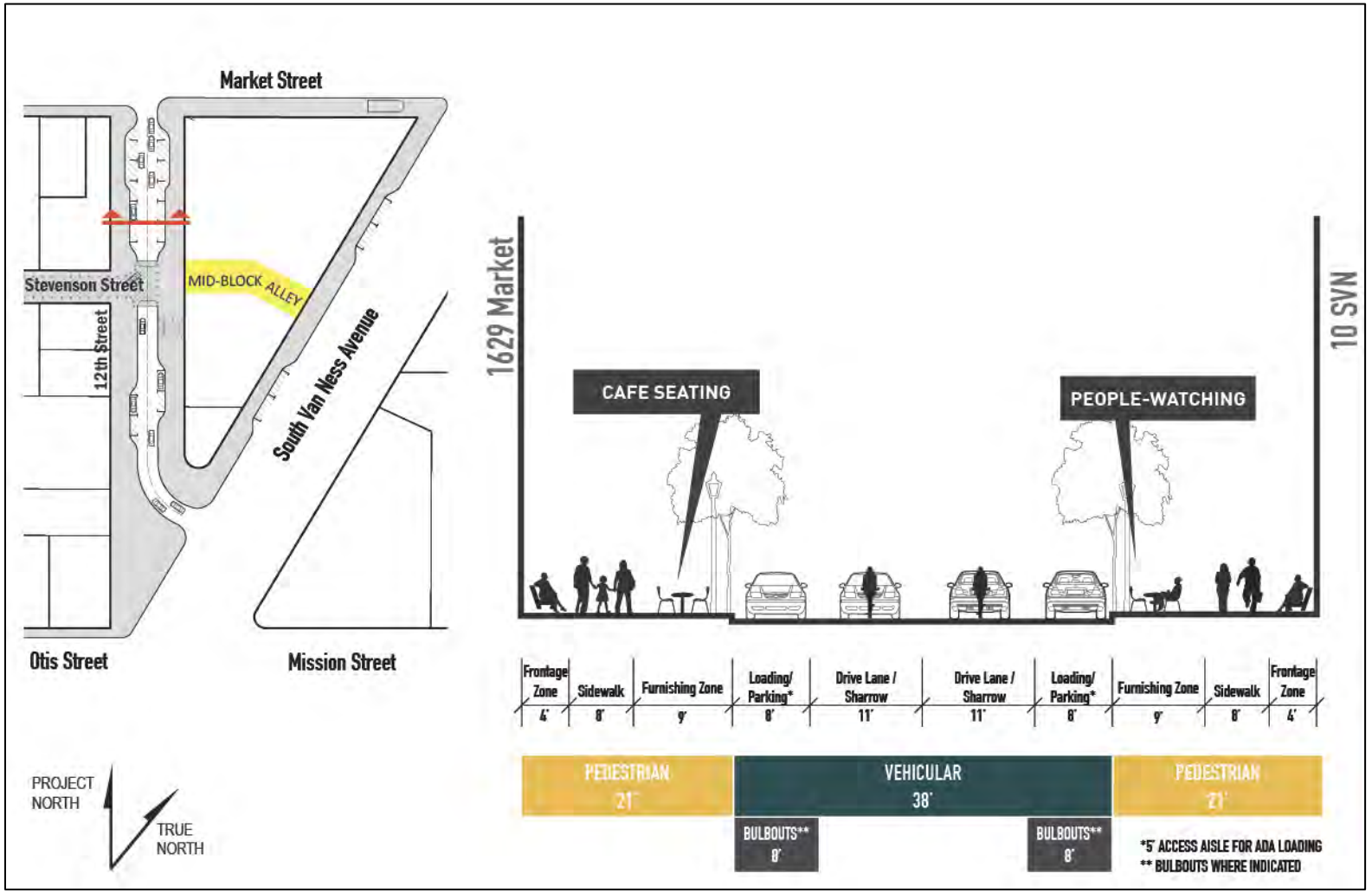
Two 60-foot-long white and yellow loading zones[18] are proposed along the South Van Ness Avenue frontage, near the entrances to the residential lobbies, to provide an area for passenger drop-off and pick up, and commercial loading activities. Proposed changes to the right-of-way are described below. Four passenger and commercial loading zones are proposed on 12th Street, one 100-foot-long loading zone and one 40-foot-long loading zone on each side of 12th Street. Each 100-foot loading zone would include one ADA loading space, one ADA parking space, one passenger loading space, one commercial loading space, and one regular parking space. Each 40-foot loading zone would include one passenger loading space and one commercial loading space.

[18] White zones are for passenger loading and unloading during certain hours, with a time limit of five minutes. Yellow zones are for commercial loading activities.



Source: SITELAB Urban Studio, 2017

Figure 15: Proposed Project – Market Octavia Streetscape Plan (Plan View)



Source: SITELAB Urban Studio, 2017

Figure 16: Proposed Project – Market Octavia Streetscape Plan (12th Street Right-of-Way Section)

In addition to the streetscape improvements described above, the proposed project would install 33 net new street trees and class II bicycle racks with capacity for 61 bicycles along South Van Ness Avenue, Market Street, and 12th Street, in compliance with the City's Better Streets Plan.

Sustainability. The San Francisco Building Code includes a chapter on requirements for green buildings; these requirements establish either Leadership in Energy and Environmental Design (LEED)[19] certification levels or Green Point Rated[20] system points for types of proposed residential and commercial buildings. The proposed project would seek LEED Silver certification, which includes measures applicable to both construction and operation of the proposed project. The proposed project would incorporate a number of sustainability features, including stormwater and rainwater collection features and a wastewater treatment system. The wastewater treatment system would be sized to treat and utilize recycled water from the proposed building for nonpotable uses in the building, including flushing toilets, irrigation, and cooling tower water for the HVAC system. The proposed project would remove the existing 28 trees along the perimeter of the project site frontage on all three sides of the property. In compliance with Public Works Code section 806(c)(2), the proposed project would install 61 new street trees, with one tree every 20 feet along the perimeter of the project site frontage for a total of 33 net new street trees.

The project sponsor has submitted an application to the Governor's Office seeking certification of the proposed project as an environmental leadership development project pursuant to Assembly Bill 900, the Jobs and Economic Improvement through Environmental Leadership Act of 2011, and the California Environmental Quality Act (CEQA) section 21178 et seq. An environmental leadership development project does not result in any net increase in greenhouse gas (GHG) emissions and achieves a 10 percent higher standard for transportation efficiency than comparable projects. The California Air Resources Board (ARB) provided a letter of determination on December 18, 2017, that the proposed project would not result in any net additional GHG emissions and authorized the governor to certify the project. The governor's signature was received on December 21, 2017, certifying that the project is an environmental leadership development project.[21]

Other Design Features. As a result of preliminary wind test modelling in accordance with Planning Code section 148, the north face of the proposed north tower would be chamfered[22] from Level 13 to Level 22, and 75 percent porous wind canopies (see Figure 17) would be constructed at the sidewalk level along the east side of South Van Ness Avenue between Market Street and Mission Street. This would provide protection to pedestrians and bicyclists from hazardous wind conditions. The chamfer is evident in Figure 4.

The proposed project would include canopies that would extend from the base of the building at strategic locations to improve wind conditions along the street. Figure 17 below indicates the wind canopy locations for the proposed project. The canopies would be trellis-like porous structures attached to the buildings with cantilevered segments, supported by vertical columns to a height of approximately 20 feet.

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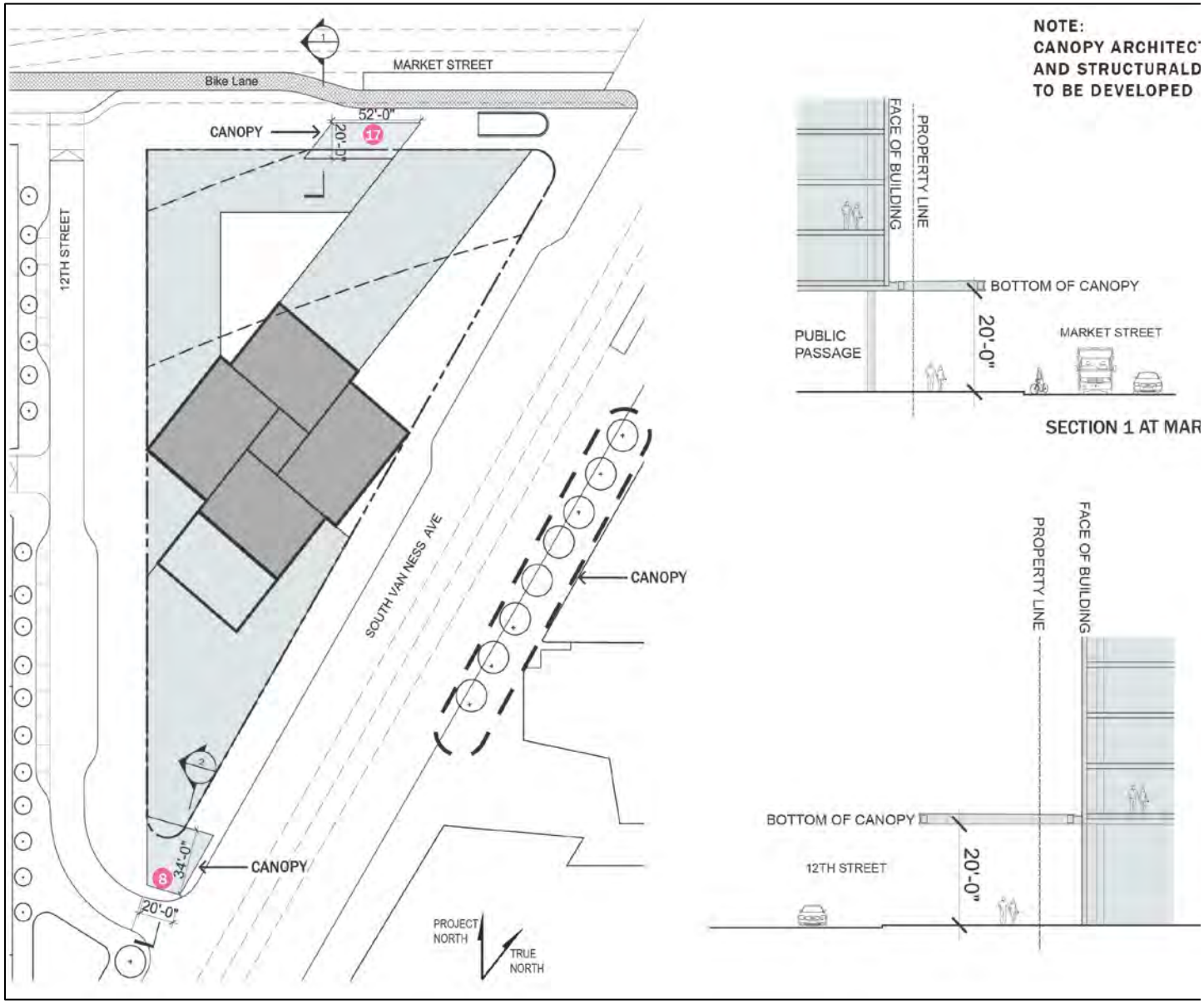
19 LEED is an internationally recognized green building certification system developed by the U.S. Green Building Council, which involves third-party verification that a building or community was designed and built using strategies aimed at improving performance across metrics that include energy savings, water efficiency, indoor air quality, use of recycled materials, and proximity to public transportation.

20 Green Point Rated is a program of Build it Green, established for evaluating residential building performance in the areas of resource conservation, indoor air quality, water conservation, energy efficiency, and livable communities (infill development, increased density, diversity of land uses).

21 The certification process for environmental leadership development projects is separate from the environmental review process conducted for the proposed project.

22 A chamfer is a flat surface resulting from cutting off the edge of a volume or a symmetrical sloping surface at an edge or corner.



Source: BMT Fluid Mechanics 2017

Figure 17: Canopy Locations for Wind Reduction

Construction. This section describes the construction activities associated with the proposed project. Construction is anticipated to occur over approximately 36 months, and would include the following phases: (1) demolition; (2) shoring and excavation; (3) foundation and podium construction; (4) superstructure/skin; and (5) interior work. Construction hours would typically be from 7 a.m. to 8 p.m., Monday through Thursday; and 7 a.m. to 5 p.m. on Fridays and Saturdays. Limited evening work (8 p.m. to 7 a.m.) and work on weekends (7 a.m. to 5 p.m.) would be required for phases 3 and 4.

As discussed previously, a subsurface BART easement runs underneath the northern portion of the project site, as shown in Figure 2. In this portion of the site, structural loads associated with the proposed project must remain equal to or less than existing loads on the BART tunnel. The northern half of the project site is within the BART zone of influence (ZOI). The portion of the structure within the BART easement would be supported by a concrete mat foundation, which would ensure that the existing load imposed on the BART tunnel is maintained. Outside of the easement, but within the BART ZOI, the tower and podium structures would be supported by a deep foundation consisting of double-cased, drilled cast-in-place piers. The installation of drilled cast-in-place piers involves digging cylindrical shafts and then filling them with wet concrete. Thus, no pile driving would be required. Outside of the BART ZOI, the tower and podium structures could be supported by either a deep foundation system or a mat foundation.[23] Construction methods for the proposed project, including construction depth, techniques and approval processes are discussed in detail in the Geology and Soils Section below.

Construction activities would require temporary sidewalk and parking-lane closures for the entire construction period. The proposed project would develop and implement a construction management plan to anticipate and minimize transportation-related impacts of various construction activities associated with the proposed project. The construction management plan would ensure that overall circulation in the project area is maintained to the extent possible, with particular focus on ensuring transit, pedestrian, and bicycle access and connectivity. The program would supplement and expand, rather than modify or supersede, any manual, regulations, or provisions set forth by the SFMTA, the San Francisco Public Works or other city departments and agencies, and the California Department of Transportation.

Variant

The project sponsor is also considering a taller building design consisting of a single tower and podium (see Figure 18). Elevations for 12th Street, Market Street, and South Van Ness Avenue are presented in Figure 18, while variant renderings are included in the project EIR. As shown in Table 2, the proposed variant would include construction of a single 590-foot-tall, 55-story building.[24] Similar to the proposed project, the variant would have stair/elevator penthouses extending up to 20 feet above the roof height, for a total height of 610 feet.[25] The podium would vary in height, from 90 to 139 feet along the Market Street frontage and up to 164

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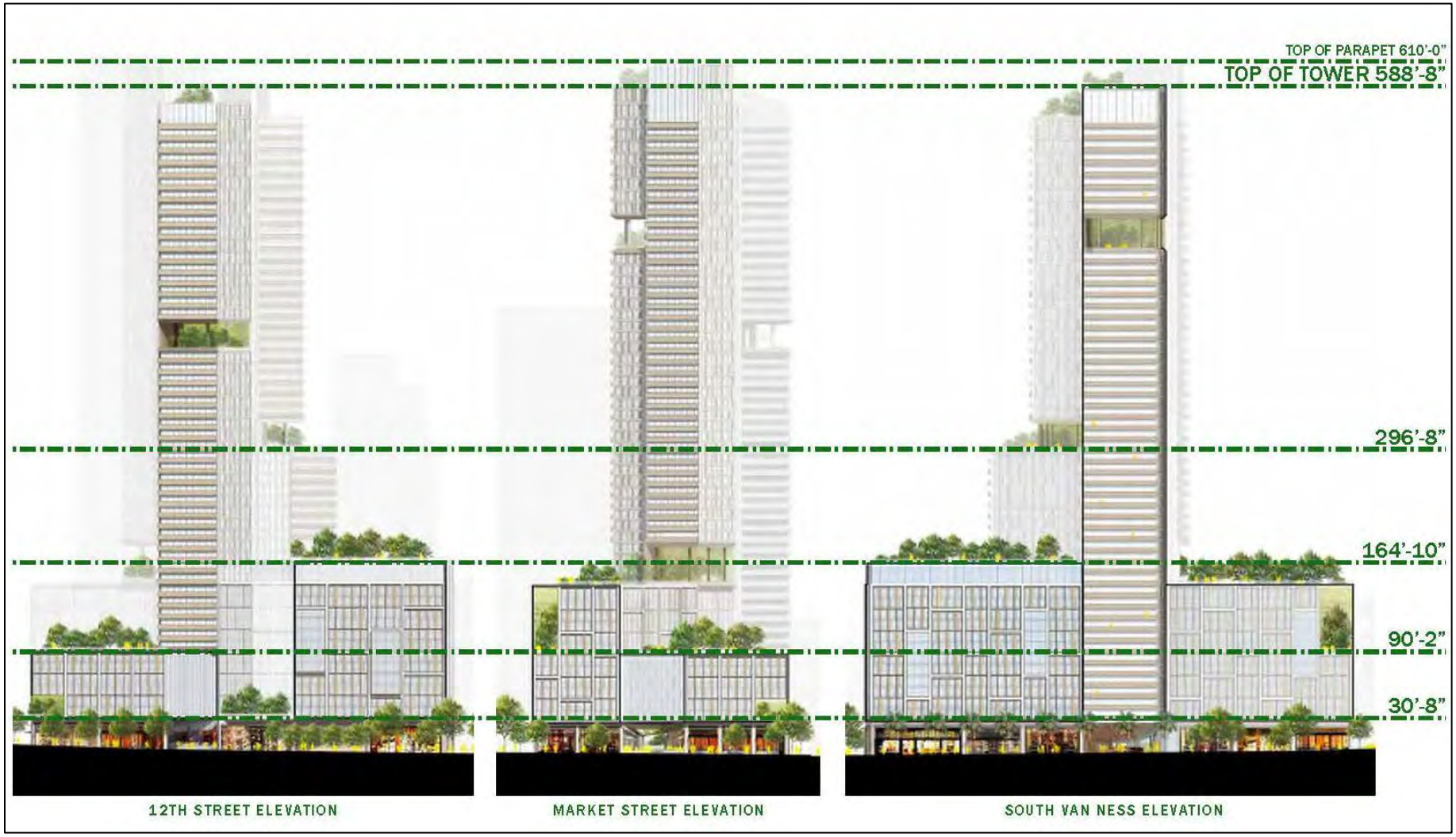
23 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation, 10 Van Ness Avenue, San Francisco California*, March 16, 2017.

24 The Van Ness and Market Downtown Residential SUD encourages transit-oriented, high-density, mixed-use residential neighborhood development around the intersections of Market Street and Van Ness Avenue and Mission Street and Van Ness Avenue. The current height limit for building towers ranges from 250 to 400 feet. The project variant is intended to reflect the changes to the existing height limits proposed by the Market Street Hub Project. The Hub Project includes changes to existing height limits to provide greater variation in the heights of buildings proposed at the intersection of Market Street and Van Ness Avenue and to better ensure that the area's growth supports the City's goals for housing, transportation, the public realm, and the arts.

25 Pursuant to Planning Code section 260(b)(1)(B), the mechanical and elevator penthouses are exempt from the Planning Code height limits, but are considered in the context of environmental review.

feet along the southern frontage of the site, as shown in Figure 18. The ground floor would contain the same uses as the proposed project, with comparable retail uses (see Figure 20) and a single residential lobby. As with the proposed project, 336 class I bicycle spaces would be provided on the ground floor for project residents and ground-floor retail spaces, and 61 class II bicycle spaces would be provided on the sidewalk adjacent to the project site, to meet Planning Code requirements. Vehicle parking would be the same as for the proposed project, with 518 vehicle parking spaces provided in a two-level subgrade parking garage/basement with an entrance off 12th Street (see Figure 21).



Source: KPF Associates, 2017

Figure 18: Variant – Building Elevations from 12th Street, Market Street, and South Van Ness Avenue

Table 2: Characteristics of Proposed Project and Variant

Lot	*Proposed Project*			*Variant*
	Dimensions			
Size	51,150 square feet			
Length	475 feet (South Van Ness Avenue)/288 feet (Market Street)/450 feet (12th Street)			
Proposed Building	**Area (gross square feet)**			
Residential[1]	935,745			935,242
Ground-Floor Commercial (Retail)	30,350			30,450
Parking[2]	102,000			102,000
Rooftop Mechanical	3,000			5,297
Total	1,071,095			1,072,989
Building Characteristics	**Description**			
Stories	North Tower/Podium	41 stories/12 stories		55 stories/15 stories (Tower/Podium)
	South Tower/Podium	41 stories/12 stories		
Height	North Tower/Podium	400 feet (up to 420 feet including the elevator penthouse[3])/114 feet		590 feet (up to 610 feet including the elevator penthouse[3])/164 feet (Tower/Podium)
	South Tower/Podium	400 feet (up to 420 feet including the elevator penthouse)/120 feet		
Ground Floor	Retail: 30,350 gross square feet multiple tenant spaces Residential: Two residential lobbies and 336 class I bicycle parking spaces			Retail: 30,450 gross square feet multiple tenant spaces Residential: 1 residential lobby, and 336 class I bicycle parking spaces
Basement	518 vehicle parking spaces			518 vehicle parking spaces
Proposed Units	**Amount (Approx. Percent)**			
Dwelling Units	984			984
	North Tower	South Tower	Total	
Studio	267 (27%)	108 (11%)	375 (38%)	347 (35%)
1-Bedroom	294 (30%)	167 (17%)	461 (47%)	449 (46%)
2-Bedroom	51 (5%)	49 (5%)	100 (10%)	166 (17%)
3-Bedroom	19 (2%)	29 (3%)	48 (5%)	22 (2%)
Vehicle Parking Spaces[4]	518			518
Bicycle Parking Spaces[5]	397			397
Open Space[6]	**Area (square feet)**			
Publicly accessible	2,975			12,091
Common	45,176			25,565
Private	0			9,550

Notes:

1 Includes first-floor nonretail uses and second-floor residential amenity uses.

2 Includes parking and basement mechanical equipment.

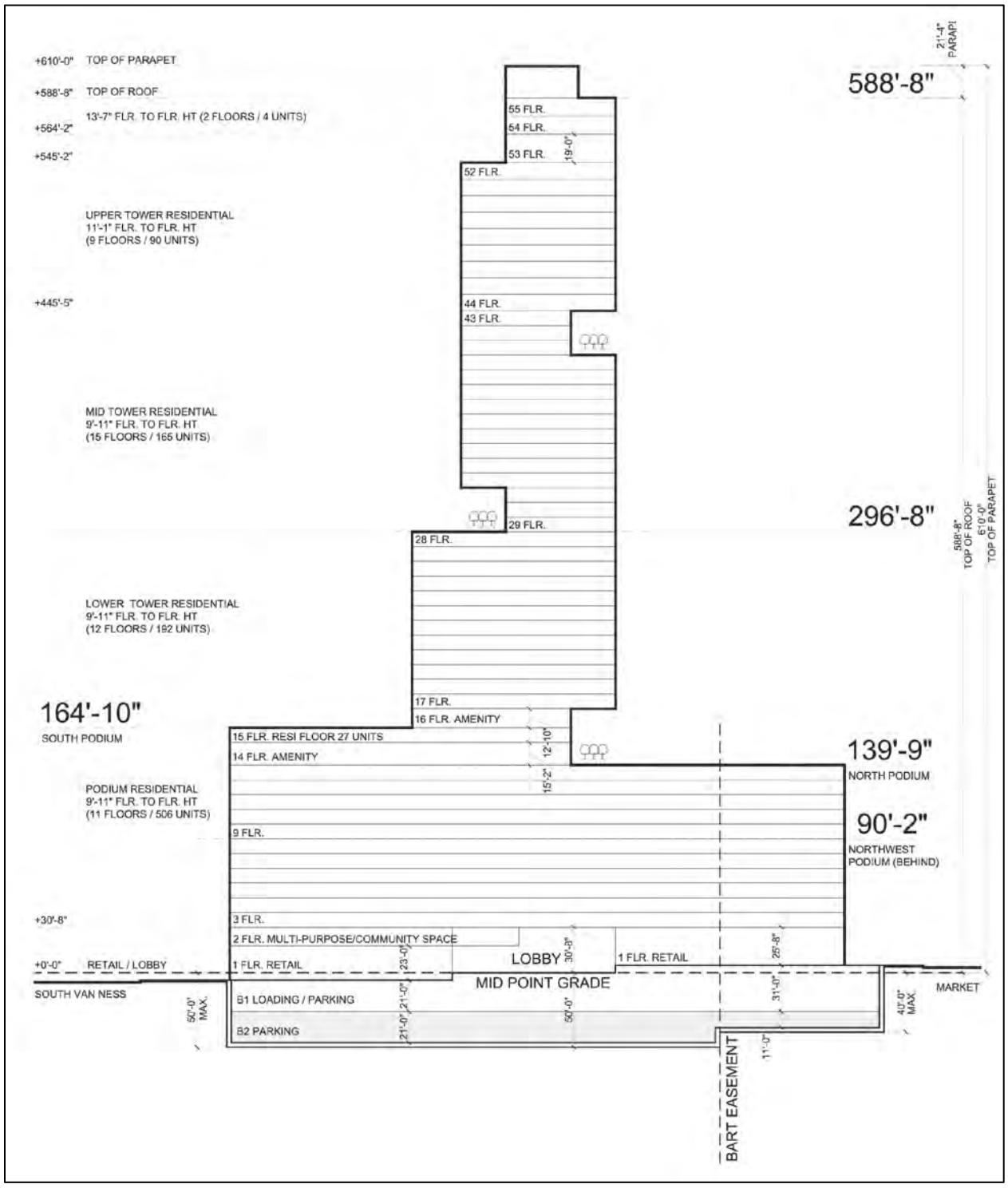
3 The Planning Code height and bulk designations for the project site exempt elevator penthouse, roof screens, and other rooftop appurtenances from height limits.

4 Vehicle parking spaces: 491 for residential use, 14 for retail use, six for car-share, seven for off-street loading.

5 Bicycle parking spaces: 336 class I bicycle parking spaces on the ground floor, 61 class II bicycle parking spaces in on-street bicycle corrals.

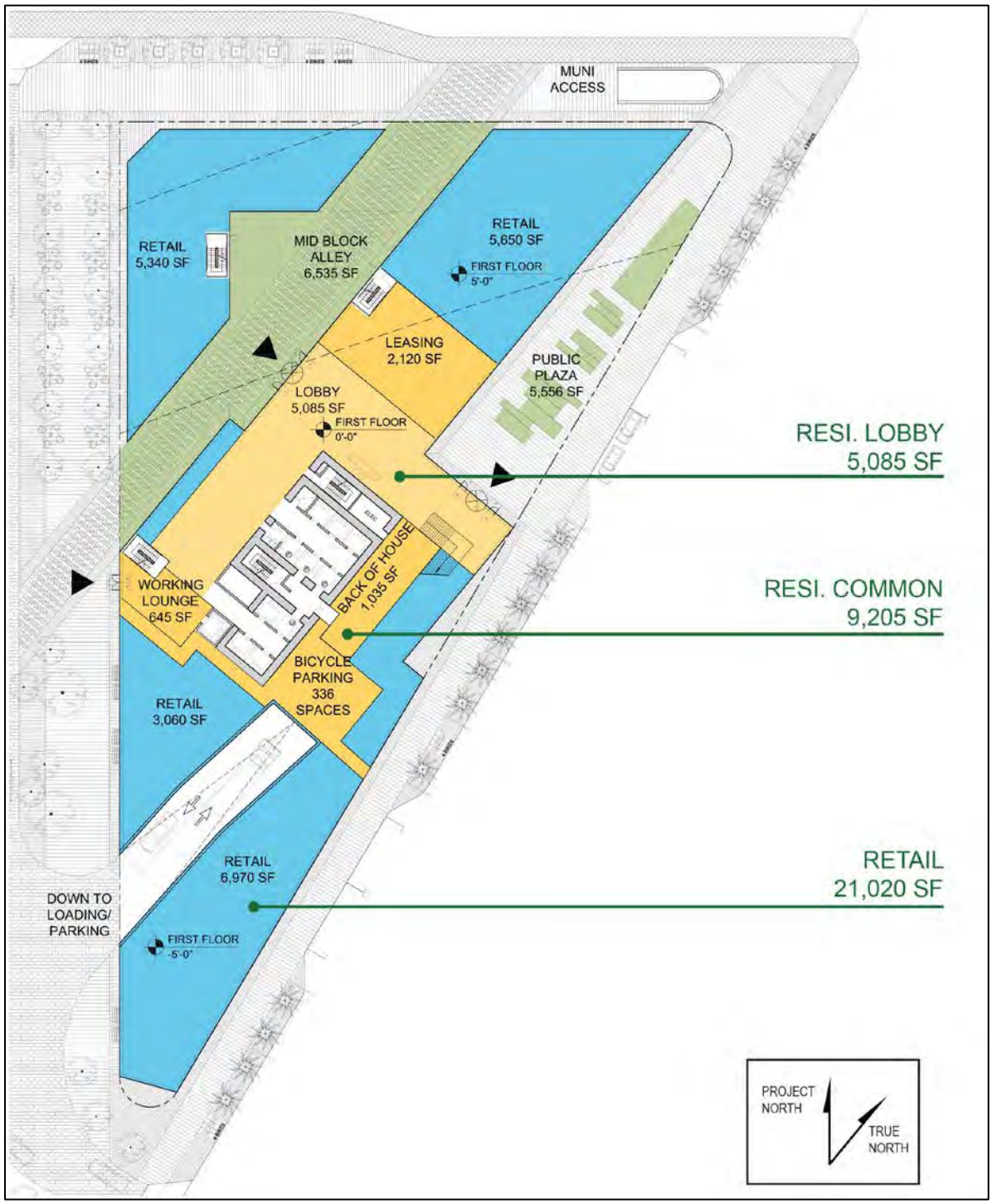
6 Provided in compliance with Planning Code section 736.93, Usable Open Space per Residential Unit.

Source: 10 South Van Ness LLC, 2017



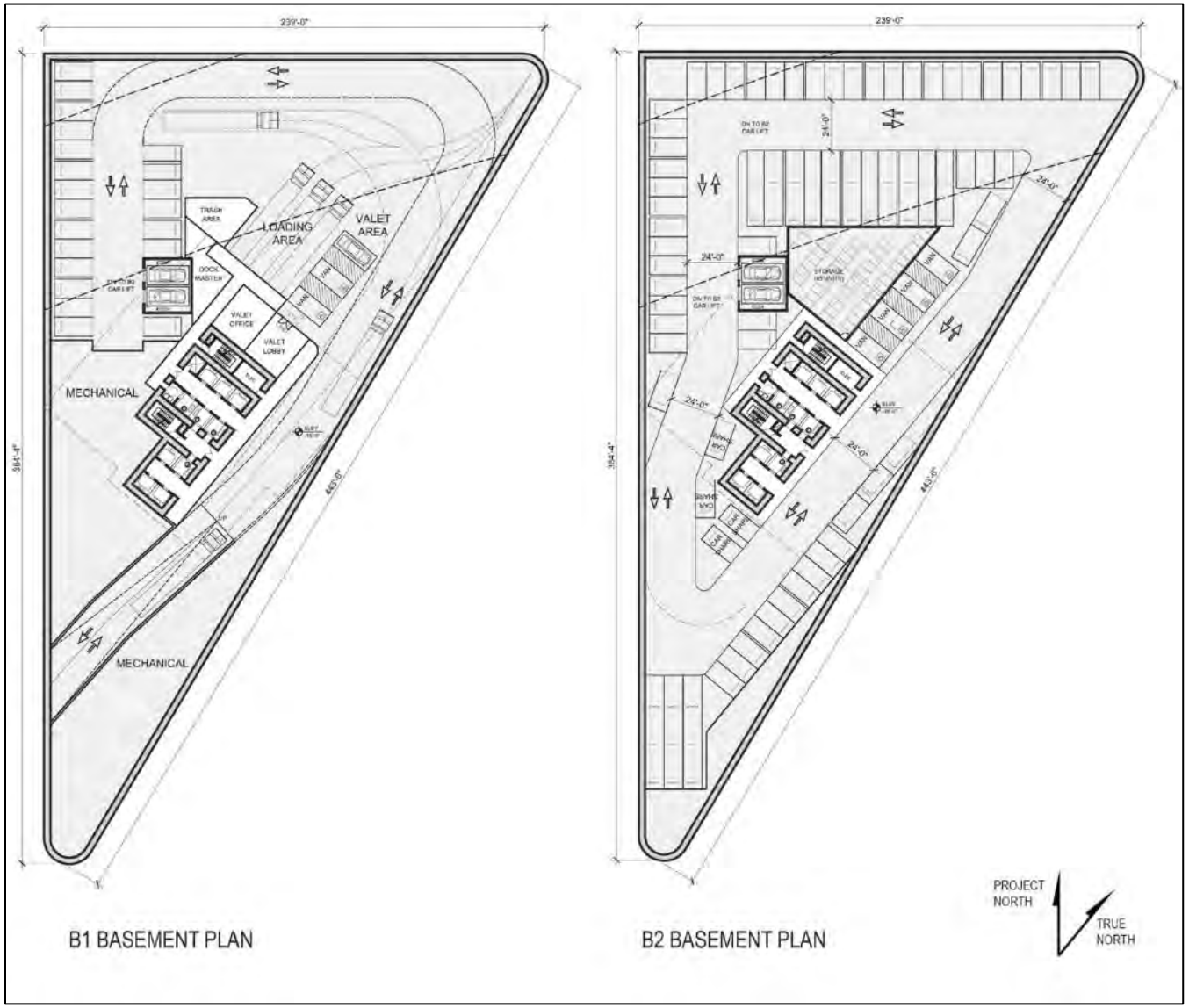
Source: KPF Associates, 2017

Figure 19: Variant – Section



Source: KPF Associates, 2017

Figure 20: Variant – Ground-Floor Plan



Source: KPF Associates, 2017

Figure 21: Variant – Basement Garage Floor Plans

The proposed variant would include approximately 984 dwelling units in a combination of studios and one-, two-, and three-bedroom units, similar to the proposed project. However, with the proposed variant, the mix of units would consist of approximately 347 studios, 449 one-bedroom units, 166 two-bedroom units, and 22 three-bedroom units (representative floor plans are shown in Figures 20 through 26). Residential uses would be provided on Levels 3 through 55, with Level 2 serving as an amenity floor for the proposed residential uses. The pedestrian entrances to the residential lobby would be located on South Van Ness Avenue and on the mid-block alley. One elevator from the parking garage/basement would provide access to the residential lobby. From the residential lobby, a second elevator would provide access to the tower. Elevator access may also be available between the below-grade parking garage/basement and the retail spaces.

Green roofs and open space are provided on several levels throughout the building. In addition to open space on the ground floor, podium levels and rooftop, voids located throughout the tower integrate green space. These voids have been designed to break up the building massing and balance programming, mechanical requirements, open space and green roofs at various levels, as depicted in the elevations shown in Figure 18. The voids were also designed to improve wind conditions and were located in strategic areas on the building based on the results of numerous wind tunnel tests.

Open Space. The proposed variant would include usable open space in a combination of publicly accessible open space (12,091 sf), common usable open space (25,565 sf), and private open space (9,550 sf) for a total of 47,206 sf.[26] The open space would be dispersed throughout the building as depicted in Figures 26 and 27. The publicly accessible open space would consist of a mid-block alley connecting Market Street to 12th Street and a pedestrian plaza along the northeasterly South Van Ness Avenue frontage, as shown in Figure 20. The common usable open space would be provided on Levels 14, 16, 29, 41, and 53.

Parking/Loading and Mechanical Equipment. The proposed variant would include the same parking and loading facilities and mechanical equipment as the proposed project. As with the proposed project the generator would be located in the basement with the air intake at the ground level.

Circulation and Access. The proposed variant would include the same circulation and access as the proposed project, with the exception of the location of lobby entrances and the configuration of the mid-block alley. For the proposed variant, there would be two entrances to the single residential lobby provided, one off the mid-block alley and one off South Van Ness Avenue. The proposed mid-block alley would provide public access through the project site between Market Street and 12th Street.

Transportation Demand Management. The proposed variant would include the same TDM plan as the proposed project.

Streetscape Improvements and On-Street Parking. The proposed variant would include the same streetscape improvements and on-street parking and loading as the proposed project.

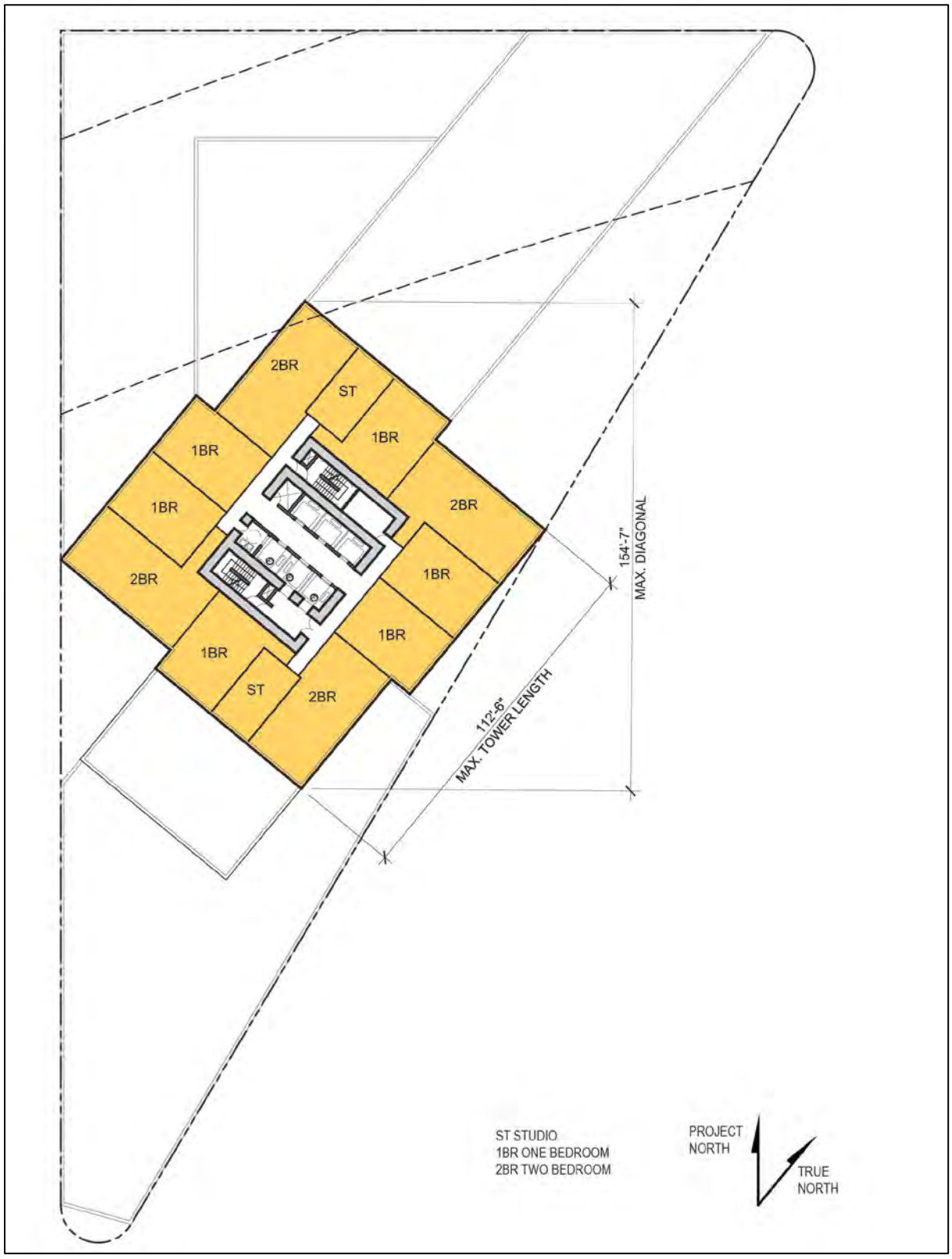
[26] Private open space is open space only accessible to one unit or a certain group of units.

Source: KPF Associates, 2017

Figure 22: Variant – Representative Floor Plans for Levels 3–8

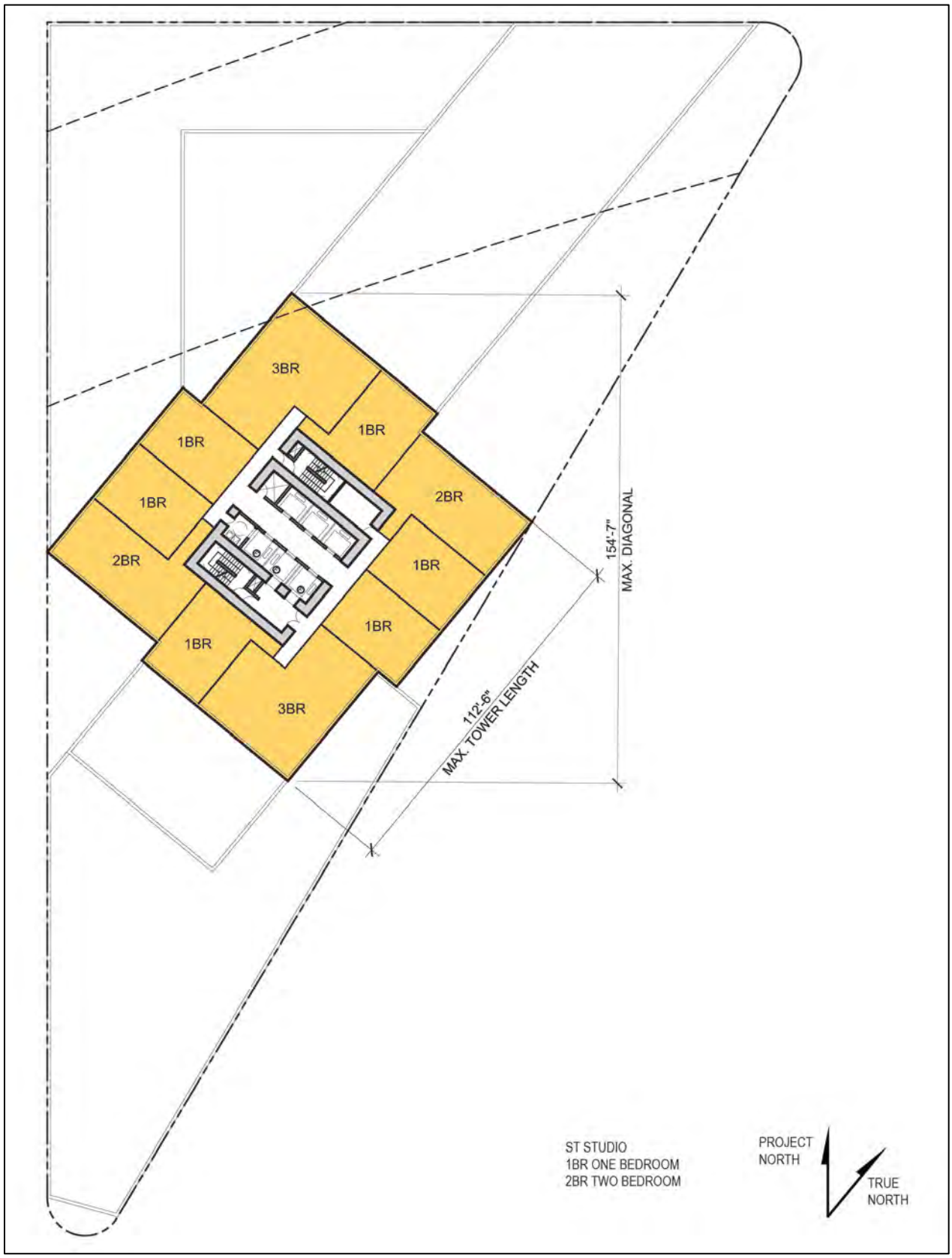
Source: KPF Associates, 2017

Figure 23: Variant – Representative Floor Plans for Levels 29–31



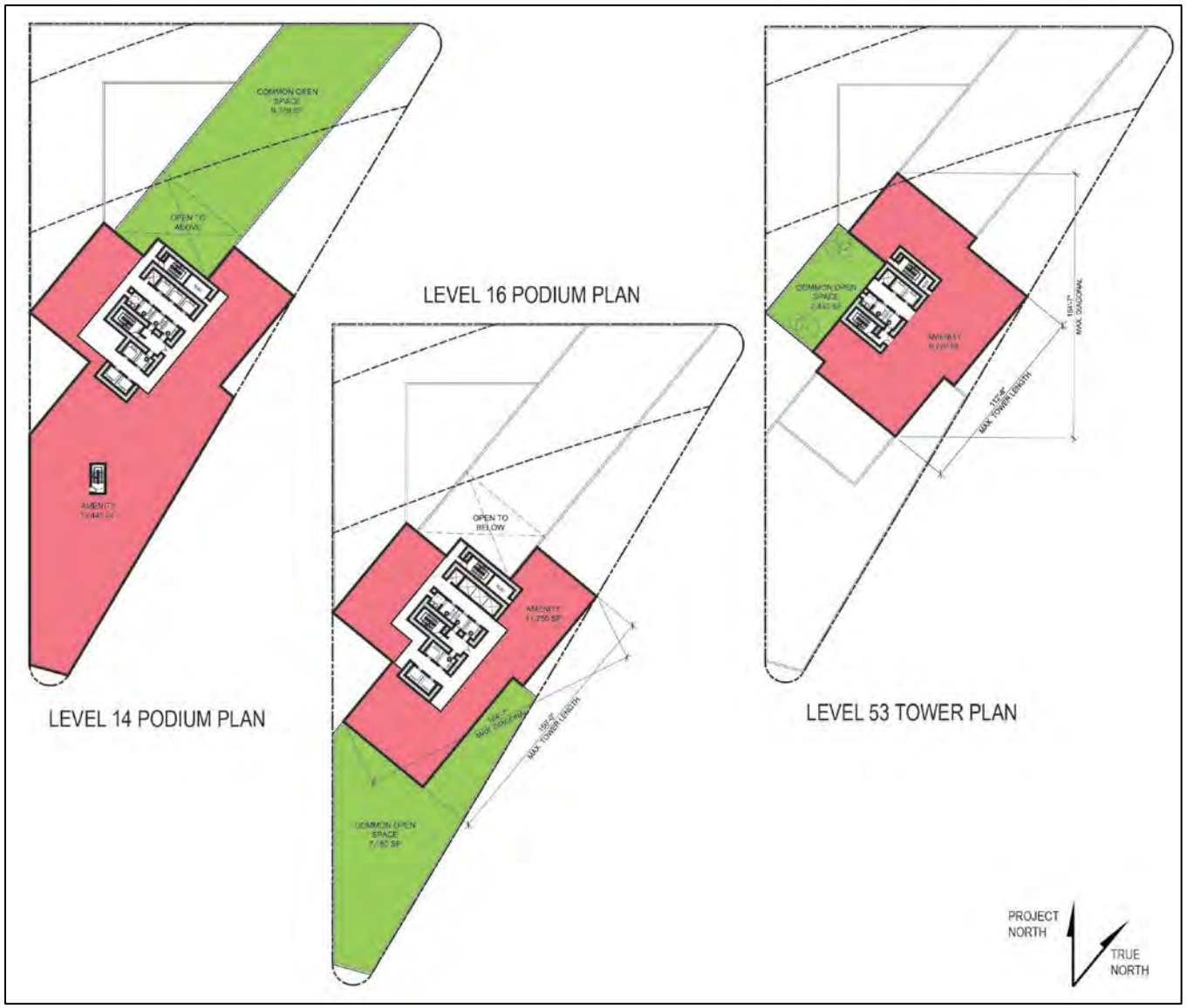
Source: KPF Associates, 2017

Figure 24: Variant – Representative Floor Plans for Levels 32–40



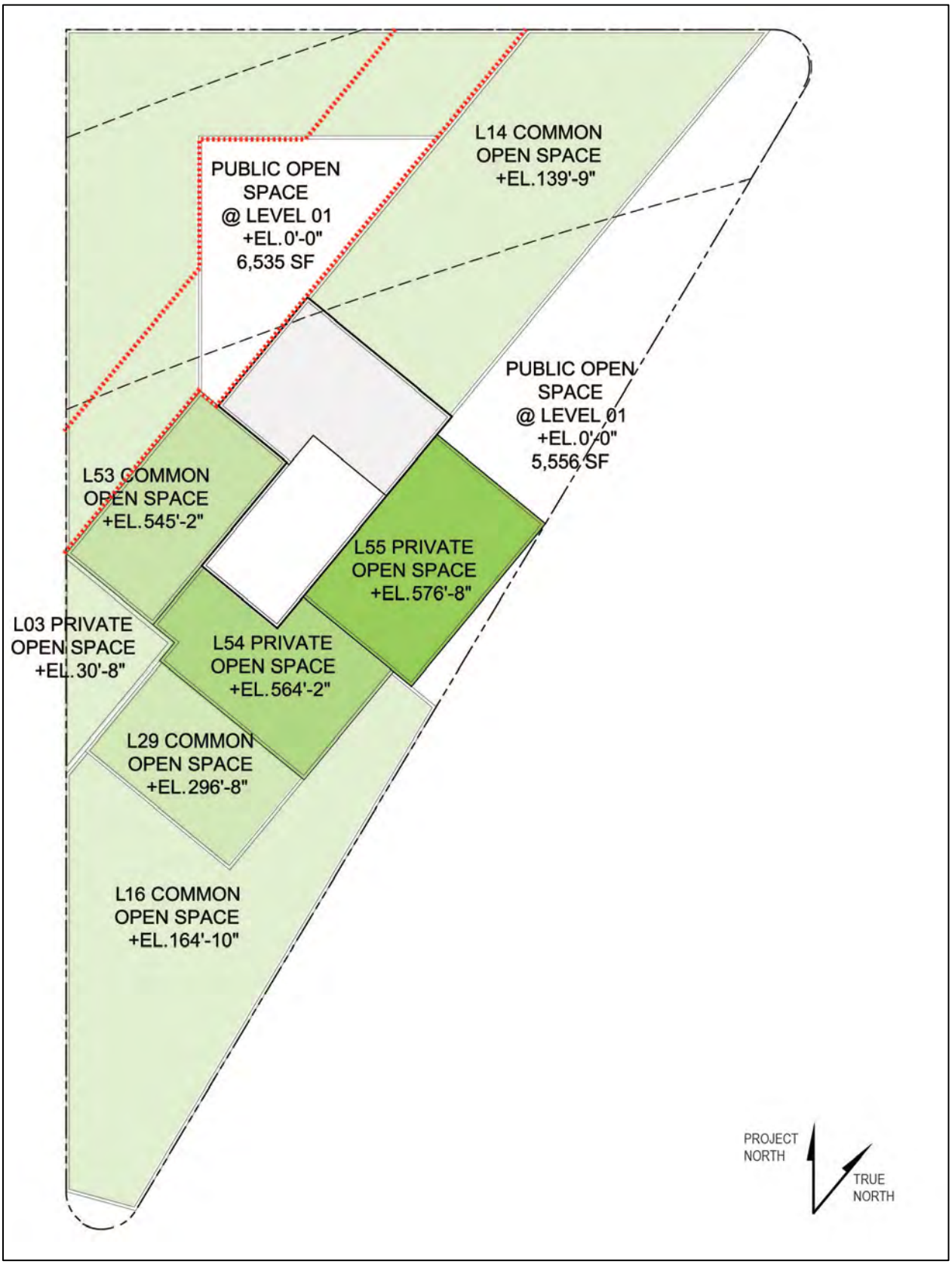
Source: KPF Associates, 2017

Figure 25: Variant – Representative Floor Plans for Levels 44–52



Source: KPF Associates, 2017

Figure 26: Variant – Amenity and Common Open Space Plans



Source: KPF Associates, 2017

Figure 27: Variant – Open Space Diagram

Sustainability. The proposed variant would incorporate the same sustainability features as the proposed project. As with the proposed project, the variant is also certified as an environmental leadership development project. The proposed variant would also remove the existing 28 trees along the perimeter of the project site frontage on all three sides of the property, and install 61 new street trees in compliance with Public Works Code section 806(c)(2), for a total of 33 net new street trees.

Other Design Features. Wind features for the proposed variant would be in the same locations as described for the proposed project. The tower has been designed with voids on various levels to break up the building massing, provide common and private open space amenities, and improve wind conditions. The voids in the tower massing help reduce wind down-drafting and acceleration around the tower by creating space for the wind to naturally flow through the tower. Absent these voids, stronger winds would occur at the pedestrian level at the base of the tower on 12th Street due to downdrafts and across South Van Ness Avenue due to wind acceleration around the tower massing.

Construction. Construction activities would be the same under the proposed variant as under the proposed project, in terms of phasing, duration and potential for temporary sidewalk and roadway closures. The 55-story proposed single tower project variant would fundamentally have the same foundation type and design methodology as the 41-story double tower construction under the proposed project. Both are anticipated to be constructed with a combination of a mat foundation and deep foundation piers. In both cases, the tower columns and shear walls would be founded on a common pier cap. This pier cap would be supported by drilled piers extending below the BART ZOI, or up to approximately 80 feet bgs, but not to the depth of the underlying bedrock. The proposed variant with one tower would require fewer columns, shear walls, and piers compared to the proposed project with two towers. As under the proposed project, the variant would also not require pile driving.

Straight-Shot Streetscape Option

The straight-shot streetscape plan, shown in Figures 28 and 29 could be included, as on option, with either the proposed project or variant. [27] The straight-shot streetscape plan would exceed Market & Octavia Area Plan and Planning Department standards by creating a pedestrian promenade on 12th Street (see Figure 28). On 12th Street, the eastern sidewalk would be expanded to a width of 40 feet (9 feet of pedestrian throughway, 25 feet for a pedestrian plaza, and an additional 6 feet of pedestrian throughway), while the western sidewalk would be expanded to a width of 18 feet (4 feet of buffer, 10 feet of pedestrian throughway, and an additional 4 feet of buffer), as shown in Figure 29. There would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction.

On the west side of 12th Street, the straight-shot streetscape design would include one 60-foot-long loading zone with one ADA loading space, one passenger loading space, and one commercial loading space, and one 40-foot-long loading zone with one commercial loading space and one passenger loading space. One 60-foot-long loading zone with one ADA loading space, one passenger loading space, and one commercial loading space would be included on the east side of 12th Street. The two loading zones on the west side of South Van Ness Avenue, and the pedestrian plaza on the southwest corner of the project site would be included as proposed under the Market Octavia Streetscape Plan.

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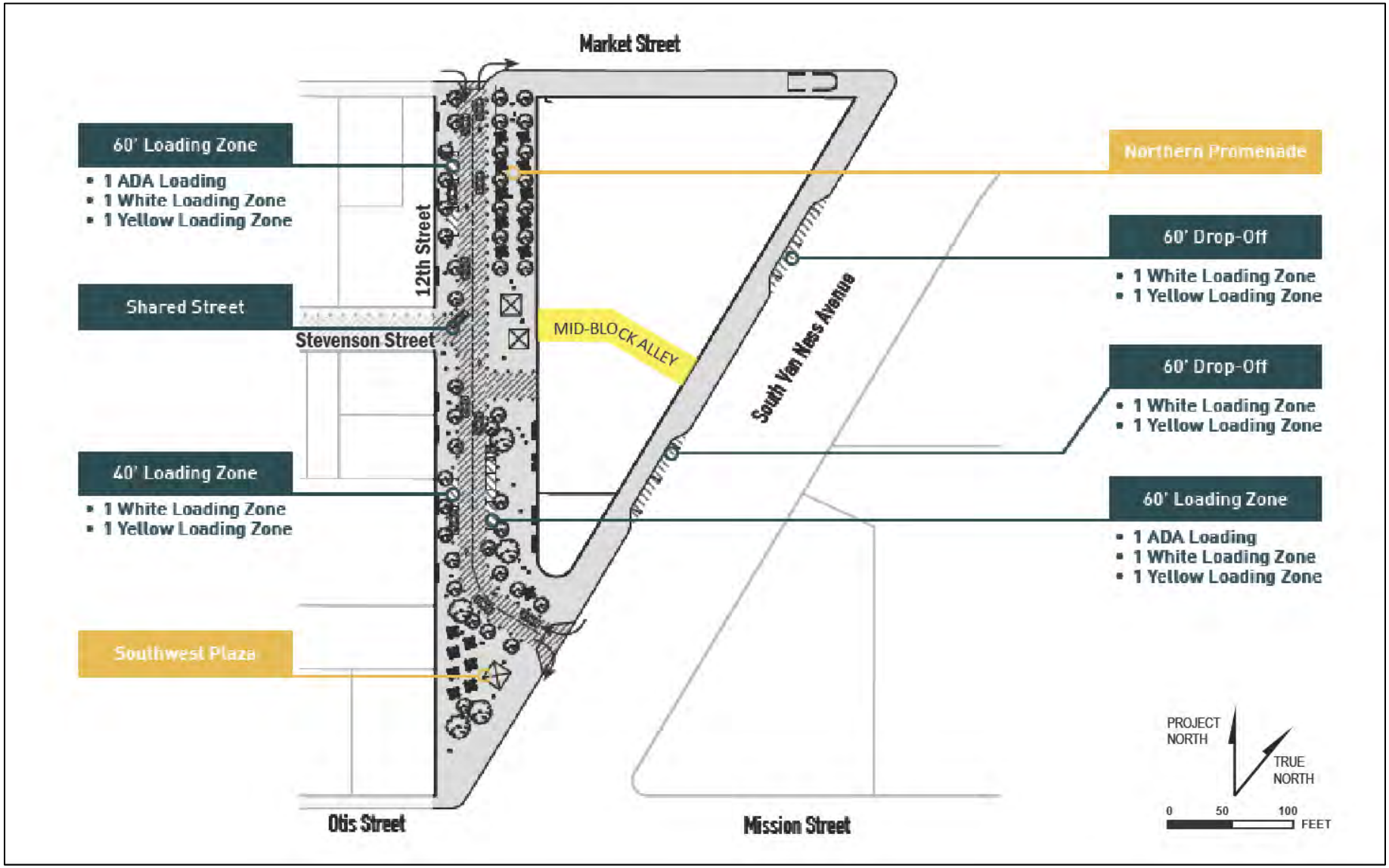
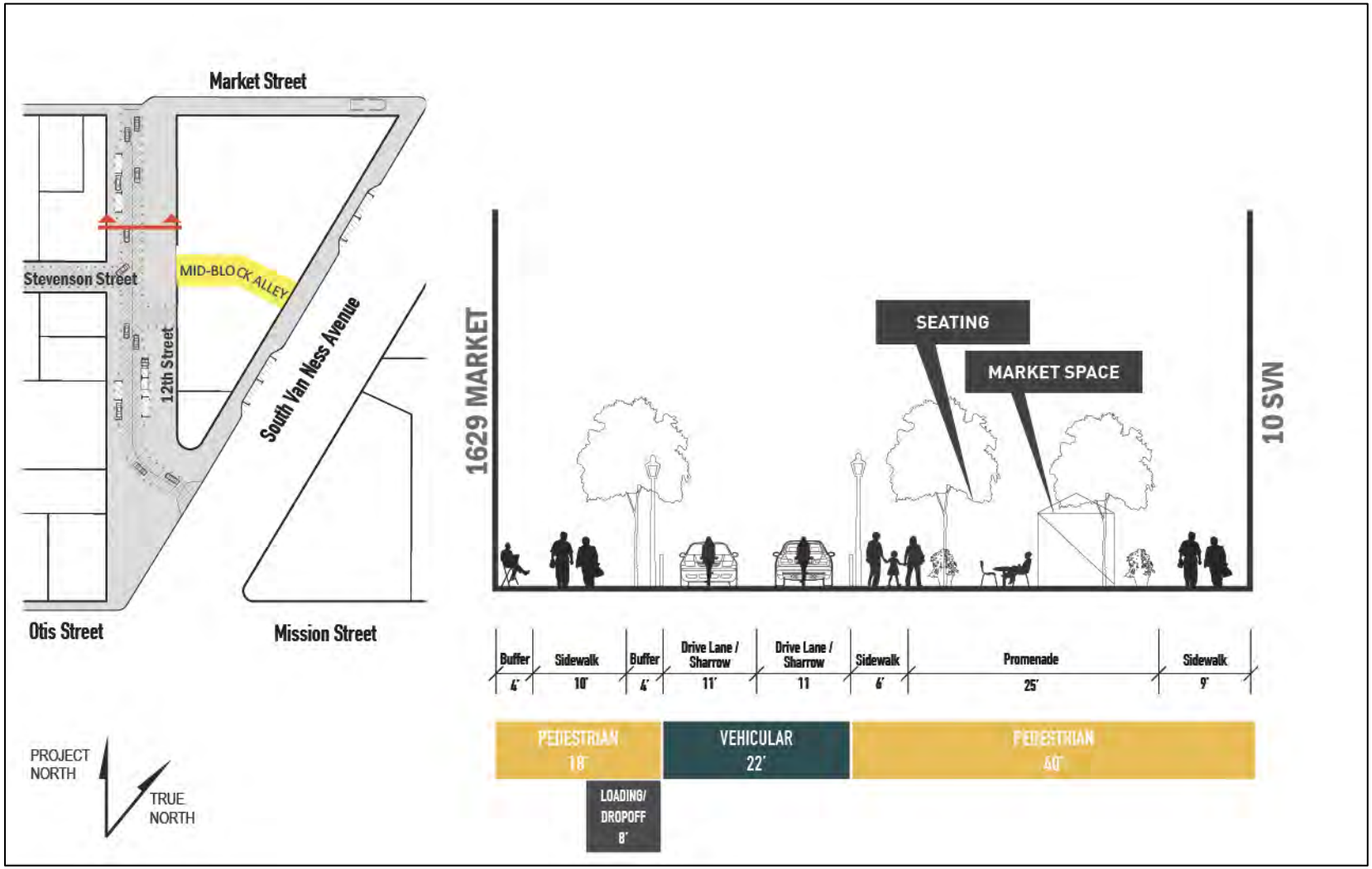
[27] Although Figures 28 and 29 show the straight-shot streetscape option with a mid-block alley connecting South Van Ness Avenue to 12th Street, if the straight-shot streetscape option were combined with the variant, the mid-block alley would be reconfigured to connect Market Street with 12th Street, as shown in Figure 20.



Source: SITELAB Urban Studio, 2017

Figure 28: Straight-Shot Streetscape Option with the Proposed Project (Plan View)



Source: SITELAB Urban Studio, 2017

Figure 29: Straight-Shot Streetscape Option with the Proposed Project (12th Street Right-of-Way Section)

As under the Market Octavia Streetscape Plan, this option would include 61 class II bicycle spaces along the project frontage sidewalks, with 32 spaces on 12th Street, 21 spaces on Market Street, and eight spaces on South Van Ness Avenue. Under both streetscape design options, the three existing curb cuts on South Van Ness Avenue and the three existing curb cuts on the east side of 12th Street would be removed, and a 20-foot-long curb cut would be created on the east side of 12th Street for access to and from the proposed underground parking garage.

Under the proposed streetscape plan and straight-shot streetscape option, new streetscape features would be consistent with the Better Streets Plan within the sidewalk areas along Market Street and South Van Ness Avenue. Approximately seven new street trees would be installed along the south side of Market Street, and approximately 17 new street trees would be installed along the west side of South Van Ness Avenue. Any new trees planted would comply with the Public Works requirements.

The design of the straight-shot streetscape option would be similar to the proposed streetscape design; the primary difference is that the straight-shot streetscape option would remove parking and instead include wider sidewalks, allowing for more room for pedestrian amenities such as a promenade along the east side of 12th Street and additional street furniture for sitting and marketplace kiosk space. In addition, the raised intersection at Stevenson Street and the mid-block alley under the proposed project streetscape would not be included under the straight-shot streetscape option. This option would propose a shared street concept that would be like a living street.[28]

Required Approvals

This section describes the approvals that would be required for the proposed project and variant.

Approvals Required for the Proposed Project and Variant[29]

Actions by the Planning Commission

- Approval of a Downtown Project Authorization pursuant to Planning Code Section 309 for new construction or substantial alteration of structures in C-3 Districts, with exceptions to the requirements of Sunlight Access on Certain Streets (section 146[a]); Reduction of Ground-Level Wind Currents in C-3 Districts (section 148); and Reduction of Shadows on Certain Public or Publicly Accessible Open Spaces in C-3 Districts (section 147).
- Approval of a Conditional Use Authorization pursuant to Planning Code section 303[u]) to permit accessory residential parking above that principally permitted in Planning Code sections 151.1 and 249.33.
- Approval of an in-kind improvements agreement under Planning Code section 424.3(c) for community improvements for the neighborhood infrastructure portion of the Van Ness and Market Downtown Residential SUD neighborhood infrastructure fee.

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28 Living Streets convert standard streets and alleys "into shared spaces that prioritize the use of the space for pedestrians and open space – often by claiming street space to create enhanced and active places for landscaping and seating. Living Alleys typically include special paving, traffic calming, lighting, seating, greening, and other elements to indicate that vehicles are visitors and pedestrians have primacy across the full width of the right-of-way." Source: SF Better Streets, *http://www.sfbetterstreets.org/find-project-types/reclaiming-roadway-space/living-alleys/,* accessed April 23, 2018.

29 Additional approvals required for the variant are discussed separately below, p. 50.

Actions by Other City Departments and Agencies

- *Planning Department and Department of Building Inspection (DBI)* – Approval of the site permit and addenda thereto. Approval of demolition, grading, and building permits for the demolition of the existing buildings and construction of the new building. Permit for underpinning of adjacent structures. Night noise permit for nighttime construction.
- *SFMTA Board of Directors* – Approval of the proposed curb modifications, parking space removal, and bicycle corrals on South Van Ness Avenue, Market Street, and 12th Street.
- *SFMTA Department of Parking and Traffic* – Approval of a special traffic permit for use of a public street space during project construction; approval of foundation, shoring, and dewatering systems as they relate to the Muni ZOI.
- *SFMTA Color Curb Program* – Approval of a request for on-street loading spaces on South Van Ness Avenue and 12th Street.
- *Bureau of Streets and Mapping, San Francisco Public Works* – Subdivision and condominium map approval and encroachment permits for sidewalk underground vaults. Permit for removal and planting of street trees; approval of a street space permit for use of a public street space during project construction (including construction of the proposed wind canopies); street and sidewalk permits for any modifications to public streets, sidewalks, or curb cuts.
- *San Francisco Public Works* – Street encroachment permit, to be approved by the director of public works, and by the board of supervisors if required by the director, for wind canopies to be located in the public right-of-way.
- *San Francisco Public Utilities Commission* – Approval of any changes to sewer laterals. Approval of an erosion and sediment control plan before commencing construction, and compliance with post-construction stormwater design guidelines, including a stormwater control plan.
- *San Francisco Department of Public Health* – Approval of a dust control plan because the site is in excess of 0.5 acre (article 22B). Approval of a ventilation plan, in compliance with San Francisco Health Code, article 38, because the proposed project site is located within an area that is identified in the Air Pollutant Exposure Zone Map.[30] Approval of a site mitigation plan under the Maher Ordinance (article 22A), because the proposed project is located within the Maher Ordinance Area.[31]
- *Board of Supervisors* – Approval of sidewalk widening.
- *Recreation and Park Commission* – Joint determination with the Planning Commission that the project complies with the requirements of Planning Code section 295.

Actions by Other Agencies

- *Bay Area Air Quality Management District* – Issuance of permits for the installation and operation of an emergency generator.
- *BART* – Plan review and approval of shoring and foundation within the BART ZOI, and issuance of a permit to work within or adjacent to the right-of-way.

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30 San Francisco Department of Public Health, 2014, Air Pollutant Exposure Zone Map, April 2014, *https://www.sfdph.org/dph/files/EHSdocs/AirQuality/AirPollutantExposureZoneMap.pdf*, accessed August 9, 2017.

31 San Francisco Planning Department, Expanded Maher Area Map, March 2015, *https://www.sfdph.org/dph/eh/HazWaste/hazWasteSiteMitigation.asp*, accessed August 9, 2017.

Additional Approvals Required for the Proposed Variant

Actions by the Planning Commission

- Recommend to the board of supervisors approval of *Planning Code Map and Text Amendments for Height District Reclassification*: from the 120/400-R2 and 400-R-2 Height and Bulk District, as described above, to create a special use district (SUD).[32]
- *General Plan Amendment*: Approval of General Plan Amendment to Downtown Area Plan.

Actions by the Board of Supervisors

- *Planning Code Amendments for Height District Reclassification*: The building height of the proposed variant would exceed the height limit of the existing 120/400 R-2 and 400-R-2 Height and Bulk District. The board of supervisors would need to approve an amendment to the Zoning Map Height and Bulk Districts (Sheet HT07) pursuant to Planning Code section 302, to create an SUD.
- *General Plan Amendment*: Approval of General Plan Amendment to Downtown Area Plan.

[32] The creation of a special use district is the instrument by which height and bulk controls can be changed in a small geographic area. The SUD would include increases to the height and bulk limits, and may include some changes to the inclusionary housing requirement.

B. PROJECT SETTING

As described above, the project site is located at the southwest corner of Market Street and South Van Ness Avenue, on the entire block bounded by South Van Ness Avenue to the east, Market Street to the north, and 12th Street to the west. As shown in Figure 2, the project site is roughly triangular in shape and is currently occupied by the 91,088-square-foot San Francisco Honda dealership.[33] A subsurface easement for BART is located underneath the northern third of the project site. Two Muni bus stops and one subsurface Muni rail entrance are located along the project site's frontage with Market Street.

The land uses in the immediate vicinity of the project site are characterized by a mix of residential, commercial, and civic uses. The maximum permitted building heights in the vicinity of the project site (as allowed by existing height districts) range from 40 feet to 400 feet (see Figure 3). Several large, mixed-use commercial, office, and residential buildings are located along Van Ness Avenue and Market Street; they are interspersed with smaller buildings hosting office, commercial, warehouse/storage, and multifamily residential uses.

Cumulative Setting

Cumulative analysis under CEQA may use a list-based or projections-based approach depending on the environmental topic and resources addressed. Table 3 includes cumulative projects within a 0.25-mile radius of the project site that may be considered in determining cumulative environmental effects that are more localized. Table 3 shows the past, present, and reasonably foreseeable relevant projects within 1,500 feet of the project site that, in conjunction with the proposed project or variant, are considered for purposes of the cumulative environmental analysis (see Figure 30). As shown in Table 3, cumulative projects within 1,500 feet of the project site would result in 3,777 residential units, 118,146 gsf of retail, 2,349 gsf of commercial, 542,599 gsf of office, and 142,125 gsf of institutional uses..

[33] The historic resources evaluation prepared for the project (*Part I Historic Resource Evaluation, Final Version: 10 South Van Ness Avenue (2015-004568ENV) City and County of San Francisco, California*) found the existing Honda dealership at 10 South Van Ness Avenue to be eligible for listing in the California Register under Criterion 1 (Events) for its association with the Fillmore West concert venue and Criterion 2 (Persons) for its association with prominent San Francisco music promoter Bill Graham.

Table 3: Cumulative Projects[34]

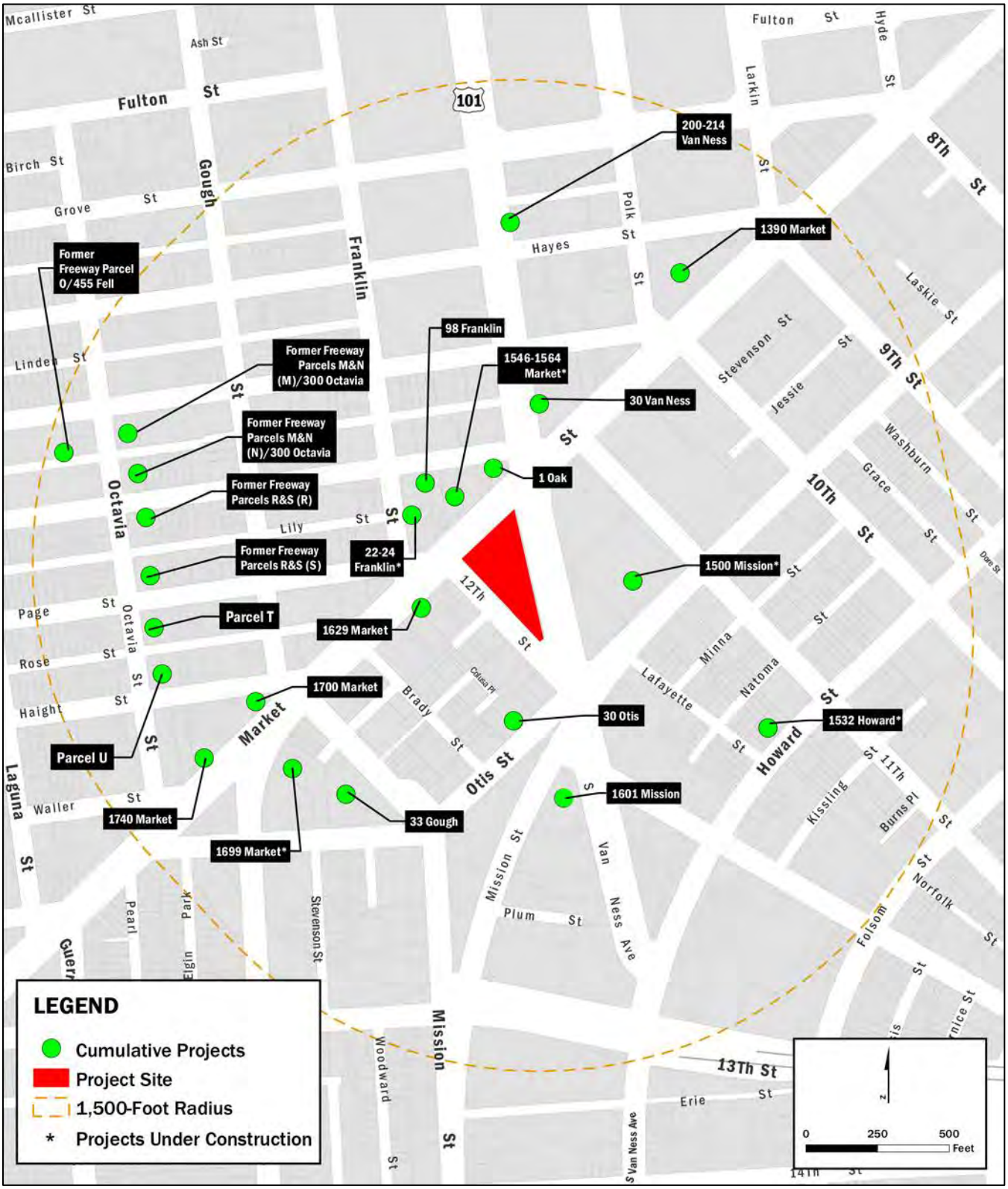
Address	Case File No.	Dwelling Units	Gross Square Feet			
			Retail	Commercial	Office	Institutional
22-24 Franklin Street[1]	2013.1005E	35	2,100			
98 Franklin Street	2016-014802ENV	345	3,100			75,500
33 Gough Street[2]	No current case number					
1532 Howard Street[1]	2013.1305E	15				
1390 Market Street (Fox Plaza Expansion)[3]	2005.0979E					
1546-1564 Market Street[1]	2012.0877E	109	4,810			
1629 Market Street (1601-1637 Market Street and 53 Colton Street)	2015.005848ENV	584	13,100		27,300	
1699 Market Street[1]	2014.0484E	162	4,500			
1700 Market Street	2013.1179E	48		1,549		
1740 Market Street	2014.0409E	110	7,600			
1500 Mission Street (1500 and 1580 Mission Street)[1]	2014.000362ENV	550	35,000		463,300	
1601 Mission Street	2014.1121ENV	220	7,336			
30 Otis Street	2015.010013ENV	354	4,600			13,125
1 Oak Street	2009.0159E	320	1,300			
30 Van Ness Avenue[4]	2015.008571ENV	610	21,000		49,999	
200-214 Van Ness Avenue	2015.012994ENV	113	5,000			54,000
Parcels M and N – 300 Octavia Boulevard	2014.002330ENV	12		800		
Parcel O – 455 Fell Street	2015.002837ENV	108	1,200		2,000	
Parcels R and S	2014.1322ENV	56	7,500			
Parcel T	2014.1509ENV	26				
Total		**3,777**	**118,146**	**2,349**	**542,599**	**142,125**

Notes:

1. Project(s) currently under construction.
2. No project is currently proposed for this site; the environmental evaluation application was withdrawn on April 5, 2018. Modeled as a Hub pipeline project with a 200-foot-tall tower and 80-foot-tall podium.
3. No proposed project currently exists at this site. Modeled as a 120- to 140-foot-tall building.
4. The project is the sale of a four-story, city-owned office building over ground-floor retail/commercial, with continued use of the office by the City until 2019. After 2020, the building is expected to be replaced with a high-rise residential tower, with a proposed Hub height increase to 520/120 feet.

Source: Compiled by AECOM in 2017, updated April 2018.

[34] The cumulative projects list was identified at the time of the publication of the notice of preparation of an environmental impact report (July 12, 2017). This list was updated in April 2018.



Source: AECOM 2017

Figure 30: Cumulative Projects

In addition to the cumulative projects shown in Table 3, the following transportation improvement plans and area plans are considered for purposes of the cumulative environmental analysis:

Van Ness Bus Rapid Transit – Clearinghouse No. 2007092059. The Van Ness Bus Rapid Transit project proposes operational and physical improvements to facilitate improved Muni bus service along Van Ness Avenue between Mission and Lombard streets. The operational improvements include designating bus-only lanes to allow buses to travel with fewer impediments; adjusting traffic signals to give buses more green light time at intersections; and providing real-time bus arrival and departure information to passengers to allow them to manage their time more efficiently. The physical improvements include building high-quality and well-lit bus stations to improve passenger safety and comfort, as well as providing streetscape improvements and amenities to make the street safer and more comfortable for pedestrians and bicyclists who access the transit stations. Improvements to stations in the vicinity of the project site include locating the Bus Rapid Transit station in the northbound direction of South Van Ness Avenue at Market Street and discontinuing the existing curbside bus stop on South Van Ness Avenue north of Mission Street.

Better Market Street Project – Case No. 2014.0012E. The goal of this project is to make improvements to Market Street to reestablish the street as the premier cultural, civic, and economic center of San Francisco. The Better Market Street Project is a coordinated multi-city agency effort led by San Francisco Public Works, the San Francisco Planning Department, and the SFMTA to redesign and implement transportation and streetscape improvements to Market Street. The project would make improvements to the 2.2-mile segment of Market Street between Octavia Boulevard and The Embarcadero and potentially along Mission Street between Valencia Street and The Embarcadero. The project envisions a new Market Street that is more beautiful and green, has enlivened public plazas and sidewalks full of cafés, showcases public art and performances, provides dedicated bicycle facilities, and delivers efficient and reliable transit. The Better Market Street Project would include transportation and streetscape improvements, including changes to the roadway configuration and private vehicle access; traffic signals; surface transit, such as transit-only lanes, stop spacing, service, stop location, stop characteristics and infrastructure; bicycle facilities; pedestrian facilities; streetscapes; commercial and passenger loading; vehicular parking; plazas; and utilities.

Market & Octavia Area Plan – Case No. 2003.0347. As part of the general plan, the Market & Octavia Area Plan serves to respond to the need for housing, repair the fabric of the neighborhood, and to support transit-oriented development. The Market & Octavia Area Plan includes zoning for residential and commercial uses, prescribes streetscape and open space improvements, and locates high-density land uses close to transit. The Market & Octavia Area Plan established the Van Ness and Market Downtown Residential SUD, in which the project site is located, which is intended to be a transit-oriented, high-density, mixed-use neighborhood with a significant residential presence.

Western SoMa Area Plan – Case No. 2008.0877. The Western SoMa Area Plan is an adopted element of the San Francisco General Plan. The plan area consists of approximately 298 acres in the western portion of the South of Market area, with its northwestern boundary approximately 0.5 mile southeast of the project site. The Western SoMa Area Plan establishes new height and bulk districts, changes to zoning districts, and new density restrictions for the area. The Area Plan also includes streetscape improvements along designated streets and intersections, including installation of signalized pedestrian crossings; sidewalk extensions and corner bulb-outs; gateway treatments such as signage and lighting; physical roadway features such as enhanced hardscape areas, landscaped islands and colored textured pavement; public realm greening amenities (i.e., street trees and planted medians); and other pedestrian enhancements (i.e., street furniture, public restrooms).

The Market Street Hub Project (Hub Project) – Case No. 2015-000940ENV. The Hub Plan would amend the 2008 Market and Octavia Area Plan, for the easternmost portions of the Market and Octavia Area Plan. The overarching objectives of the Hub Plan are to encourage housing, including affordable housing; create safer and more walkable streets as well as welcoming and active public spaces; increase transportation options; and create a neighborhood with a range of uses and services to meet neighborhood needs. [35] The Hub Plan would pursue this vision through changes to current zoning controls in the area to meet plan objectives. This would include changes to height and bulk districts for select parcels to allow more housing, including more affordable housing. The Hub Plan seeks to increase the space available for housing through changes to the planning code and zoning map so as to allow development of a taller, larger, and more diverse array of buildings and heights within the Hub Plan area. Modifications to zoning controls would also allow more flexibility for development of nonresidential uses, specifically, office, institutional, art, and public uses. The plan also calls for public-realm improvements to streets and alleys within and adjacent to the Hub Plan area. The Hub Plan would lower off-street parking maximums to decrease off-street parking capacity within the Hub Plan area, a transit-rich location. In addition to analyzing the Hub Plan at a programmatic level, the Hub Plan EIR would evaluate two individual development projects within the Hub Plan area (i.e., 30 Van Ness Avenue Project and 98 Franklin Street Project) at a project-specific level. The Planning Department is anticipated to release a notice of preparation of an environmental impact report (EIR) for the Hub Plan in May 2018 and have a public scoping meeting to receive oral comments concerning the scope of the EIR in June 2018 and a draft EIR in spring 2019.

It is anticipated that if all of the parcels in the Hub Plan area were to be developed to the proposed maximum height and bulk limits, these changes would result in approximately over 2,000 new residential units (over 5,000 new residents) in addition to new commercial space.

[35] A draft plan was released in March 2017. Please see: http://sf-planning.org/market-street-hub-project. Accessed April 21, 2018.

C. COMPATIBILITY WITH EXISTING ZONING AND PLANS

	Applicable	*Not Applicable*
Discuss any variances, special authorizations, or changes proposed to the San Francisco Planning Code or Zoning Map, if applicable.	☒	☐
Discuss any conflicts with any adopted plans and goals of the City or Region, if applicable.	☒	☐
Discuss any approvals and/or permits from City departments other than the Planning Department or the Department of Building Inspection, or from Regional, State, or Federal Agencies.	☒	☐

This section discusses all applicable (1) variances, special authorizations, and proposed changes to the Planning Code or Zoning Map, (2) conflicts with adopted plans and goals of the City or region, and (3) approvals or permits required from various federal, state, and local agencies necessary for the construction and operation of the proposed project.

Conflicts with adopted plans, policies, or regulations do not, in and of themselves, indicate a significant environmental effect within the meaning of CEQA. To the extent that physical environmental impacts may result from such conflicts, these impacts are analyzed under the relevant environmental topic in the initial study (Section E, Evaluation of Environmental Effects), or in the project EIR. The consistency of the proposed project or variant with plans, policies, and regulations that do not relate to physical environmental issues will be considered by City decision-makers when they determine whether to approve, modify, or disapprove the proposed project or variant.

San Francisco Plans and Policies

San Francisco General Plan

The San Francisco General Plan provides the City's vision for the future of San Francisco. The general plan is divided into 10 elements that apply citywide: Air Quality, Arts, Commerce and Industry, Community Facilities, Community Safety, Environmental Protection, Housing, Recreation and Open Space, Transportation, and Urban Design. The general plan also includes area plans that identify objectives for specific geographic planning areas, such as the Market & Octavia Area Plan, which includes the project site.

The general plan also includes area plans, each of which focuses on a particular area of the city. The project site is in the area covered by the Market and Octavia Area Plan, which establishes objectives and policies that guide development in the Market and Octavia neighborhoods. The general plan also includes a land use index, which consolidates the different land use policies contained in all of the different elements of the general plan, including area plans.

The proposed project or variant would not obviously or substantially conflict with the objectives and policies of the general plan except as noted below. The proposed project or variant, which would be 400- or 590-feet tall, respectively, would potentially conflict with the following policies of the general plan:

- Recreation and Open Space Element
    - Policy 2.3: Preserve sunlight in public open spaces.
- Urban Design Element

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

The physical environmental impacts that could result from these potential conflicts will be discussed in the EIR. The consistency of the proposed project with general plan objectives and policies that do not relate to physical environmental issues will be considered by City decision makers as part of their deliberations on whether to approve or disapprove the proposed project, and any potential conflicts identified as part of that process would not alter the physical environmental effects of the proposed project.

San Francisco Planning Code

The San Francisco Planning Code, which incorporates by reference the City's zoning maps, governs permitted uses, densities and the configuration of buildings within San Francisco. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless a project complies with the San Francisco Planning Code, or an exception or variance is granted pursuant to the provisions of the San Francisco Planning Code, or legislative amendments to the Planning Code are included and adopted as part of the proposed project.

Land Use Controls

The building site component of the project site is in the C-3-G District. Pursuant to Planning Code section 210.3, the C-3-G District "is composed of a variety of uses: retail, offices, hotels, entertainment, clubs and institutions, and high-density residential. Many of these uses have a citywide or regional function, although the intensity of development is lower here than in the downtown core area. As in the case of other downtown districts, no off-street parking is required for individual commercial buildings. In the vicinity of Market Street, the configuration of this district reflects easy accessibility by rapid transit."

The project site is also within the Van Ness and Market Downtown Residential SUD. As noted in San Francisco Planning Code section 249.33, this district is intended to be a transit-oriented, high-density, mixed-use neighborhood with a significant residential presence. The SUD is intended to serve as a transitional zone between larger scale commercial areas downtown and lower scale residential and neighborhood commercial areas to the west.

Planning Code sections 215 through 227 regulate the types of land uses that are principally permitted, conditionally permitted, or not permitted in the C-3-G District. Other Planning Code requirements that are applicable to the proposed project include, but are not limited to, the provisions of:

- Section 124: Floor Area Ratio
- Section 132.1: Setbacks and Streetwall Articulation in C-3 Districts
- Section 134: Rear Yards
- Section 135: Usable Open Space
- Section 138: Public Open Space in C-3 Districts
- Section 138.1: Streetscape and Pedestrian Improvements
- Section 140: Dwelling Unit Exposure
- Section 145.1: Street Frontages
- Section 146: Sunlight Access to Public Sidewalks in C-3 Districts
- Section 147: Reduction of Shadows on Certain Public and Publicly Accessible Open Spaces in C-3 Districts

- Section 148: Reduction of Ground-Level Wind Currents in C-3 Districts
- Section 151.1: Permitted Off-Street Parking Spaces in C-3 Districts
- Section 152.1: Required Off-Street Freight Loading Spaces in C-3 Districts
- Section 155.2: Bicycle Parking
- Section 166: Car Sharing
- Section 249.33: Van Ness and Market Downtown Residential Special Use District
- Section 295: Height Restrictions on Structures Shadowing Property Under the Jurisdiction of the Recreation and Park Commission
- Section 309: Permit Review in C-3 Districts
- Section 411: Transit Impact Development Fee
- Section 415: Housing Requirements for Residential and Live/Work Development Projects
- Section 424: Van Ness and Market Affordable Housing and Neighborhood Infrastructure Fee and Program
- Section 429: Public Art Requirements

As described in Section A, Project Description, under "Project Approvals," pp. 44 to 47, the project would require the following approvals: approval of a Downtown Project Authorization pursuant to Planning Code section 309 for new construction or substantial alteration of structures in C-3 Districts, with exceptions to the requirements of Sunlight Access on Certain Streets (section 146[a]); Reduction of Ground-Level Wind Currents in C-3 Districts (section 148); and Reduction of Shadows on Certain Public or Publicly Accessible Open Spaces in C-3 Districts (section 147); approval of a Conditional Use Authorization pursuant to Planning Code section 303[u]) to permit accessory residential parking above that principally permitted in Planning Code sections 151.1 and 249.33.

Height and Bulk

The northern portion of the site is in the 120-R-2 height and bulk district; and the southern portion of the site is in the 120/400-R-2 height and bulk district. This allows for a building of 120 feet in height on the northern portion of the project site and a podium of up to 120 feet in height and a tower of up to 400 feet in height on the southern portion of the site. The R-2 bulk district does not set bulk restrictions for buildings under 120 feet in height. For buildings over 120 feet in height, all portions of structures above the podium height are subject to the bulk restrictions in San Francisco Planning Code section 270(e)(2).

Per San Francisco Planning Code section 270(e)(2)(D), buildings between 351 and 550 feet in height may not exceed a plan length of 115 feet, a diagonal dimension of 145 feet, and a maximum average floor area of 10,000 gsf. Per San Francisco Planning Code section 270(e)(2)(F), to encourage tower sculpting, the gross floor area of the top one-third of the tower shall be reduced by 10 percent from the maximum floor plate unless the overall tower floor plate is reduced by an equal or greater volume. A minimum distance of 115 feet must be preserved between all structures above 120 feet in height at all levels above 120 feet in height, as required by the R-2 bulk district.

The proposed variant would exceed the existing height and bulk limits and would require the board of supervisors to approve an amendment to the Zoning Map Height and Bulk Districts (Sheet HT07) pursuant to San Francisco Planning Code section 302, through the creation of a special use district.

Floor Area Ratio

Currently, there is no density limit based on lot size within the C-3-G District, as indicated in San Francisco Planning Code section 210.2, Table 210.2. San Francisco Planning Code section 210.2, Table 210.2, limits the FAR

in the C-3-G District to 6:1 for this district, meaning that the building area for a project cannot exceed six times its lot area. The Van Ness and Market Downtown Residential SUD does not permit use or transfer of development rights to increase FAR.[36] An increase in FAR is available through payment of the Van Ness inclusionary affordable housing fee and the Van Ness and Market Neighborhood infrastructure fee.[37]

The project site is 51,150 sf in area, which would result in permitted building area of 306,900 sf, which would exceed the permitted 6:1 FAR.[38] The project sponsor would pay the fees required by the San Francisco Planning Code to achieve the proposed FAR. The proposed project and variant would comply with the San Francisco Planning Code section 415, the Inclusionary Affordable Housing Program, by providing the required percentage of onsite or offsite BMR units or paying the in-lieu fee.

The Accountable Planning Initiative

The Accountable Planning Initiative added section 101.1 to the San Francisco Planning Code and established eight Priority Policies. These policies are as follows (the sections of this initial study addressing the environmental issues associated with the policies, if any, are included in parenthesis):

(1) Preservation and enhancement of neighborhood-serving retail uses
(2) Protection of neighborhood character
(3) Preservation and enhancement of affordable housing
(4) Discouragement of commuter automobiles
(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
(7) Landmark and historic building preservation
(8) Protection of open space

The demolition of the existing building at 10 South Van Ness Avenue potentially conflicts with Priority Policy No. 7, which calls for the preservation of historic buildings. The construction of either the proposed project or variant potentially conflicts with Priority Policy No. 8, which calls for the protection of parks and open space and their access to sunlight. The physical environmental impacts that could result from these potential conflicts will be discussed in the EIR.

Before issuing a permit for any project requiring an initial study under CEQA or for any demolition, conversion, or change of use, and before taking any action that requires a finding of consistency with the San Francisco General Plan, the City is required to find that the proposed project or legislation would be consistent with the Priority Policies. Staff reports and approval motions prepared for the decision-makers would include a comprehensive project analysis and findings regarding the consistency of the proposed project with the Priority Policies.

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[36] Transferable development rights allow a property to exceed the FAR at a development site by purchasing development rights from historic buildings.

[37] In the Van Ness and Market Downtown Residential SUD, increased FAR is allowed with payment of in-lieu fees (the Van Ness inclusionary affordable housing fee and the Van Ness and Market Neighborhood infrastructure fee).

[38] Defined as 6 x 51,150 sf = 306,900 sf.

Other Local Plans and Policies

In addition to the general plan, the planning code and zoning maps, and the Accountable Planning Initiative, other local plans and policies that are relevant to the proposed project are discussed below.

- *San Francisco Sustainability Plan*: is a blueprint for achieving long-term environmental sustainability by addressing specific environmental issues including, but not limited to, air quality, climate change, energy, ozone depletion, and transportation. The goal of the San Francisco Sustainability Plan is to enable the people of San Francisco to meet their present needs without sacrificing the ability of future generations to meet their own needs. The San Francisco Building Code was amended in 2008 to add chapter 13C, Green Building Requirements, which partially implements the energy provisions of the Sustainability Plan.
- *San Francisco Climate Action Strategy*: is a local action plan that examines the causes of global climate change and the human activities that contribute to global warming, provides projections of climate change impacts on California and San Francisco based on recent scientific reports, presents estimates of San Francisco's baseline greenhouse gas emissions inventory and reduction targets, and describes recommended actions for reducing the City's greenhouse gas emissions.
- *San Francisco Transit First Policy*: The Transit First Policy is a set of principles that emphasize the City's commitment that the use of public rights of way by pedestrians, bicyclists, and public transit be given priority over the private automobile. These principles are embodied in the policies and objectives of the Transportation Element of the San Francisco General Plan. All City boards, commissions, and departments are required by law to implement the City's Transit First Policy principles in conducting the City's affairs.
- *San Francisco Bicycle Plan*: is intended to provide the safe and attractive environment needed to promote bicycling as a transportation mode. In addition to identifying the existing bicycle route network and proposing short term and long term improvements to this network, the plan identifies goals, objectives, and policies to support these proposed improvements.
- *San Francisco Better Streets Plan*: consists of illustrative typologies, standards, and guidelines for the design of San Francisco's pedestrian environment, with the central focus of enhancing the livability of the city's streets. The requirements of the Better Streets Plan were incorporated into the San Francisco Planning Code as section 138.1.
- *Transportation Sustainability Fee Ordinance:* requires that development projects that filed environmental review applications prior to July 21, 2015, but have not yet received approval, pay 50 percent of the applicable Transportation Sustainability Fee. TSF funds may be used to improve transit serves and improve pedestrian and bicycle facilities.
- The *Better Market Street Project:* is a plan that envisions a new Market Street that is more beautiful and green, has enlivened public plazas and sidewalks full of cafés, showcases public art and performances, provides dedicated bicycle facilities, and delivers efficient and reliable transit. The goal of the Better Market Street Project is to revitalize and reestablish Market Street as the cultural, civic, and economic center of San Francisco.

The proposed project and variant have been reviewed against these local plans and policies and the proposed project and variant would not obviously or substantially conflict with them.

Regional Plans and Policies

In addition to local plans and policies, there are several regional planning agencies whose environmental, land use, and transportation plans and policies consider the growth and development of the nine-county San Francisco Bay Area. Some of these plans and policies are advisory, and some include specific goals and provisions that must be adhered to when evaluating a project under CEQA. The regional plans and policies that are relevant to the proposed project and variant are discussed below

- *Plan Bay Area and Regional Housing Needs Plan*: prepared by the Association of Bay Area Governments (ABAG) and the Metropolitan Transportation Commission (MTC), is a long-range land use and transportation plan for the nine-county Bay Area that covers the period from 2010 to 2040. Plan Bay Area calls for concentrating housing and job growth around transit corridors, particularly within areas identified by local jurisdictions as Priority Development Areas. In addition, Plan Bay Area specifies strategies and investments for maintaining, managing, and improving the region's multi-modal transportation network and proposes transportation projects and programs to be implemented with reasonably anticipated revenue. Plan Bay Area was adopted in July 2017. [39]
- ABAG's *Projections 2013* is an advisory policy document that uses population and employment forecasts to assist in the development of local and regional plans and policy documents.
- The Bay Area Air Quality Management District's *Bay Area 2017 Clean Air Plan* requires implementation of "all feasible measures" to reduce ozone and to provide a control strategy to reduce ozone, particulate matter, toxic air contaminants, and GHGs. The 2017 Clean Air Plan describes the status of local air quality and identifies emission control measures to be implemented.
- The Regional Water Quality Control Board's *Water Quality Control Plan for the San Francisco Bay Basin* is a master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the state, including surface waters and groundwater, and includes implementation programs to achieve water quality objectives.

The proposed project and variant have been reviewed against these regional plans and policies and the proposed project and variant would not obviously or substantially conflict with these plans or policies.

39 Association of Bay Area Governments and Metropolitan Transportation Commission, *Plan Bay Area 2040*, Final, adopted July 26, 2017.

D. SUMMARY OF ENVIRONMENTAL EFFECTS

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

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

Approach to Environmental Review

This initial study examines the proposed project and variant to identify potential effects on the environment. For each checklist item, the evaluation considered the impacts of the proposed project both individually and cumulatively, with the exception of GHG emissions, which are evaluated only in the cumulative context. All items on the initial study checklist that have been checked "Less than Significant with Mitigation Incorporated," "Less than Significant Impact," "No Impact" or "Not Applicable" indicate that, upon evaluation, staff has determined that the proposed project could not have a significant adverse environmental effect relating to that topic. A discussion is included for those issues checked "Less than Significant with Mitigation Incorporated" and "Less than Significant Impact" and for most items checked with "No Impact" or "Not Applicable."

For all of the items checked "No Impact" or "Not Applicable" without discussion, the conclusions regarding potential significant adverse environmental effects are based upon field observation, staff experience, and expertise on similar projects, and standard reference material available within the Planning Department, such as the City's Transportation Impact Analysis Guidelines for Environmental Review, or the California Natural Diversity Database and maps published by the California Department of Fish and Wildlife.

For the analysis of potential cumulative effects, each environmental topic herein briefly identifies the cumulative context relevant to that topic. For example, for shadow impacts, the cumulative context would be nearby projects that could contribute to cumulative shadow effects on the same open space affected by the project. In other cases, such as air quality, the context would be the San Francisco Bay Area Basin.

Variant

The proposed variant is primarily different from the proposed project in terms of building envelope size, shape, height, bulk, massing and appearance. The overall square footage and breakdown allocated to residential and commercial retail use are nearly identical to the proposed project, including the number of residential units, parking, and open space. Construction would involve the same activities, transportation and circulation issues, duration, depth/amount of excavation, and removal/disposal of building materials as the proposed project. Therefore associated impacts such as air quality and noise impacts from construction would also be identical because the same equipment, vehicles, and material types and quantities would be used for the same period.

As a result, the proposed variant would only be expected to differ in analysis and impacts where the building envelope is a factor (i.e., wind and shadow).

For these reasons, the impacts resulting from construction and operation of the proposed variant are anticipated to be the same as those resulting from the proposed project for nearly all environmental topics, and are not discussed separately.

Straight-shot Streetscape Option

The straight-shot streetscape option could be applied to either the proposed project or the variant. The design of the straight-shot streetscape option would be similar to the proposed streetscape design. The primary difference is that the straight-shot streetscape option would include wider sidewalks expanded to 40 feet on the east side of 12th Street and extended up to 18 feet on the west side of 12th Street. The straight-shot streetscape option would provide more pedestrian streetscape amenities than the proposed streetscape design, applying living streets concepts.[40] Additionally, there would be two 11-foot-wide mixed-flow travel lanes, with one lane running in each direction under the straight-shot streetscape option. The straight-shot streetscape option is not discussed further under the topics included in this initial study because there would be no difference in impacts between the straight-shot streetscape option and the proposed streetscape design under either the proposed project or the variant.

As a result, the straight-shot streetscape option will be analyzed and discussed in more detail in only the Transportation and Circulation section of the EIR.

Senate Bill 743 and Public Resources Code Section 21099

Senate Bill 743 was signed into law on September 27, 2013, and became effective on January 1, 2014. Among other provisions, Senate Bill 743 amends CEQA by adding Public Resources Code section 21099 regarding analysis of aesthetics, parking and transportation impacts for urban infill projects.[24]

Aesthetics and Parking Analysis

Public Resources Code section 21099(d), effective January 1, 2014, provides that "aesthetics and parking impacts of a residential, mixed-use residential, or employment center project on an infill site located within a transit priority area shall not be considered significant impacts on the environment." Accordingly, aesthetics and parking are no longer to be considered in determining if a project has the potential to result in significant environmental effects for projects that meet all of the following three criteria:

(1) The project is in a transit priority area. [41]

(2) The project is on an infill site.[42]

(3) The project is residential, mixed-use residential, or an employment center.

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40 Living Streets convert standard streets and alleys "into shared spaces that prioritize the use of the space for pedestrians and open space – often by claiming street space to create enhanced and active places for landscaping and seating. Living Alleys typically include special paving, traffic calming, lighting, seating, greening, and other elements to indicate that vehicles are visitors and pedestrians have primacy across the full width of the right-of-way." Source: SF Better Streets, *http://www.sfbetterstreets.org/find-project-types/reclaiming-roadway-space/living-alleys/*, accessed April 23, 2018.

41 CEQA Guidelines section 21099(a)(7) defines a "transit priority area" is defined as an area within one-half mile of an existing or planned major transit stop. A "major transit stop" is defined in CEQA Guidelines section 21064.3 as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

42 CEQA Guidelines section 21099(a)(4) defines an "infill site" as a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses. "Qualified urban uses" are defined in CEQA Guidelines section 21072 as any residential, commercial, public institutional, transit or transportation passenger facility, or retail use, or any combination of those uses.

The proposed project and variant meet each of the above three criteria because each (1) is located near major transit routes, (2) is located on an infill site that has been previously developed with industrial and commercial uses and is surrounded by areas of either recently completed or planned urban development; and (3) would be a mixed-use residential project. Thus, this initial study and the EIR do not consider aesthetics and the adequacy of parking in determining the significance of project impacts under CEQA.[43]

The Planning Department recognizes that the public and decision makers nonetheless may be interested in information pertaining to the aesthetic effects of a proposed project and may desire that such information be provided as part of the environmental review process. In addition, CEQA section 21099(d)(2) states that a lead agency maintains the authority to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers and that aesthetics impacts do not include impacts on historical or cultural resources (e.g., historic architectural resources). As such, the Planning Department does consider aesthetics for design review and to evaluate effects on historic and cultural resources. Renderings of the proposed project and variant will be included in the EIR.

Automobile Delay and Vehicle Miles Traveled Analysis

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

In January 2016, the Governor's Office of Planning and Research published a Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA for public review and comment. The update recommended that transportation impacts for projects be measured using a vehicle miles traveled (VMT) metric. On March 3, 2016, in anticipation of the future certification of the revised CEQA Guidelines, the San Francisco Planning Commission adopted the recommendation of the Governor's Office of Planning and Research to use the VMT metric instead of automobile delay to evaluate the transportation impacts of projects (Resolution 19579). (Note: The VMT metric does not apply to the analysis of impacts on non-automobile modes of travel such as riding transit, walking, and bicycling.)

Accordingly, this initial study does not contain a discussion of automobile delay impacts. Instead, a VMT and induced automobile travel impact analysis will be provided in the EIR. The topic of automobile delay, nonetheless, may be considered by decision-makers, independent of the environmental review process, as part of their decision to approve, modify, or disapprove the proposed project.

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[43] San Francisco Planning Department, *Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis*, 2014.0408E, March 30, 2017. This document is on file and available for public review at the Planning Department, 1650 Mission Street, Suite 400, as part of Case File 2014.0408E.

Summary of Potentially Significant Impacts

This initial study evaluates the proposed 10 South Van Ness Avenue project and variant to determine whether they would result in significant environmental impacts. The designation of topics as "Potentially Significant" in this initial study means that these topics will be analyzed in greater depth in the EIR. On the basis of this initial study, the following are the topics for which impacts have been determined to be potentially significant:

- Cultural Resources (historic architectural resources only)
- Transportation and Circulation
- Noise
- Air Quality
- Wind and Shadow

These environmental topics will be evaluated in an EIR prepared for the project.

Summary of Less-than-Significant Impacts

The following potential individual and cumulative environmental effects were determined to be either less than significant or would be reduced to a less-than significant level through recommended mitigation measures included in this initial study:

- Land Use and Land Use Planning (all topics)
- Population and Housing (all topics)
- Cultural Resources (archeological resources, human remains, tribal cultural resources)
- Greenhouse Gas Emissions (all topics)
- Recreation (all topics)
- Utilities and Service Systems (all topics)
- Public Services (all topics)
- Biological Resources (all topics)
- Geology and Soils (all topics)
- Hydrology and Water Quality (all topics)
- Hazards and Hazardous Materials (all topics)
- Mineral and Energy Resources (all topics)
- Agriculture and Forestry Resources (all topics)

These items are discussed and mitigation measures are included, where appropriate, in Section E of this initial study and require no further environmental analysis in an EIR. All mitigation measures identified in this initial study are listed in **Section F, Mitigation Measures and Improvement Measures**. These measures have been agreed to by the project sponsor and will be implemented.

For each checklist item, the evaluation has considered both individual and cumulative impacts of the proposed project, the variant, and both streetscape designs.

E. EVALUATION OF ENVIRONMENTAL EFFECTS

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
1.	**LAND USE AND PLANNING**					
	Would the project:					
a)	Physically divide an established community?	☐	☐	☐	☒	☐
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐	☐

Land Use and Planning

The proposed project and variant share a comparable program of development, with the same types and amounts of land uses. For this reason, the potential land use impacts from operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

Impact LU-1: The proposed project or variant would not physically divide an established community. (*No Impact*)

The project site is in the Market & Octavia Area Plan area as designated by the San Francisco General Plan.[44] In addition, per the San Francisco Zoning Code, the project site is in the Downtown General Commercial (C-3-G) zoning district, where retail sales and service uses on the ground floor and residential uses above the ground floor are principally permitted. Furthermore, the project site is in the Van Ness and Market Downtown Residential SUD, a transit-oriented, high-density, mixed-use district with a significant residential presence. This SUD is intended to serve as a transitionary zone between larger scale commercial areas downtown to the lower scale residential and neighborhood commercial areas to the west.

The physical division of an established community is typically associated with the loss of mobility through a neighborhood or between a community and outlying areas. For example, construction of a barrier to access within an existing neighborhood (such as a new freeway) or the removal of a means of access (such as a roadway) could result in division of an established community. As discussed in Section A, Project Description, the project site is located in the densely developed SoMa neighborhood, adjacent to residential, commercial, and civic uses. With the exception of the proposed streetscape improvements, the improvements under the proposed project or variant would be limited to the project site. The proposed project or variant would not make any changes to major roadways in the area that would inhibit access through the neighborhood, nor would the proposed project impede pedestrian or bicycle travel through the neighborhood. Both proposed streetscape designs would improve access for bicyclists and pedestrians through and in the vicinity of the project site by widening the

44 San Francisco Planning Department, *Market & Octavia Area Plan,* adopted May 30, 2008, last amended 2010, http://208.121.200.84/ftp/files/Citywide/Market_Octavia/Market_and_Octavia_Area_Plan_2010.pdf, accessed April 23, 2018.

sidewalks on 12th Street, providing a mid-block pedestrian alley to allow public access through the project site, and providing sidewalk bulb-outs along the east side of 12th Street to shorten the crossing distances at the intersections with Market Street and South Van Ness Avenue, and to reduce vehicle speed. Vehicle access on 12th Street would continue under both of the proposed streetscape designs. Neither the proposed project nor the variant would construct a permanent physical barrier to neighborhood access or remove an existing means of access. Thus, the proposed project or the variant, would not physically divide the established community. No impact would occur.

Impact LU-2: The proposed project or variant would not conflict with applicable land use plans, policies, or regulations of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect. (*Less than Significant*)

Land use plans and policies adopted for the purpose of avoiding or mitigating an environmental effect directly address physical environmental issues and contain targets or standards which must be met to preserve or improve characteristics of San Francisco's physical environment.

As described in Section C, Compatibility with Existing Zoning and Plans, the proposed project and variant would not obviously or substantially conflict with any adopted environmental plan or policy, with the exception of historic preservation policies contained in the general plan and the Accountable Planning Initiative. Physical environmental impacts resulting from these conflicts with historic preservation policies are discussed in topic E.4, Cultural Resources, below, and will be evaluated in the EIR. To the extent that the proposed project or variant conflicts with any general plan objectives and policies that do not relate to physical environmental issues, those conflicts will be considered by decision-makers as part of their decision to approve or disapprove the proposed project or variant independent of the environmental clearance process. Potential conflicts with applicable general plan objectives and policies will continue to be analyzed and considered as part of the review of entitlements applications required for the proposed project and variant independent of environmental review under CEQA.

As designed, the proposed project or variant would require an exception from San Francisco Planning Code section 146(a) related to sunlight access to certain sections of Market Street. Because the proposed project or variant would result in wind comfort criteria exceedances, the proposed project or variant would require an exception from San Francisco Planning Code section 148-Reduction of Ground-level Wind Currents in C-3 Districts, which outlines wind reduction criteria for projects in C-3 Districts. The Planning Code sets criteria for both comfort and hazards and requires buildings to be shaped so as not to cause ground-level wind currents to exceed these criteria.

The proposed variant would exceed the existing height and bulk limits and would require the board of supervisors to approve an amendment to the Zoning Map Height and Bulk Districts (Sheet HT07) pursuant to San Francisco Planning Code section 302, through creation of a special use district. As discussed in Section C, Compatibility with Existing Zoning and Plans, these conflicts would be addressed through the project's entitlement process, including the required variances and exceptions from San Francisco Planning Code requirements.

The proposed project and variant would not conflict with plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. Impacts would be less than significant.

Impact-C-LU-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not result in a substantial cumulative impacts related to land use and planning. (*Less than Significant*)

The cumulative projects shown in Table 3 are primarily mixed-use buildings of five or more stories that would support residential uses above ground-level retail uses. In some cases, the lower levels would support civic/institutional uses. Cumulative projects also include area plans and transportation improvement plans/projects that prescribe new zoning requirements for residential and commercial uses, and streetscape and other improvements to the transportation network. As shown in Figure 30, the cumulative projects are generally located in the vicinity of Octavia Boulevard in the Hayes Valley neighborhood and in the vicinity of Van Ness Avenue and Market Street, within the Civic Center and SoMa neighborhoods.

Consistent with the planning vision for the area, as adopted in the Market & Octavia Area Plan, the cumulative projects would develop housing on infill sites in proximity to major transit hubs. Cumulative projects located on the former Central Freeway parcels (along Octavia Boulevard) would be smaller in scale to complement the existing streetscape and the residential and retail uses within Hayes Valley. Taller residential towers would be developed along major thoroughfares, such as Van Ness Avenue and Market Street, and within SoMa. Objectives 1.1 and 1.2 of the Market & Octavia Area Plan identify development of high-density housing projects with active ground-floor uses and streetscape improvements in the area as an opportunity to site housing development of appropriate scale and revitalize the pedestrian experience within the project area.

Therefore, because the proposed project or variant, in combination with the cumulative projects considered in this analysis would reflect the City's desired outcome for this area, including adding transportation and streetscape improvements to improve the public realm of the city, cumulative impacts related to land use and land use planning would be considered less than significant.

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
2.	**POPULATION AND HOUSING**					
	Would the project:					
a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐	☐
b)	Displace substantial numbers of existing housing units, necessitating the construction of replacement housing?	☐	☐	☐	☒	☐
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒	☐

Population and Housing

For the purposes of this population and housing analysis, the project area is defined as the census tracts within 0.25 mile of the project site. This includes census tracts 124.02, 176.01, 177, 201, 168.02, and 162.

The proposed project and variant share a comparable program of development, with the same number of residential units and similar amount of commercial retail uses. For this reason, the associated population and housing impacts resulting from operation of the proposed variant are anticipated to be to the same as those resulting from the proposed project.

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

According to the U.S. Census Bureau's most recent American Community Survey,[45] the City and County of San Francisco had an estimated population of about 840,763 residents in 2015. Census Tract 201, which includes the project site and immediate vicinity, has a population of 5,548. The total number of housing units within Census Tract 201 is 3,266. In the six census tracts located within the project area (0.25 mile of the project site), the population is 23,863 persons and the total number of housing units is 15,588.[46] The project site is currently used as an auto dealership, which employs 108 people.[47]

Plan Bay Area, which is the current regional transportation plan and Sustainable Communities Strategy that was adopted by the Metropolitan Transportation Commission and ABAG in July 2013, contains housing and employment projections anticipated to occur in San Francisco through 2040. Plan Bay Area calls for an increasing percentage of Bay Area growth to occur as infill development in areas with good transit access and where services necessary to daily living are provided in proximity to housing and jobs. With its abundant transit service

45 U.S. Census Bureau, 5-Year Estimates, San Francisco County, Demographic and Housing Estimates, 2011–2015 American Community Survey, *https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml*, accessed July 31, 2017.

46 Ibid.

47 Mejias, Luis, Project Manager, Crescent Heights real estate development company, email to Christine Wolfe of AECOM regarding existing employees on the project site, February 21, 2017.

and mixed-use neighborhoods, San Francisco is expected to accommodate an increasing share of future regional growth. In the last few years the supply of housing has not met the demand for housing within San Francisco. As described in ABAG's *Regional Housing Need Plan for the San Francisco Bay Area: 2014-2022*, San Francisco's projected housing need from 2014 to 2022 is 28,869 residential units, consisting of 6,234 within the very-low-income level (0–50 percent); 4,639 within the low-income level (51–80 percent); 5,460 within the moderate-income level (81–120 percent); and 12,536 within the above-moderate-income level (120 percent plus).[48,49]

As part of the planning process for Plan Bay Area, San Francisco identified priority development areas, which are existing neighborhoods near transit that are appropriate places to concentrate future growth, and the project site is located in the Market-Octavia/Upper Market Priority Development Area of *Plan Bay Area 2040*.[50]

Based on an average household size of 2.19 persons per household for San Francisco, the addition of 984 units under either the proposed project or variant could increase the population at the project site by approximately 2,155 residents.[51] Therefore, the proposed project or variant would result in a residential population increase of approximately 39 percent over the existing population within Census Tract 201, an increase of approximately 9 percent over the existing population of the project area, and approximately 0.26 percent over the existing citywide population. The population increase attributable to the proposed project or variant would represent about 0.77 percent of the projected citywide increase in population of about 280,465 persons anticipated between 2010 and 2040.[52] The growth associated with the proposed project or single tower project variant is anticipated in the San Francisco General Plan, including the Market & Octavia Area Plan. The increase in the number of dwelling units under the proposed project or variant is consistent with Policy 1.2.2 of the Market & Octavia Area Plan, which states: "maximize housing opportunities and encourage high-quality commercial spaces on the ground floor."[53]

The proposed project or variant would introduce a new type of commercial activity and change in employment at the site resulting in a total of approximately 155 employees, approximately 87 associated with the retail uses and approximately 68 associated with the building management operations.[54,55] This would equate to a net increase of approximately 47 employees at the project site. San Francisco's employment base is projected to increase by approximately 233,500, from about 526,000 total jobs in 2015 to approximately 759,500 in 2040.[56,57] Even if all of

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48 Association of Bay Area Governments, *Regional Housing Need Plan for the San Francisco Bay Area: 2014–2022,* adopted July 18, 2013, *http://www.abag.ca.gov/planning/housingneeds/pdfs/2014-22_RHNA_Plan.pdf*, accessed August 9, 2017.

49 The Area Median Income (AMI) in San Francisco in 2017 for a 4-person household was $115,300. Therefore, for a 4-person household, the very-low-income level (0–50 percent of AMI) would be up to $57,650, the low-income level (51–80 percent of AMI) would be $57,651–$92,250, the moderate-income level (81-120 percent of AMI) would be $92,251–$138,350, and above-moderate-income level (120 percent of AMI and above) would be greater than $138,351.

50 Association of Bay Area Governments, Priority Development Area Showcase, *http://gis.abag.ca.gov/website/PDAShowcase/*, accessed August 4, 2017.

51 Based on the U.S. Census Bureau's most recent American Community Survey (2011–2015), the total number of housing units in San Francisco is 383,676 and estimated population is 840,763 (which gives an average of 2.19 persons per household).

52 San Francisco Planning Department, 2014 Housing Element, *San Francisco General Plan*, adopted April 27, 2015, *http://www.sf-planning.org/ftp/General_Plan/2014HousingElement-AllParts_ADOPTED_web.pdf*, accessed April 24, 2018.

53 San Francisco Planning Department, *Market & Octavia Area Plan,* adopted May 30, 2008, last amended 2010, *http://sf-planning.org/market-octavia-area-plan*, accessed April 23, 2018.

54 San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review,* October 2002.

55 Mejias, Luis, Project Manager, Crescent Heights real estate development company, email to Christine Wolfe of AECOM regarding existing employees on the project site, February 21, 2017.

56 California Employment Development Department, Historical Data for Unemployment Rate and Labor Force (Not Seasonally Adjusted) in San Francisco County,

the approximately 47 additional employees associated with the proposed project or variant were conservatively assumed to be new to San Francisco, the project-related employment growth would represent considerably less than 1 percent (0.02 percent) of the city's estimated job growth between the years 2015 and 2040. This estimated increase in employment would be negligible in the context of total jobs in San Francisco.

In general, a project would be considered growth inducing if its implementation would result in substantial population increases and new development either directly or indirectly. The proposed project and the variant would result in the demolition of the existing auto dealership on the site and construction of an infill development including up to 984 residential units over ground-floor commercial uses. However, the proposed project and the variant would be located in an urbanized area and would not be expected to substantially alter existing development patterns in the neighborhood, or in San Francisco as a whole. Furthermore, the proposed project or variant would not indirectly induce substantial population growth in the project area, because it would not involve any extensions of area roads, utilities, or other infrastructure that could enable additional development in currently undeveloped areas.

As such, residential and employment population increases on the project site would be noticeable, compared with existing conditions in Census Tract 201. However, the project-related population and employment increases would not be substantial in relation to the existing number of residents and employees and to the expected increases in the residential and employment populations of San Francisco. Therefore, the proposed project or variant would not directly or indirectly induce substantial population growth or concentration of employment in the project area or citywide that would cause a substantial adverse physical change to the environment. This impact would be less than significant.

Impact PH-2: The proposed project or variant would not displace substantial numbers of existing housing units or people or create demand for additional housing elsewhere. (*No Impact*)

The project site is currently used as an auto dealership and does not contain any residential uses; therefore, no residential or housing unit displacement would result from the demolition of the existing building and construction of the proposed project or variant. However, the estimated project-related employment increase above existing conditions (approximately 47 new employees) would result in an incremental increase in the demand for housing and would contribute to the city's broader need for additional housing. As described in the City's *2014 Housing Element*, San Francisco is undertaking rezoning efforts to increase the number of housing units that can be constructed such that the city can meet or exceed its regional housing targets.[58] According to ABAG *Projections 2013*, in 2015 San Francisco had an estimated 1.27 workers per household.[59] Based on this assumption about workers per household and the conservative assumption that all new employees would be new San Francisco residents, the estimated 47 new employees attributable to the proposed project or variant would generate a potential demand for about 37 new dwelling units, which would be equivalent to 0.1 percent of the overall housing needs allocation of 28,869 units between 2015 and 2022. This potential increase in employment-

http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSMoreResult.asp?menuChoice=localAreaPro&criteria=unemployment+rate&categoryType=employment&geogArea=0604000075&area=San++Francisco+County&timeseries=unemployment+rateTimeSeries, accessed August 9, 2017.

57 San Francisco Planning Department, 2014 Housing Element, *San Francisco General Plan,* adopted April 27, 2015, *http://www.sf-planning.org/ftp/General_Plan/2014HousingElement-AllParts_ADOPTED_web.pdf*, accessed April 24, 2018.

58 Ibid.

59 Association of Bay Area Governments, *Projections 2013,* December 2013.

related housing demand would not be considered substantial in the context of total housing demand in San Francisco and would be offset by the addition of residential uses provided by the proposed project or variant. In addition, the actual increase in housing demand due to the proposed project or variant may likely be lower, because some of the new employees may not be new to San Francisco.

The proposed project or variant is subject to the provisions of San Francisco Planning Code section 415, Inclusionary Affordable Housing Program, which requires projects of 10 or more residential units to contribute to the creation of below-market-rate housing. The requirements of the Inclusionary Affordable Housing Program differ for development projects based on their date of filing an environmental evaluation application with the San Francisco Planning Department. Based on the application date for the proposed project and variant, the proposed project or variant would be required to provide BMR residential units on the project site (equal to 14.5 percent of the project's overall number of residential units), within a separate building within 1 mile of the project site (equal to 30 percent of the project's overall number of residential units), or through an in-lieu payment to the Mayor's Office of Housing and Community Development (equal to 30 percent of the project's overall number of residential units).

The proposed project or variant would add 984 new residential units and would meet or exceed the requirements of San Francisco Planning Code section 415. Therefore, the proposed project or variant would contribute to the city's housing stock, including affordable housing stock, thereby helping to meet the city's overall housing demands.

In summary, the proposed project or variant would not remove existing housing units and would not displace residents. The proposed retail uses at the proposed project or variant would increase the number of employees at the project site by approximately 47 people, which would not create a significant demand for additional housing. This would be a very small increase compared to the total population of, and the available housing stock in, San Francisco and the Bay Area. Overall, the proposed project or variant would result in no impact related to displacement of housing or residents or creation of housing demand resulting in a need to construct additional housing elsewhere.

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

As mentioned above, *Plan Bay Area 2040* includes housing and employment projections anticipated to occur in San Francisco through 2040, and calls for focused growth and development in priority development areas. The *Plan Bay Area 2040* projections provide the cumulative context for the population and housing analysis.

According to ABAG's *Regional Housing Need Plan for the San Francisco Bay Area*: *2014–2022* and the California Department of Housing and Community Development, the city's projected housing need from 2014 to 2022 is 28,869 residential units. Consistent with this projection, the Housing Element of the San Francisco General Plan states: "[B]ased on the growing population, and smart growth goals of providing housing in central areas like San Francisco, near jobs, and transit, the City must plan for the capacity for roughly 28,870 new units, 57 percent of which should be suitable for housing for the extremely low, very low, low, and moderate income households to

meet its share of the region's projected housing demand."[60] Further, in November 2014, the City voters enacted Proposition K, which established a directive to construct or rehabilitate at least 30,000 homes by 2020.

The jurisdictional allocation for San Francisco translates into an average annual need of approximately 4,124 net new residential units. As described above, *Plan Bay Area 2040* anticipates future growth to be focused in priority development areas, such as the Market-Octavia/Upper Market Priority Development Area, where the proposed project and the majority of the cumulative projects shown in Table 3 are located. The past, present, and reasonably foreseeable projects shown in Table 3 would add approximately 3,777 new dwelling units to the area. Overall, these nearby cumulative development projects (including the proposed project or variant) would add approximately 10,325 new residents in 4,761 dwelling units in the project area, which would represent an estimated 186 percent increase in the area's residential population. All residential projects would be required to pay an affordable housing in-lieu fee or provide the required percentage of onsite or offsite BMR units, in accordance with Planning Code section 415.

In addition, past, present, and reasonably foreseeable future projects (including the proposed project or variant) would add up to approximately 118,146 gsf of retail uses, approximately 2,349 gsf of commercial uses, approximately 542,599 gsf of office uses, and approximately 142,125 gsf of institutional uses. The addition of these new uses could generate approximately 2,897 new employees as follows: 337 from retail uses, 9 from commercial uses, 1,966 from office uses, 517 from institutional uses, and 68 associated with the residential and building services portion of the proposed project or variant.[61,62]Approximately 1,646 of these new employees are anticipated to be staff of the San Francisco Planning, Building and Public Works Departments, who are being relocated from various buildings in the city, including from 1650 and 1660 Mission Street.[63]

Based on the conservative assumption that all new employees could be new San Francisco residents and the conversion and demolition of existing buildings for the cumulative projects would not result in employment decreases, an estimated 2,897 new employees (including new employees associated with the proposed project or variant) would be added within a 0.25-mile radius of the project site.[64] The approximately 2,897 new employees would generate a potential demand for about 2,282 new dwelling units. Based on information in ABAG's *Projections 2013* and the City's *2014 Housing Element*, the employment-related housing demand associated with the cumulative development projects could be accommodated by the city's projected housing growth of 84,910 units between 2015 and 2040. Furthermore, the cumulative development projects would add to the city's housing stock and could potentially accommodate some of the new employment-related housing demand. This estimated cumulative employment growth would account for less than 1 percent of projected citywide household growth between 2015 and 2040.

Lastly, cumulative projects would not result in the displacement of substantial numbers of housing units as the majority of the approved and proposed projects would demolish vacant buildings, construct new buildings on

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60 San Francisco Planning Department, 2014 Housing Element, *San Francisco General Plan*, adopted April 27, 2015, *http://www.sf-planning.org/ftp/General_Plan/2014HousingElement-AllParts_ADOPTED_web.pdf*, accessed April 24, 2018.

61 San Francisco Planning Department, *Transportation Impact Analysis Guidelines for Environmental Review,* October 2002.

62 Due to variability in staffing of residential buildings, employees associated with residential and building service uses at the cumulative projects are not factored into these totals, with the exception of the 68 employees anticipated for employment at the residential portion of the proposed project or variant.

63 Future plans for 1660 Mission Street are not factored into the area totals because future use of the site is not confirmed.

64 It is anticipated that the number will be substantial lower than this, given the relocation of existing City of San Francisco staff.

surface parking lots, or otherwise intensify land uses, and the proposed project or variant would not displace any housing units. Although cumulative projects would increase the population and employment in the area, they would not induce substantial population and employment growth beyond what was planned for and anticipated. For these reasons, impacts related to housing displacement and population growth would be less than significant.

Topics:		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
3.	**CULTURAL RESOURCES**					
	Would the project:					
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco *Planning Code*?	☒	☐	☐	☐	☐
b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐	☐
c)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐	☐
d)	Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074?	☐	☒	☐	☐	☐

Cultural Resources

The proposed project and the variant would both involve the demolition of the existing building on the project site and construction would involve the same activities, duration, and depth/amount of excavation. For these reasons, the potential impacts to historic resources, archeological resources, tribal cultural resources, and human remains resulting from construction of the proposed variant would be the same as those resulting from the proposed project.

Impact CR-1: The proposed project or variant would result in the demolition of the existing building at 10 South Van Ness Avenue, a historical resource pursuant to CEQA and the San Francisco Planning Code. (*Potentially Significant*)

The historic resource evaluation completed for the proposed project and variant found that the structure retains integrity of location, design, setting, and association due to the rareness of the resource and its sociocultural (rather than architectural design) significance as the location of the Fillmore West.[65] The finding is also based on the presence of extant character-defining features on the exterior and interior, and the reversibility of a number of alterations (including the attached metal screens on the exterior and the auto-lifts in the ballroom space). Therefore, the demolition of the existing structure located at 10 South Van Ness Avenue could cause a substantial adverse change in the significance of a historical resource as defined in section 15064.5, a significant impact. As a result, this topic will be addressed in the EIR.

Impact CR-2: The proposed project or variant's construction could cause a substantial adverse change in the significance of an unknown archeological resource. (*Less than Significant with Mitigation*)

In addition to assessing impacts to archeological resources that would meet the requirements for listing as a historical resource, impacts to unique archeological resources are also considered under CEQA, as described in

65 SWCA Environmental Consultants/Turnstone, *Part I Historic Resources Evaluation 10 South Van Ness Avenue,* September 2016.

section 15064.5 of the CEQA guidelines, as well as under the California Public Resources Code (section 21083.2). If an archeological site does not meet the criteria for inclusion in the California Register of Historical Resources but does meet the definition of a unique archeological resource as outlined in Public Resources Code section 21083.2, it is entitled to special protection or attention under CEQA. A unique archeological resource implies an archeological artifact, object, or site about which it can be clearly demonstrated that – without merely adding to the current body of knowledge – there is a high probability that it meets one of the following criteria:

- The archeological artifact, object, or site contains information needed to answer important scientific questions, and there is a demonstrable public interest in that information.
- The archeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type.
- The archeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

A non-unique archeological resource indicates an archeological artifact, object, or site that does not meet the above criteria. Impacts to non-unique archeological resources and resources that do not qualify for listing in the California Register of Historical Resources receive no further consideration under CEQA.

It should also be noted herein that a disturbed or secondarily deposited prehistoric midden is presumed to be significant for its information potential; under CEQA, and it is legally significant unless or until it is demonstrated to the contrary.

A preliminary archeological review was completed by the San Francisco Planning Department for the proposed project.[66] According to the preliminary archeological review, no prehistoric archeological resources are known to occur on the project site. However, four sites, which include prehistoric components, are located within 0.5 mile of the project site. Due to the presence of these four previously identified prehistoric archeological sites in this portion of San Francisco in similar subsurface settings (i.e., dune sand); the site is considered to have moderate-high sensitivity for the presence of prehistoric archeological resources.

Project construction requires subsurface excavation for the construction of underground parking. As such, due to the moderate-high sensitivity of the project area the project has the potential to disturb unknown archeological resources, and these impacts would be considered significant.

Accordingly, to reduce potential impacts to significant archeological resources, the project sponsor has agreed to comply with **Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring**, which would require the project sponsor to retain the services of an archeologist from the Department Qualified Archeological Consultants List to develop and implement an archeological testing plan. Implementation of **Mitigation Measure M-CR-1** would reduce the impact to a less-than-significant level.

66 San Francisco Planning Department, *Environmental Planning Preliminary Archeological Review: Checklist*, Case No. 2015-004568ENV, 10 South Van Ness Avenue, October 12, 2016.

Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring

Based on a reasonable presumption that archeological resources may be present within the project area, 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 rotational qualified archeological consultants list maintained by the Planning Department archeologist. The project sponsor shall contact the department archeologist to obtain the names and contact information for the next three archeological consultants on the qualified archeological consultants list. 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 at the direction of the Environmental Review Officer (ERO). 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 4 weeks. At the direction of the ERO, the suspension of construction can be extended beyond 4 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) and 15064.5(c).

Consultation with Descendant Communities. On discovery of an archeological site[67] associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group, an appropriate representative[68] of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the final archeological resources report shall be provided to the representative of the descendant group.

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing program (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.

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67 The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

68 An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the department archeologist.

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. No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. 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 redesigned 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 monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the archeological monitoring program reasonably before the commencement of any project-related soil-disturbing activities. 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), and site remediation shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context.
- 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 the 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), 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 onsite/offsite 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 soil-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 Native American Heritage Commission, which shall appoint a Most Likely Descendant (California Public Resources Code section 5097.98). The archeological consultant, the project sponsor, ERO, and the Most Likely Descendant shall have up to but not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines section 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. Nothing in existing state regulations or in this mitigation

measure compels the project sponsor and the ERO to accept recommendations of a Most Likely Descendant. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such an agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.

Final Archeological Resources Report. The archeological consultant shall submit a draft final archeological resources report 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 final archeological resources report shall be distributed as follows: California Archeological Site Inventory, Northwest Information Center shall receive one copy and the ERO shall receive a copy of the transmittal of the report to the Northwest Information Center. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the final archeological resources report 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.

With implementation of **Mitigation Measure M-CR-1**, project construction would have a less-than- significant impact on prehistoric or historical archeological resources.

Impact CR-3: The proposed project or variant's construction could disturb human remains, including those interred outside of formal cemeteries. (*Less than Significant with Mitigation*)

Section 15064.5 of CEQA assigns special importance to human remains, and specifies procedures to be used when Native American remains are discovered. These procedures are detailed in Public Resources Code section 5097.98.

As discussed above, the project area exhibits elevated archeological sensitivity. Prehistoric archeological sites, including some that contain human remains, have been identified within San Francisco. The likelihood of inadvertently exposing currently unknown archeological resources, including those containing human remains, during construction of the proposed project or project variant cannot be dismissed. The inadvertent exposure of previously unidentified human remains, including those interred outside of formal cemeteries, would be considered a significant impact. To reduce this impact to a less-than-significant level, the project sponsor has agreed to comply with **Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring**, presented above, which includes the procedures required for appropriate treatment of human remains.

With implementation of **Mitigation Measure M-CR-1**, the proposed project or variant would have a less-than-significant impact related to the potential disturbance of human remains.

Impact CR-4: The proposed project or variant's construction could cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074. (*Less than Significant with Mitigation*)

CEQA section 21074.2 requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed or determined to be eligible for listing, the national, state, or local register of historical resources. Based on discussions with Native American tribal representatives, in San Francisco, prehistoric archeological resources are presumed to be potential tribal cultural resources. A tribal cultural resource is adversely affected when a project causes a substantial adverse change in the resource's significance.

Pursuant to CEQA section 21080.3.1(d), within 14 days of a determination that an application for a project is complete or a decision by a public agency to undertake a project, the Lead Agency is required to contact the Native American tribes that are culturally or traditionally affiliated with the geographic area in which the project is located. Notified tribes have 30 days to request consultation with the Lead Agency to discuss potential impacts on tribal cultural resources and measures for addressing those impacts. On August 15, 2017, the Planning Department contacted Native American individuals and organizations for the San Francisco area, providing a description of the proposed project and requesting comments on the identification, presence, and significance of tribal cultural resources in the project area. During the 30-day comment period, no Native American tribal representatives contacted the Planning Department to request consultation.

As described under **Impact CR-2**, there is the potential for archeological resources within the project area, and as described in **Impact CR-3**, there is the potential for human remains within the project area. Unknown archeological resources may be encountered during construction that could be identified as tribal cultural resources at the time of discovery or at a later date. Therefore, the potential adverse effects of the proposed project on previously unidentified archeological resources, discussed under Impact CR-2, also represent a significant impact on tribal cultural resources. Implementation of **Mitigation Measure M-CR-2: Tribal Cultural Resources Interpretive Program**, would reduce potential adverse effects on tribal cultural resources to a less-than-significant level. **Mitigation Measure M-CR-**2 would require either preservation-in-place of the tribal cultural resources, if determined effective and feasible, or an interpretive program regarding the tribal cultural resources developed in consultation with affiliated Native American Tribal Representatives.

Mitigation Measure M-CR-2: Tribal Cultural Resources Interpretive Program

If the ERO determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned to avoid any adverse effect on the significant tribal cultural resource, if feasible.

If the ERO, in consultation with the affiliated Native American tribal representatives and the project sponsor, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the project sponsor shall implement an interpretive program of the tribal cultural resource in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the ERO would be required to guide the interpretive program. The plan shall identify, as appropriate, proposed locations for

installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifact displays and interpretation, and educational panels or other informational displays.

Implementation of **Mitigation Measure M-CR-**2 would reduce potential impacts to tribal cultural resources to a less-than-significant level.

Impact C-CR-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in cumulative impacts to historic resources. (*Potentially Significant*)

There are a number of historic properties in the vicinity of the project site, including several located within the Market Street Masonry Historic District. The vicinity of the project site has undergone various improvements and modernization at different times, and will continue to be developed as part. Therefore, past, present, and reasonably foreseeable projects in the vicinity of the project site could have a cumulative impact related to historic resources, and this topic will be evaluated in further detail in the EIR.

Impact C-CR-2: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would result in cumulative impacts to archeological resources, tribal cultural resources, and human remains. (*Less than Significant with Mitigation*)

Archeological resources, tribal cultural resources, and human remains are nonrenewable, finite resources. All adverse effects to archeological resources have the potential to erode a dwindling cultural/scientific resource base. Federal and state laws protect archeological resources in most cases, either through project redesign or by requiring that the scientific data present within an archeological resource be archeologically recovered.

As identified in the preliminary archeological review, the project site is part of a larger area that was 1850s residential development and cultivated field. Ground-disturbing activities of past, present, and reasonably foreseeable future projects in the project vicinity have the potential to disturb previously unidentified archeological resources, such as historic features associated with the 1850s residential and agricultural development that could yield information pertaining to agricultural processes during the Gold Rush period. Accordingly, the proposed project in combination with past, present, and reasonably foreseeable future projects could result in a significant cumulative impact on archeological resources associated with this 1850s development. As such, the potential disturbance of archeological resources within the project site could make a cumulatively considerable contribution to a cumulative loss of significant archeological information that would contribute to the development of California, Bay Area, and San Francisco history.

As discussed above, implementation of the approved plans for testing, monitoring, and data recovery would preserve and realize the information potential of archeological resources. The recovery, documentation, and interpretation of information about archeological resources that may be encountered within the project site would enhance knowledge of prehistory and history. This information would be available to future archeological studies, contributing to the collective body of scientific and historic knowledge. With implementation of Mitigation Measures M-CR-1 and M-CR-2, the proposed project's contribution to any potential cumulative impacts related to archeological resources, human remains, or tribal cultural resources would not be cumulatively considerable.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
4. TRANSPORTATION AND CIRCULATION					
Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing the measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☒	☐	☐	☐	☐
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☒	☐	☐	☐	☐
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	☒	☐	☐	☐	☐
e) Result in inadequate emergency access?	☒	☐	☐	☐	☐
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☒	☐	☐	☐	☐

Transportation and Circulation

Neither the proposed project nor the variant involves changes to air traffic patterns. Therefore, topic 4c is not applicable and is not discussed further.

The proposed project or variant would generate auto, transit, pedestrian and bicycle trips to and from the project site and would increase demands on the local transportation system, including the roadway network, transit service, pedestrian and bicycle facilities, and vehicle parking and freight loading/service vehicle accommodations, which could result in significant transportation impacts. The proposed streetscape design or the straight-shot streetscape option would change circulation of vehicle, bicycle, and pedestrian traffic in the project area. Also, the proposed project, variant or straight-shot streetscape option could conflict with plans, ordinances, or policies addressing the safety or performance of the circulation system or result in other project-level or cumulative transportation and circulation impacts, which will be discussed in the EIR.

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

Noise

The project site is not located within an airport land use plan area,[69] nor is it in the vicinity of a private airstrip. Therefore, topics 6e and 6f are not applicable and are not discussed further.

Construction activities and traffic as well as operation of the proposed project or variant could result in a substantial increase in ambient noise levels, above current levels, in the vicinity of the project site. In addition, construction and operation of the proposed project or variant would generate noise and vibration in a manner that could exceed local standards and expose sensitive receptors (including existing residents across Market Street to the north, and across 12th Street to the west of the project site, and future residents on the project site) to excessive levels potentially resulting in significant noise and vibration impacts. Noise impacts will be discussed in the EIR.

69 City/County Association of Governments of San Mateo County, *Airport Land Use Compatibility Plan for the Environs of San Francisco International Airport*, November 2012. See also Alameda County Community Development Agency, *Oakland International Airport, Airport Land Use Compatibility Plan*, December 2012.

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

Air Quality

The proposed project or variant would generate emissions and odors and could increase health risk hazards to sensitive receptors (in a manner that could result in significant air quality impacts. Also, the proposed project or variant could also conflict with plans, guidelines, and policies addressing attainment and maintenance of air quality standards within the San Francisco Bay Area Air Basin. Air quality impacts will be discussed in the EIR.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
7. GREENHOUSE GAS EMISSIONS					
Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐	☐
b) Conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐	☐

Greenhouse Gas Emissions

Construction of both the proposed project and the variant would involve the same activities, equipment, phasing, and duration. Similarly, the proposed project and variant share a comparable program of development, with the same number of units and similar amount of commercial retail uses and associated energy and water use. Both the proposed project and the variant would be subject to the same regulations related to the reduction of greenhouse gas (GHG) emissions. For these reasons, the GHG emissions resulting from construction and operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

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

The Bay Area Air Quality Management District has prepared guidelines and methodologies for analyzing GHG emissions. These guidelines are consistent with CEQA Guidelines sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's GHG emissions. CEQA Guidelines section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs and describes the required contents of such a plan. Accordingly, San Francisco has prepared *Strategies to Address Greenhouse Gas Emissions,* which presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's qualified GHG reduction strategy in compliance with the CEQA guidelines. These GHG reduction actions have resulted in a 23.3 percent reduction in GHG emissions in 2012 compared to 1990 levels, exceeding the year 2020 reduction goals outlined in the Bay Area Air Quality Management District's Bay Area 2010 Clean Air Plan, Executive Order (EO) S-3-05, and Assembly Bill 32 (also known as the Global Warming Solutions Act).

Given that the City has met the state's and region's 2020 GHG reduction targets and San Francisco's GHG reduction goals are consistent with, or more aggressive than, the long-term goals established under EO S-3-05 and EO B-30-15, the City's GHG reduction goals are consistent with EO S-3-05, EO B-30-15, Assembly Bill 32, and the Bay Area 2010 Clean Air Plan. Therefore, proposed projects that are consistent with the City's GHG reduction strategy would be consistent with the aforementioned GHG reduction goals, would not conflict with these plans

or result in significant GHG emissions, and would, therefore, not exceed San Francisco's applicable GHG threshold of significance.

The following analysis of the impact of the proposed project or variant on climate change focuses on the contribution of the proposed project or variant to cumulatively significant GHG emissions. Because the analysis is in a cumulative context, this section does not include individual project-specific impact statements.

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

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

The proposed project or variant would increase activity on the project site through the demolition of the existing two-story commercial building and the construction of a mixed-use residential building(s) with up to 984 dwelling units and approximately 30,000 gross square feet of retail commercial. Therefore, the proposed project or variant would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) and residential operations that result in an increase in energy use, water use, wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions.

The proposed project and variant would be subject to regulations adopted to reduce GHG emissions as identified in the GHG Reduction Strategy. As discussed below, compliance with the applicable regulations would reduce the proposed project's or single tower variant's GHG emissions related to transportation, energy use, waste disposal, wood burning, and use of refrigerants.

Compliance with the City's Commuter Benefits Program, Emergency Ride Home Program, transportation management programs, Transportation Sustainability Fee, Jobs-Housing Linkage Program, bicycle parking requirements, low-emission car parking requirements, and car sharing requirements would reduce the transportation-related emissions associated with the proposed project or the variant. These regulations reduce GHG emissions from single-occupancy vehicles by promoting the use of sustainable transportation modes with zero or lower GHG emissions on a per capita basis.

The proposed project or variant would be required to comply with the energy efficiency requirements of the City's Green Building Code, Stormwater Management Ordinance, and Water Conservation and Irrigation ordinances, which would promote energy and water efficiency, thereby reducing the energy-related GHG emissions associated with the proposed project or the variant.[70] Additionally, the proposed project or variant would be required to meet the renewable energy criteria of the Green Building Code, further reducing energy-related GHG emissions.

[70] Compliance with water conservation measures reduce the energy (and GHG emissions) required to convey, pump, and treat water required for the project.

The waste-related emissions associated with the proposed project or the variant would be reduced through compliance with the City's Recycling and Compositing Ordinance, Construction and Demolition Debris Recovery Ordinance, and Green Building Code requirements. These regulations reduce the amount of materials sent to a landfill, reducing GHGs emitted by landfill operations. These regulations also promote reuse of materials, conserving their embodied energy[71] and reducing the energy required to produce new materials.

Compliance with the City's Street Tree Planting requirements would serve to increase natural carbon sequestration. Other regulations, including those limiting refrigerant emissions and the Wood Burning Fireplace Ordinance would reduce emissions of GHGs and black carbon, respectively. Regulations requiring low-emitting finishes would reduce volatile organic compounds.[72] Thus, the proposed project and variant were determined to be consistent with San Francisco's GHG reduction strategy.[73]

The project sponsor is required to comply with these regulations, which have proven effective as San Francisco's GHG emissions have measurably decreased when compared to 1990 emissions levels, demonstrating that the City has met and exceeded EO S-3-05, Assembly Bill 32, and the climate action plan GHG reduction goals for the year 2020. Other existing regulations, such as those implemented through Assembly Bill 32, will continue to reduce a project's contribution to climate change. In addition, San Francisco's local GHG reduction targets are consistent with the long-term GHG reduction goals of EO S-3-05, EO B-30-15, Senate Bill 32, and the climate action plan. Therefore, because the proposed project and variant are consistent with the City's GHG reduction strategy, they would also be consistent with the GHG reduction goals of EO S-3-05, EO B-30-15, Senate Bill 32, and the climate action plan, would not conflict with these plans, and would, therefore, not exceed San Francisco's applicable GHG threshold of significance. As such, the proposed project and variant would not have a cumulatively considerably contribution to GHGs and would result in a less-than-significant cumulative impact regarding compliance with plans established to reduce GHG emissions.

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

72 Although they are not GHGs, volatile organic compounds are precursor pollutants that form ground level ozone. Increased ground level ozone is an anticipated effect of future global warming that would result in added health effects locally. Reducing emissions of volatile organic compounds would reduce the anticipated local effects of global warming.

73 San Francisco Planning Department, 2017, *Greenhouse Gas Analysis: Compliance Checklist for 10 South Van Ness Avenue Mixed-Use Project,* January 4, 2017.

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

Wind and Shadow

The proposed project would demolish the existing building on site and construct two podiums with one approximately 400-foot-tall tower above each podium. Under the proposed variant, the existing building would be demolished and a 590-foot-tall building would be constructed. Similar to the proposed project, the variant would have stair/elevator penthouses extending up to 20 feet above the roof height, for a total height of 420 feet (proposed project) and 610 feet (variant), including roof screens and elevator penthouses.[74] A podium would be constructed under the proposed variant that would rise up to a height of approximately 164 feet above the ground.

Wind

The proposed project and the variant could result in ground-level wind speeds on the project site and on adjacent sidewalks that exceed pedestrian comfort limits and hazard criteria set forth in the San Francisco Planning Code. Wind impacts will be evaluated further in the EIR.

Shadow

The proposed project and the variant could result in net new shading on several existing and future parks and open spaces in a manner that could affect the use and enjoyment of these facilities. Net new shadow could occur on: Patricia's Green, the Page & Laguna Mini Park, the Howard and Langton Mini Park, Hayes Valley Playground, Koshland Park, Buchanan Street Mall, and the future Natoma and 11th Park, all of which are under the jurisdiction of the San Francisco Recreation and Parks Department (RPD). Net new shading could also occur on the future Brady Park, a privately owned, publicly accessible open space. Shadow impacts will be evaluated further in the EIR.

[74] Pursuant to Planning Code Section 260(b)(1)(B), the mechanical and elevator penthouses are exempt from the Planning Code height limits, but are considered in the context of environmental review.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
9. RECREATION					
Would the project:					
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated?	☐	☐	☒	☐	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐	☐

Recreation

The proposed project would provide 45,175 sf of common usable open space and 2,975 sf of publicly accessible open space, while the proposed variant would provide 25,565 sf of common usable open space, 12,091 sf of publicly accessible open space, and 9,550 sf of private open space. Because development under the proposed variant represents comparable demand for recreational facilities, with the same number of units and similar amount of commercial retail and open space uses and associated park/recreational needs, the potential recreation impacts resulting from operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

Impact RE-1: The proposed project or variant would not result in a substantial increase in the use of existing parks and recreation facilities such that substantial physical deterioration or degradation of recreational facilities would occur or be accelerated. (*Less than Significant*)

Currently, there are no parks or recreational space on the project site. The following RPD parks, open spaces, and recreational facilities are within 0.5 mile of the project site and are accessible by walking, bicycling, or transit:[75]

- Patricia's Green, located at Octavia Street between Hayes Street and Fell Street, approximately 0.27 mile north of the project site, is an approximately 0.41-acre park that includes a playground, picnic area, and art installations.
- Civic Center Plaza/Joe Alioto Piazza, located at the intersection of Grove Street and Larkin Street, approximately 0.28 mile northeast of the project site, is an approximately 5.4-acre plaza including lawn areas and children's play equipment, located adjacent to City Hall.
- Page and Laguna Mini Park, located mid-block on Rose Street between Laguna Street and Octavia Boulevard, approximately 0.30 mile northwest of the project site, is an approximately 0.16-acre community garden that includes a walkway and seating areas.

75 RPD administers more than 220 parks, playgrounds, and open spaces throughout the City. RPD also manages 25 recreation centers, nine swimming pools, five golf courses and numerous tennis courts, ball diamonds, soccer fields and other sports venues (San Francisco Recreation and Park Department, Who We Are, *http://sfrecpark.org/about/who-we-are/*, accessed July 31, 2017).

- Koshland Community Park and Learning Garden, located at the intersection of Page Street and Buchanan Street, approximately 0.36 mile northwest of the project site, is an approximately 0.82-acre park with children's play structures, a plaza, community garden plots, and a half basketball court.
- Hayes Valley Playground, located at the intersection of Hayes Street and Buchanan Street, approximately 0.40 mile northwest of the project site, is an approximately 0.75-acre playground with a stage and plaza to facilitate community gatherings, community garden plots, outdoor fitness equipment, and a 2,500-square-foot clubhouse.
- Page Street Community Garden, located mid-block on Page Street between Buchanan Street and Webster Street, approximately 0.45 mile northwest of the project site, is an approximately 0.08-acre community garden.

RPD is in the process of acquiring a new park property on 11th Street between Minna and Natoma Streets, approximately 0.17 mile southeast of the project site. The timing of construction and programming for the parking is unknown at this time. United Nations Plaza, located on Market Street in the Civic Center area, approximately 0.44 mile east of the project site, is a 2.6-acre pedestrian mall that is not managed by RPD. United Nations Plaza contains hardscaped and landscaped areas and limited seating and is used for weekly farmer's markets and art festivals. In addition, a new privately owned public open space, Brady Park, is proposed approximately 0.07 mile west of the project site. Brady Park is not yet designed and funding has not yet been approved.

The proposed project would add approximately 2,155 permanent residents and approximately 47 net new employees to the project site, increasing the demand for park and recreation facilities in the vicinity of the project site, including those listed above. The proposed project includes open space amenities in the form of commonly accessible terraces, as well as providing publicly accessible open space at the ground level in the form of the proposed mid-block alley, that meet the San Francisco Planning Code requirements for provision of open space. The common usable open space and publicly accessible open space would partially offset the demand for open space generated by project residents.

As such, additional demand for parks, open spaces, and recreational facilities generated by the proposed project or the variant would not be expected to increase use such that it would cause substantial additional physical deterioration of the facilities or require the construction or expansion of recreational facilities. Therefore, the proposed project or the variant would have a less-than-significant impact on parks and recreational facilities.

Impact-C-RE-1: The proposed project or the variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not result in a cumulative impact on recreational facilities or resources. (*Less than Significant*)

Cumulative development in the project vicinity would result in an intensification of land uses and a corresponding increase in the demand for recreational facilities and resources. The City has accounted for such growth as part of the Recreation and Open Space Element of the general plan.[76] In addition, San Francisco voters passed two bond measures, in 2008 and 2012, to fund the acquisition, planning, and renovation of the City's network of recreational resources. Moreover, in June 2016, San Francisco voters approved Local Measure

[76] San Francisco Planning Department, *San Francisco General Plan*, Recreation and Open Space Element, April 2014, pp. 20–36, http://www.sf-planning.org/ftp/General_Plan/Recreation_OpenSpace_Element_ADOPTED.pdf, accessed July 31, 2017.

(Proposition) B, which extends until 2046 a funding set-aside in the City budget for RPD and also provides for annual increases through 2026–2027 in General Fund monies provided to RPD, meaning that, going forward, RPD will have additional funding for programming and park maintenance.[77] As discussed above, there are seven parks, open spaces, or other recreational facilities within 0.5 mile of the project site, and two additional parks are being proposed. It is expected that these existing recreational facilities would be able to accommodate the increase in demand for recreational resources generated by nearby cumulative development projects. For these reasons, the cumulative projects considered in this analysis would not have a significant cumulative impact on recreational facilities or resources.

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

Utilities and Service Systems

The proposed project and variant share a comparable program of development, with the same number of units and similar amount of commercial retail uses; thus, associated water use and wastewater generation would be substantially similar. In addition, both the proposed project and variant would reduce the amount of impervious surfaces on the project site, and would include stormwater detention features. For this reason, the potential utilities impacts resulting from operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

Impact UT-1: The proposed project or variant would not exceed wastewater treatment requirements of the applicable regional water quality control board, would not exceed the capacity of the wastewater treatment provider that would service the project, or require or result in the construction of wastewater treatment or stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (*Less than Significant*)

The San Francisco Public Utilities Commission (SFPUC) provides water, wastewater, and storm drainage services in San Francisco. San Francisco's combined stormwater and wastewater treatment system serves the project site and handles both sewage treatment and stormwater runoff. The Southeast Treatment Plant provides wastewater

and stormwater treatment and management for the eastern portion of the City, including the project site.[78] The Southeast Treatment Plant is permitted to accept 57 million gallons per day (MGD) during dry weather and up to 250 MGD under peak wet-weather conditions.[79]

Stormwater

The San Francisco Stormwater Management Ordinance (as codified in section 147 of the San Francisco Public Works Code) requires that projects that create and replace at least 5,000 sf of impervious surface implement requirements for managing post construction stormwater runoff consistent with the Stormwater Management Requirements and Design Guidelines. Sites with more than 50 percent impervious surfaces (like the project site) must be designed such that stormwater runoff rate and volume do not exceed predevelopment conditions for the one- and two-year, 24-hour design storm.[80] Compliance with the Stormwater Management Requirements and Design Guidelines would ensure that stormwater generated by the proposed project or the variant is managed onsite such that the project would not contribute additional volumes of polluted runoff to the City's stormwater infrastructure. The Stormwater Management Requirements and Design Guidelines also require that a stormwater control plan be prepared for projects proposing to replace 5,000 sf or more of impervious surface. Stormwater control plans are reviewed by the SFPUC to determine whether a proposed project meets performance requirements.

Implementation of the proposed streetscape improvements would not alter the flow of stormwater onsite because the public-right-of way is already paved, and there would be no increase in the volume of stormwater generated at the project site. The proposed project or the variant would include landscaped open space areas and would result in a net decrease in impervious surfaces overall. The proposed project or variant would replace at least 5,000 sf of impervious surface, thus the proposed project or variant would be required to prepare a stormwater control plan documenting compliance with the requirements of the site mitigation plan. The plan would be prepared as the design of the proposed project or variant is further refined. Furthermore, the proposed project or the variant would include rainwater and stormwater collection features that would detain rainwater and stormwater for reuse onsite. Due to the decrease in net impervious surface area on the project site, inclusion of rainwater and stormwater collection features for reuse onsite, and preparation of a stormwater control plan, the proposed project or the variant would not result in increased stormwater run-off that would require the construction of new wastewater treatment or storm drainage facilities, and impacts would be less than significant.

Wastewater

The proposed project or variant would add residential and retail uses to the project site, which would generate approximately 85,986 gallons per day of wastewater, representing a 0.15 percent increase of the SFPUC's Southeast Treatment Plant's overall capacity.[81] To plan for growth in the SFPUC's service area and the resulting increase in wastewater generation, the SFPUC uses population growth estimates provided by the City. As stated in Impact PH-1, population growth at the project site is planned for in city planning documents. Therefore, the increase in wastewater generated at the project site would not represent an increase beyond the amount projected by the SFPUC and thus would be within the planned capacity of the existing combined system. Therefore, the

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[78] San Francisco Public Utilities Commission, San Francisco's Wastewater Treatment Facilities, June 2014, *http://sfwater.org/modules/showdocument.aspx?documentid=5799*, accessed January 24, 2017.

[79] San Francisco Public Utilities Commission, Southeast Treatment Plant, *http://sfwater.org/index.aspx?page=616*, accessed January 24, 2017.

[80] San Francisco Public Utilities Commission, *San Francisco Stormwater Management Requirements and Design Guidelines,* May 2016, *http://www.sfwater.org/Modules/ShowDocument.aspx?documentID=9026*, accessed August 10, 2017.

[81] San Francisco Public Utilities Commission, *Water Supply Assessment for the 10 South Van Ness Project*, adopted February 2, 2017.

proposed project or variant would not result in the construction of new wastewater treatment facilities, and impacts would be less than significant.

Additionally, wastewater generated by the proposed project or variant would meet the wastewater pretreatment standards of the SFPUC, as required by the San Francisco Industrial Waste Ordinance. These requirements are aimed at implementing the San Francisco Bay Regional Water Quality Control Board standards. Therefore, the proposed project or variant would not exceed wastewater treatment requirements, and impacts would be less than significant.

Impact UT-2: The proposed project or variant would not require new or expanded water supply resources or entitlements or require or result in the construction of water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (*Less than Significant*)

SFPUC serves approximately 2.6 million customers in the Bay Area, with approximately one-third of water deliveries going to retail customers in San Francisco. As the water provider for San Francisco, SFPUC prepares an urban water management plan every five years to project future demand and evaluate the adequacy of existing and projected supply. Demands that are not met by local runoff are met with water diverted from the Tuolumne River through the Hetch Hetchy System. On average, the Hetch Hetchy System provides approximately 85 percent of the water delivered by the SFPUC. During dry years, the water received from the Hetch Hetchy System can amount to over 90 percent of the total water delivered. SFPUC's 2015 urban water management plan contains water demand predictions based on ABAG's 2013 projections for employment and housing growth. According to the 2015 urban water management plan, water supply will be 77.5 MGD in 2020. Water demand in 2020 is anticipated to be 77.5 MGD. Water demand and supply are projected to be equivalent (i.e., no shortages or surpluses are predicted) through 2040.[82]

SFPUC plans to supplement water supply sources with increased groundwater extraction and recycled water projects, in addition to expanded recycled water and nonpotable water use requirements. With these projects and requirements, total water supply would increase to 79 MGD in 2025.[83] The 2015 urban water management plan indicates that the SFPUC would be able to meet retail water demand through 2040 during normal-year and single dry-year events.[84] During normal precipitation years, the SFPUC will have adequate supplies to meet its projected retail water demands. If a multiple dry year event occurs, the SFPUC would experience shortages in 2040 during years two and three without development of additional supply concepts.

The proposed project or variant would result in the addition of residential and retail uses to the site, which would increase water demand at the site. The proposed streetscape improvements would include more landscaping than is present at the site under current conditions, which would require water supply for irrigation. Based on the water supply assessment prepared for the proposed project and reviewed and approved by the SFPUC, the proposed project would have an estimated demand of 116,581 gallons per day for both potable and nonpotable water supplies.[85] Because the proposed variant would include comparable residential uses, retail uses, and landscaping as the proposed project, the water supply and demand for the proposed variant is anticipated to be

[82] San Francisco Public Utilities Commission, *2015 Urban Water Management Plan for the City and County of San Francisco,* June 2016.

[83] Ibid.

[84] Ibid.

[85] San Francisco Public Utilities Commission, *Water Supply Assessment for the 10 South Van Ness Project*, adopted February 2, 2017.

approximately the same as the proposed project. The project specific water supply assessment concluded that SFPUC would have adequate water supplies to accommodate the project.

Additionally, the project incorporates several water saving measures. For example, during project construction, the project sponsor and project building contractor must comply with article 21 of the San Francisco Public Works Code, which requires that nonpotable water be used for dust-control activities unless permission is obtained from SFPUC. Article 12C of the San Francisco Health Code, Alternate Water Sources for Non-Potable Applications, allows the collection, treatment, and use of alternate water sources for nonpotable applications. In addition, article 12C requires that all new development projects of 250,000 sf or more of gross floor area install onsite water systems to treat and reuse available alternate water sources for toilet and urinal flushing and irrigation. Developments over 250,000 sf of gross floor area must submit a water budget application and accompanying Water Use Calculator to the SFPUC. Because the proposed project or variant would be over 250,000 gsf, the proposed project or variant would employ a blackwater recycling system, which would recycle wastewater generated by in the building for onsite nonpotable uses, including toilet flushing, irrigation, and HVAC/cooling demand.

The entirety of the proposed project's or variant's toilet/urinal, HVAC, and irrigation water demands would be met by onsite sources, including the proposed blackwater recycling system and proposed stormwater/rainwater collection features. In addition, in compliance with Title 24 of the California Code of Regulations and the City's Green Building Ordinance, the proposed project or variant would include water-efficient fixtures to reduce the amount of potable water used for building functions. The proposed project or variant would comply with chapter 63 of the San Francisco Administrative Code, the San Francisco Water Efficient Irrigation Ordinance, which requires projects to design, install, and maintain efficient irrigation systems, utilize low water-use plantings, and set a maximum applied water allowance (an annual water budget). Overall, the proposed project or variant is anticipated to offset approximately 29 percent of the overall water demand of the proposed project or variant through compliance with this provision.[86]

Because the water demand associated with the proposed project or the variant could be accommodated by SFPUC's existing and planned supplies, and because the proposed project or variant would include water saving measures, the proposed project or variant would not result in a substantial increase in water use on the project site that would result in the need for new water supply entitlements or resources or the construction of new water treatment facilities. Therefore, impacts related to water supply would be less than significant.

Impact UT-3: The proposed project or variant would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs, and would comply with federal, state, and local statutes and regulations related to solid waste. (*Less than Significant*)

In September 2015, the City approved an agreement with Recology, Inc. for the transport and disposal of the City's municipal solid waste at the Recology Hay Road Landfill in Solano County for approximately nine years or until 3.4 million tons of municipal solid waste have been disposed (whichever occurs first). The City would have an option to renew the agreement thereafter for an additional six years or until an additional 1.6 million tons have

[86] Ibid.

been disposed (whichever occurs first).[87] The Recology Hay Road Landfill is permitted to accept up to 2,400 tons of waste per day, and, assuming the maximum throughput is transferred to the landfill each day, the landfill has permitted capacity to receive waste approximately through the year 2034.[88] The current estimated rate of disposal is approximately 1,851 tons, which would result in closure in approximately 2041.[89] Recology also operates San Francisco's Transfer Station, located at 501 Tunnel Avenue in San Francisco. The San Francisco Transfer Station has a maximum permitted throughput of 3,000 tons per day.

The California Integrated Waste Management Act of 1989 (Assembly Bill 939) requires municipalities to adopt an Integrated Waste Management Plan to establish objectives, policies, and programs related to waste disposal, management, source reduction, and recycling. San Francisco Ordinance No. 27-06 requires a minimum of 75 percent solid waste diversion by 2010, which it exceeded by 5 percent, and has a goal of 100 percent solid waste diversion, or "zero waste," to landfill or incineration by 2020.[90] Chapter 14 of the San Francisco Environment Code, the Construction and Demolition Debris Recovery Ordinance, requires that construction and demolition debris be transported by a registered transporter and be processed by a registered facility that must recover for reuse or recycling and divert from landfill at least 65 percent of construction and demolition debris. Pursuant to section 4.103.2.3 of the San Francisco Green Building Code, new high-rise residential buildings are required to divert at least 75 percent of construction and demolition waste. Projects that would fully demolish an existing structure must submit a waste diversion plan to the Director of the San Francisco Department of the Environment at the time of application for a demolition permit. The waste diversion plan must provide a list of all material types and volumes anticipated from the demolition; the market or destination for each material; the estimated recovery rate (diversion from landfill) by material or market; and the anticipated transporter for each material type. Chapter 19 of the San Francisco Environment Code, the Mandatory Recycling and Composting Ordinance, requires all employees, visitors, residents, and businesses within the city to separate their recyclables, compostables, and landfill trash.

The rate of waste disposal of the proposed project or variant is anticipated to be consistent with waste disposal rates within the city as a whole. Furthermore, the Hay Road Landfill, as discussed above, has adequate capacity to serve increased demand from the proposed project or the variant. Through compliance with all City ordinances related to waste during both construction and operation, implementation of the proposed project or variant would not impede the City's waste diversion goals. Because the proposed project or variant would involve demolition of a building in full and would construct a high-rise residential building, the project sponsor would be required to prepare and implement a waste diversion plan and divert at least 75 percent of construction and demolition waste, as required by the Construction and Demolition Debris Recovery Ordinance and the San Francisco Green Building Code. Therefore, solid waste impacts would be less than significant.

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[87] City and County of San Francisco, *Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County,* Final Negative Declaration, Planning Department Case No. 2014.0653E, May 21, 2015, and further amended July 20, 2015, *http://sfmea.sfplanning.org/2014.0653E_Revised_FND.pdf*, accessed January 26, 2017.

[88] Ibid.

[89] Ibid.

[90] San Francisco Department of the Environment, 2016, Zero Waste – Frequently Asked Questions, *https://sfenvironment.org/zero-waste-faqs*, accessed January 26, 2017, and April 24, 2018.

Impact-C-UT-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not result in a significant cumulative impact related to utilities and services systems. (*Less than Significant*)

As discussed above, the SFPUC provides water, wastewater, and stormwater services within the city and Recology provides solid waste service. The SFPUC has incorporated the demand associated with cumulative projects into its future water supply and wastewater service projections identified in the urban water management plan[91] As discussed under Impact C-PH-1, cumulative projects would not result in population growth beyond what has been projected by the City and ABAG as the basis for water supply and wastewater service projections. The City and County of San Francisco currently exceeds statewide goals for reducing solid waste and is expected to reduce solid waste volumes further in the future through several ordinances. For these reasons, cumulative utilities and service systems impacts would be less than significant.

[91] San Francisco Public Utilities Commission, *2015 Urban Water Management Plan for the City and County of San Francisco*, June 2016.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
11. PUBLIC SERVICES					
Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services such as fire protection, police protection, schools, parks, or other services?	☐	☐	☒	☐	☐

Public Services

Impacts to parks and recreational facilities are discussed under topic E.9, Recreation.

The proposed project and variant share a comparable program of development, with the same number of units and similar amount of commercial retail uses and associated police, fire, and school needs. For this reason, the potential public services impacts resulting from operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

Impact PS-1: The proposed project or variant would increase demand for police or fire services but not to the extent that would require new or physically altered of facilities the construction of which could cause significant environmental effects. (*Less than Significant*)

The project site is served by the San Francisco Police Department and the San Francisco Fire Department. The San Francisco Police Department (SFPD), headquartered at 850 Bryant Street, divides the city into two divisions, Metro and Golden Gate, and each division is divided into five districts. The project site is located within the Metro Division and is part of the Southern Police District, which is made up of the South of Market, South Beach, Mission Bay areas. The nearest police stations are: the Tenderloin Task Force Police Station, at 301 Eddy Street, approximately 4,000 feet (0.76 mile) northeast of the project site, the Mission Police Station, at 630 Valencia Street, approximately 4,000 feet (0.76 mile) southwest of the project site and the Northern Police Station, at 1125 Fillmore Street, approximately 4,500 feet (0.85 mile) northwest of the project site.[92]

The closest fire station is Station No. 36, at 109 Oak Street, approximately 400 feet (0.08 mile) northwest of the project site. Other nearby fire stations include Station 5, at 1301 Turk Street, approximately 4,000 feet (0.80 mile) northwest of the site; Station No. 6, at 135 Sanchez Street at Henry Street, approximately 4,500 feet (0.85 mile) southwest of the project site; Station No. 3, at 1067 Post Street at Polk Street, approximately 4,500 feet (0.85 mile) northeast of the project site, and Station No. 7, at 2300 Folsom Street at 19th Street, approximately 5,000 feet (0.95 mile) south of the project site.[93]

[92] San Francisco Police Department, Police District Maps, *http://sanfranciscopolice.org/police-district-maps*, accessed December 20, 2017.

[93] San Francisco Fire Department, Fire Station Locations, *http://sf-fire.org/FIRE-STATION-LOCATIONS*, accessed April 24, 2018.

The proposed project or variant would be equipped with fire prevention systems, such as fire sprinklers, smoke alarms, and fire alarms. Construction of the proposed project or variant would be required to comply with the California Fire Code, which establishes requirements pertaining to fire protection systems, including the provision of state-mandated fire alarms, fire extinguishers, appropriate building access and egress, and emergency response notification systems.

The proposed project or variant would add 984 residential units and approximately 30,350 or 30,450 gsf of retail uses, respectively, to the project site. Using the average household size of 2.19 persons per household in the city, 984 residential units would result in 2,155 additional permanent residents on the project site.[94] This increase would result in more calls for police protection, fire protection, and emergency response services relative to the existing use onsite, which does not support any permanent residents. However, given the overall demand for these services in San Francisco, the increase in demand for police and fire services resulting from the proposed project would be incremental and would be accommodated by existing facilities and personnel. The project site is in close proximity to several San Francisco Police Department and Fire Department stations, which would minimize response times to calls received from the proposed project or variant. Implementation of the proposed project or variant would therefore not require the construction of new or alteration of existing police or fire facilities. This impact would be less than significant.

Impact PS-2: The proposed project or variant would not result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered schools. (*Less than Significant*)

Implementation of the proposed project or variant would result in 984 residential units and an anticipated population of 2,155 residents,[95] which would result in the need to accommodate approximately 99 K–12 students in local schools.[96,97] Some of these students would attend schools operated by the San Francisco Unified School District (SFUSD), while others might attend private schools. It is anticipated that existing SFUSD schools in the project vicinity would be able to accommodate this minor increase in demand. Furthermore, the project sponsor would be required to pay a school impact fee based on the construction of net new residential square footage to fund SFUSD facilities and operations (through the DBI) pursuant to section 17620 of the California Education Code. Section 65995(h) of the California Government Code determines that such fees are considered full and complete mitigation of the impacts of development on local school systems. Because developer school fees would be paid, the impact related to provision of school services would be less than significant.

[94] U.S. Census Bureau, 5-Year Estimates, San Francisco County, Demographic and Housing Estimates, 2011–2015 American Community Survey, *https://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml*, accessed July 31, 2017.

[95] Based on the U.S. Census Bureau's most recent American Community Survey (2011–2015), the total number of housing units in San Francisco is 383,676 and estimated population is 840,763 (which gives an average of 2.19 persons per household).

[96] San Francisco Planning Department, Transit Center District Plan and Transit Tower Final Environmental Impact Report, Case No. 2007.0558E and 2008.0789E, May 24, 2012, p. 548. Based on student generation rates of 0.25 students for BMR units and 0.05 students for market rate units.

[97] The per unit student generation rate is greater for BMR residential units; therefore, this analysis conservatively assumes the proposed project or the variant would provide 25 percent BMR units onsite.

Impact PS-3: The proposed project or variant would not increase demand for other government services, and would not result in a substantial adverse impact due to the construction or alteration of facilities to provide such services. (*Less than Significant*)

The San Francisco Public Library (SFPL) provides library services in San Francisco, operating the Main Branch at Civic Center as well as 27 neighborhood branches. As of 2016, the public library system had a collection of 3,809,319 items, consisting of books, CDs, DVDs, sheet music, periodicals, government documents, and software. During the 2015–2016 fiscal year, the San Francisco Public Library had a total of 6,362,573 library visits; branch libraries averaged 150,945 library visits.[98] Neighborhood branches provide reading rooms, book lending, information services, technological resources, and public programs, including youth-oriented programs.[99] The average collection size across the branches for the 2015–2016 fiscal year was 44,393 items, although any library branch can receive materials from the system's overall collection. A total of 10,778,428 items across all libraries were circulated in 2015–2016.

As stated above, the proposed project and the variant would construct 984 residential units, which would result in 2,155 additional permanent residents on the project site. This increase in permanent residents would result in increased demand for libraries and other government services. However, given the overall demand for these services in San Francisco, the increase in demand for libraries and other government services resulting from the proposed project would be incremental. Project-related increases to the city's tax base would support the provision of libraries and other government services in the city. The proposed project and variant would be closest to Main Branch of the San Francisco Public Library; however, the Main Branch and other public and private libraries available in the area and throughout San Francisco are available to serve the additional 2,155 permanent residents. In addition, the San Francisco Public Library regularly evaluates resources to ensure that adequate service is maintained. The Main Branch, other public and private libraries in the project area, and other government services would be able to accommodate the residents of the proposed project and variant. Impacts to library services and other government services would therefore be less than significant.

Impact-C-PS-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not result in a significant cumulative impact related to public services. (*Less than Significant*)

Cumulative development in the project area would incrementally increase demand for police, fire, school, and library services, but not beyond levels anticipated and planned for by public service providers. The project sponsor and the sponsors of other development projects would contribute to the SFUSD through development fees, and property taxes generated by the projects would contribute to services from the San Francisco Police and Fire departments. Therefore, cumulative impacts to public services would be less than significant.

[98] San Francisco Public Library, System-wide Statistics FY 2015–2016, September 2016, *http://sfpl.org/pdf/about/administration/statistics-reports/Statisticsbylocation2015-16.pdf*, accessed January 27, 2017.

[99] San Francisco Public Library, Statistics by Location 2015–2016, June 30, 2016, *http://sfpl.org/pdf/about/administration/statistics-reports/Statisticsbylocation2015-16.pdf*, accessed October 17, 2016.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
12. BIOLOGICAL RESOURCES					
Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☐	☒
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☐	☒

Biological Resources

Construction for both the proposed project and the variant would involve the same location and activities, in an urban area of San Francisco. As under the proposed project, construction and operation of the proposed variant would result in 33 net new street trees. For these reasons, the potential biological resources impacts from construction and operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

The project site is located in a developed area almost entirely covered by impervious surfaces with a small number of non-native, ornamental plants and street trees in the project area. The project site does not include riparian habitat or other sensitive natural communities as defined by the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service; therefore, topic 12b is not applicable. In addition, the project site does not contain any wetlands as defined by section 404 of the Clean Water Act; therefore, topic 12c is not applicable. Lastly, the project site does not fall within any local, regional, or state habitat conservation plans; therefore, topic 12f is not applicable.

Impact BI-1: The proposed project or variant would not have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (*Less than Significant*)

The project site is located within a dense urban environment with high levels of human activity. The project site includes an existing building and a small number of non-native, ornamental plants and trees. Eight street trees are along South Van Ness Avenue, six along Market Street, and 14 along 12th Street. The plants and trees on the project site are not considered sensitive habitat for rare or endangered species. Further, the project site and surrounding area are entirely covered with impervious surfaces and do not include riparian habitat or other sensitive natural communities as defined by the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service. Therefore, the project site does not provide habitat for any rare or endangered plant or animal species. Thus, the proposed project or variant would not adversely affect or substantially diminish plant or animal habitats directly or through modifications. Given the existing conditions of the project site, neither the proposed project nor the variant would affect any rare, threatened, or endangered species.

The proposed project's location, height, and materiality, particularly the inclusion of transparent or reflective glass, may present risks for birds as they travel along their migratory paths. As discussed in Item BI-2 below the proposed project and variant would comply with Planning Code section 139, Standards for Bird-Safe Buildings, which establishes building design standards to reduce avian mortality rates associated with bird strikes.[100] Additionally, the proposed project would be subject to, and would comply with, City-adopted regulations for bird-safe buildings, and federal and State migratory bird regulations. Even though incidental bird strikes may occur, and may involve special status avian species the proposed project or variant would not interfere with the movement of native resident or wildlife species or with established native resident or migratory wildlife corridors. This impact would be less than significant.

Impact BI-2: The proposed project or variant would not interfere substantially with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. (*Less than Significant*)

Nesting Birds

As discussed in Item BI-3, below, the project would include tree removal. Nesting birds may be present in the existing street trees and foliage surrounding the project site. As such, if tree removal would occur during the nesting season (January 15 through August 15) or during the breeding season (March through August), nesting birds could be disturbed. This would be considered a potentially significant impact.

The project would comply with California Fish and Game Code section 3500 et al., including sections 3503, 3503.5, 3511, and 3513, which provide that it is unlawful to take or possess any migratory nongame bird, or needlessly destroy nests of birds except as otherwise outlined in the code. Staff at the California Department of Fish and Wildlife (CDFW) enforce the code by requiring that projects incorporate measures to avoid and minimize impacts to nesting birds if any tree removal would occur during the nesting or breeding season. For example, a qualified biologist would conduct a tree survey within 15 days before the start of construction occurring in March through

[100] San Francisco Planning Department, *Standards for Bird-Safe Buildings*, adopted by the San Francisco Planning Commission July 14, 2011, *http://default.sfplanning.org/publications_reports/bird_safe_bldgs/Standards%20for%20Bird%20Safe%20Buildings%20-%2011-30-11.pdf*, accessed April 24, 2018.

May; or 30 days before the start of construction occurring in June through August. These surveys would help establish the presence of any nesting birds that would need to be protected through avoidance and minimization measures. Additionally, CDFW staff may require notifications if any active nests are identified including consultation with CDFW and establishment of construction-free buffer zones.

Compliance with these existing state regulations would ensure that project impacts relating to nesting birds would be less-than-significant.

Migratory Birds

Migrating birds traveling through San Francisco are subject to risks associated with collision with tall structures, depending on the location, height, and material of the building, particularly those with transparent or reflective glass. Thus, the tall tower(s) proposed under the project and variant could have a potentially significant impact on migrating birds.

San Francisco Planning Code section 139, Standards for Bird-Safe Buildings, sets building design standards to reduce avian mortality rates associated with bird strikes for location-related hazards where the siting of a structure creates a high risk to birds,[101] and feature-related hazards that include building design features for structures that create a high risk to birds, due to height, fenestration, etc.[102] The project would be subject to section 139 requirements as it includes a tall tower that may incorporate standing transparent/reflective glass sidings, wind barriers, and balconies, which are considered feature related hazards to migratory birds. As such, the project would use bird safe glazing treatment on the building's glass sliding, as well as any other glass architectural elements. With incorporation of section 139 requirements, project impacts to migratory birds would be less-than-significant.

Compliance with applicable local, state, and federal requirements protecting biological resources would ensure that potential impacts of the proposed project related to the movement of native resident wildlife species, migratory wildlife corridors, or native wildlife nursery sites would be considered less-than-significant.

Impact BI-3: The proposed project or variant would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (*Less than Significant*)

The City's Urban Forestry Ordinance, San Francisco Public Works Code section 801 et seq., requires a permit from San Francisco Public Works for removal of any protected trees. Protected trees include landmark trees, significant trees, or street trees located on private or public property anywhere within the territorial limits of the City and County of San Francisco. The designations are defined as follows.

- ***Landmark trees*** are designated by the board of supervisors upon the recommendation of the Urban Forestry Council, which determines whether a nominated tree meets the qualification for landmark designation by using established criteria (section 810). Special permits are required to remove a landmark tree on private property or on City-owned property.

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101 Projects must be located less than 300 feet from an Urban Bird Refuge to pose location-related hazards under San Francisco Planning Code section 139.

102 Examples of feature-related hazards under San Francisco Planning Code Section 139 include standing transparent or reflective glass sidings, wind barriers, skywalks, and balconies.

- ***Significant trees*** are those trees within the jurisdiction of the San Francisco Public Works, or trees on private property within 10 feet of the public right-of-way, that meet certain size criteria. To be considered significant, a tree must have a diameter at breast height of more than 12 inches, a height of more than 20 feet, or a canopy of more than 15 feet (section 810[A][a]). The removal of significant trees on privately owned property is subject to the requirements for the removal of street trees. As part of the determination to authorize removal of a significant tree, the director of San Francisco Public Works is required to consider certain factors related to the tree, including (among others) its size, age, species, and visual, cultural, and ecological characteristics (section 810A[c]).
- ***Street trees*** are trees within the public right-of-way or on land within the jurisdiction of the San Francisco Public Works. Their removal by abutting property owners requires a permit.

No landmark or significant trees exist on the project site.[103] The proposed project or variant would remove 28 street trees. As such, the project sponsor would be required to obtain a tree removal permit in accordance with San Francisco Public Works Code section 806. The project sponsor would plant 61 new trees, resulting in 33 net new street trees in compliance with San Francisco Planning Code section 138.1, the Better Streets Plan. San Francisco Planning Code section 138.1 requires new construction, significant alterations, or relocation of building projects within any zoning district to include the planting of one 24-inch box tree for every 20 feet along the project site's street or alley frontage, with any remaining fraction of 10 feet or more requiring an additional tree. The new trees that would be planted under the proposed project or variant would be required to comply with the requirements of the Better Streets Plan, the Better Market Street Project, and the Safer Market Street Project.

Compliance with existing regulations would ensure that the proposed project or variant would not conflict with local policies or ordinances protecting biological resources and would have less-than-significant impacts.

Impact-C-BI-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not result in a significant cumulative impact related to biological resources. (*Less than Significant*)

The cumulative development projects noted in Table 3, Cumulative Projects, would result in the intensification of land uses within a dense urban environment that does not include any candidate, sensitive, or special-status species, any riparian habitat, or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Cumulative development would add tall buildings that can injure or kill birds in the event of a collision. In addition, nearby cumulative development projects would result in the removal of existing street trees or other vegetation. However, nearby cumulative development projects would be subject to the California Fish and Game Code regulations, as well as City bird-safe building and urban forestry ordinances applicable to the proposed project and variant. Compliance with existing ordinances would reduce the effects of nearby cumulative development projects to less-than-significant levels.

In summary, implementation of the proposed project or variant in combination with other past, present, and reasonably foreseeable projects would not modify any natural habitat and would have a-less-than-significant impact on any candidate, sensitive, or special-status species, any riparian habitat, or other sensitive natural community, and would not conflict with any local policy or ordinance protecting biological resources or an

[103] San Francisco Department of the Environment, Map of San Francisco's Landmark Trees, *https://sfenvironment.org/article/landmark-tree-program/map-of-san-francisco%E2%80%9A%27s-landmark-trees*, accessed August 3, 2017.

approved conservation plan. For these reasons, the proposed project or variant would not combine with past, present, and reasonably foreseeable future projects in the vicinity to result in a significant cumulative impact related to biological resources, and impacts would be less than significant.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
13. GEOLOGY AND SOILS **Would the project:**					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐	☐
ii) Strong seismic ground shaking?	☐	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐	☐
iv) Landslides?	☐	☐	☒	☐	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐	☐
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, (1994) creating substantial risks to life or property?	☐	☐	☒	☐	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐	☐

Geology and Soils

The proposed project or variant would connect to the existing sewer system, and there would be no use of septic tanks or alternative wastewater disposal systems for the proposed project or variant. Therefore, topic 13e, impacts resulting from use of septic tanks or alternative wastewater disposal systems on unstable soils, is not applicable to the proposed project or variant and will not be addressed further.

This section describes the geology, soils, and seismicity characteristics of the project area as they relate to the proposed project and variant. The analysis in this section is based on geotechnical reports prepared for the

proposed project and variant by an independent consultant.[104,105] These reports are the primary sources of information included in this section. The scope of the geotechnical investigation included reviewing test boring logs previously carried out at the site; consultation with BART and SFMTA representatives; evaluation of soil classification, subsurface conditions, seismicity, slide potential; and design recommendations.

Geology of the Site

Based on borings and collected data in the geotechnical investigations,[106,107] the project site is underlain by 10–30 feet of sandy fill and native Dune Sand, which are loose to dense and exhibit low to moderate strength. The sands are underlain by an approximately 5- to 10-foot-thick marsh deposit consisting of loose to dense silty and clayey sand. Below the marsh deposit, starting at approximately 25 feet below ground surface (bgs) is dense to very dense fine sand, silty sand, and clayey sand, referred to as the Colma formation. The Colma formation extends to at least 194 feet bgs, and includes strong residual soil (weathered rock) consisting of very stiff to hard sandy clay and clay with gravel. The geotechnical investigation states that Colma formation would be capable of supporting the load of the proposed project or variant whether a mat foundation or deep piers are used. The borings revealed that bedrock, comprised of shale of the Franciscan formation, was encountered at approximately 211 feet bgs.

Project Features

The northern third of the project site includes a subsurface easement for the existing BART tunnel, which is located 19.62 feet below grade. The invert of the BART tunnel is approximately 85 feet below ground surface.[108,109] This northern half of project site is within the BART zone of influence (ZOI)[110]; therefore, structural loads associated with the proposed project must remain equal to or less than existing loads on the BART tunnel. At this location, the foundation for the podium structures under the proposed project and variant could be supported by a mat foundation approximately 35 feet bgs without putting any additional stress on the BART tunnel. However, the towers under both the proposed project and variant on top of the BART zone of influence would need to be supported by a deep foundation system to a depth of approximately 50–80 feet bgs consisting of piers with double casings that would derive supporting capacity from the soil beneath the BART zone of influence. The deep foundation system would be drilled cast-in-place piers, which would be constructed by digging cylindrical shafts and then filling them with wet concrete. Thus, no pile driving would be required. Outside of the BART ZOI, the tower and podium structures could be supported by either a deep foundation system or a mat foundation.[111] The final lengths will be determined once the foundation system is designed,

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104 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [proposed project], *10 South Van Ness Avenue, San Francisco, California*, March 16, 2017. This document (and all other documents cited in this report, unless otherwise noted) is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, as part of Case File No. 2015-004568ENV.

105 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [variant], *10 South Van Ness Avenue, San Francisco, California*, June 6, 2017.

106 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [proposed project], *10 South Van Ness Avenue, San Francisco, California*, March 16, 2017.

107 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [variant], *10 South Van Ness Avenue, San Francisco, California*, June 6, 2017.

108 "Invert" refers to the bottom of the tunnel.

109 Langan Engineering and Environmental Services, Inc., Geotechnical Investigation [proposed project], 10 South Van Ness Avenue, March 16, 2017.

110 The BART zone of influence is defined by drawing imaginary lines from the critical point of BART's substructure at a slope of 1-1/2 (horizontal) to 1 (vertical) toward the ground surface.

111 Ibid.

reviewed by BART and has gone through the rigorous code-mandated design peer review process for all high-rise construction, commonly known as SDRP (Structural Design Review Panel).

BART would review the project's structural plans and final geotechnical and geological hazards evaluation reports for the design to ensure compliance with its guidelines for construction over and adjacent to its subway structures. The reports will include an engineering geology map, a site plan showing the location of subway structures, BART easements, a soil reworking plan, and the geotechnical conclusion and recommendations.

The project site would be excavated up to approximately 40 feet below grade in the northern portion and 50 feet below grade in the southern portion of the site. Excavation in the northern portion of the site would be shallower due to the presence of the subsurface BART tunnel, which at its lowest point is approximately 85 feet bgs. At this location, the foundation for the podium structures under the proposed project could be supported by a mat foundation approximately 35 feet bgs and satisfy the requirement that structural loads associated with the proposed project can be no greater than the existing loads on the BART tunnel. The proposed project or variant would require that approximately 100,000 cubic yards of excavated soil be removed from the project site and disposed of at an appropriate facility.[112,113] Groundwater was encountered on the project site ranging from 15 to 25 feet bgs at different locations; therefore, dewatering may be required.

The 55-story single tower variant (590 feet tall [up to 610 feet including the elevator penthouse]) would fundamentally have the same foundation type and design methodology as the 41-story double tower (400 feet tall [up to 420 feet including the elevator penthouse]) under the proposed project. In both cases the tower columns and shear walls would be founded on a common pile cap.[114] This pile cap would be supported by drilled piers extending below the BART Zone of Influence, to a depth of approximately 50–80 feet bgs, but not to the depth of the underlying bedrock because the Colma formation is strong enough to support the proposed project or variant. The proposed project with two towers would require more columns, shear walls, and piers compared to the single tower variant. However, because the proposed project and variant would have similar foundation designs and are anticipated to be constructed with a combination of a mat foundation and deep foundation piers, the potential geology and soils impacts resulting from construction and operation of either the proposed project or variant are anticipated to be the same.

Regulatory Framework

Under the direction and management of the seven-member Building Inspection Commission, the mission of the San Francisco Department of Building Inspection (the building department) is to oversee the effective, efficient, fair and safe enforcement of the City and County of San Francisco's Building, Housing, Plumbing, Electrical, and Mechanical Codes, along with the Disability Access Regulations. To ensure that the potential for adverse geologic, soils, and seismic hazards is adequately addressed, San Francisco relies on the state and local regulatory process for review and approval of building permits pursuant to the California Building Standards Code (state building code, California Code of Regulations, title 24); the San Francisco Building Code (local building code), which is the state building code plus local amendments that supplement the state code; the building department's

112 Ibid., p. 13.

113 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [variant], *10 South Van Ness Avenue, San Francisco, California,* June 6, 2017, p. 12.

114 A pile cap is a thick concrete mat that is placed on and fastened to the top of a group of piles that have been driven into soft or unstable ground to transmit loads and provide a suitable stable foundation.

implementing procedures including Administrative Bulletins and Information Sheets, and the State Seismic Hazards Mapping Act of 1990 (seismic hazards act), located in Public Resources Code sections 2690 to 2699.6.

The California Building Standards Code, or state building code, is codified in title 24 of the California Code of Regulations. The state building code provides standards that must be met to safeguard life or limb, health, property, and public welfare by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all buildings and structures within the state. The state building code generally applies to all occupancies in California, with modifications adopted in some instances by state agencies or local governing bodies. The current state building code incorporates, by adoption, the 2016 edition of the International Building Code of the International Code Council with the California amendments. These amendments include significant building design and construction criteria that have been tailored for California earthquake conditions.

Chapter 16 of the state building code addresses structural design requirements governing seismically resistant construction (section 1604), including, but not limited to, factors and coefficients used to establish a seismic site class and seismic occupancy category appropriate for the soil/rock at the building location and the proposed building design (sections 1613.5 through 1613.7). Chapter 18 includes, but is not limited to, the requirements for foundation and soil investigations (section 1803); excavation, grading, and fill (section 1804); allowable load-bearing values of soils (section 1806); foundation and retaining walls, (section 1807); and foundation support systems (sections 1808 through 1810). Chapter 33 includes, but is not limited to, requirements for safeguards at work sites to ensure stable excavations and cut-or-fill slopes (section 3304) and the protection of adjacent properties including requirements for noticing (section 3307). Appendix J of the state building code includes, but is not limited to, grading requirements for the design of excavations and fills (sections J106 and J107) specifying maximum limits on the slope of cut and fill surfaces and other criteria, required setbacks and slope protection for cut and fill slopes (J108), and erosion control in general and regarding the provision of drainage facilities and terracing (sections J109 and J110). San Francisco has adopted Appendix J of the state building code with amendments to J103, J104, J106, and J109 as articulated in the local building code.

The seismic hazards act, enacted in 1990, requires the California State Geologist to create maps identifying seismic hazard zones in order for cities and counties to adequately prepare the safety element of their general plans and to encourage land use management policies and regulations to reduce and mitigate those hazards to protect public health and safety. The seismic hazard act includes guidelines for the preparation of seismic hazard maps, policies and criteria regarding the responsibilities of city, county, and state agencies; criteria for project approval, and guidelines for evaluating seismic hazards and recommending mitigation measures.[115]

All projects located within a state-designated seismic hazard zone for liquefaction or landslide hazard are subject to state seismic hazards act requirements, which include the preparation of a geotechnical investigation to delineate the area of hazard and propose mitigation measures to address any identified seismic hazards. The local building official must incorporate the recommended mitigation measures to address such hazards into the conditions of the building permit. The project site is within a seismic hazard zone (liquefaction zone), as discussed below; thus, site design and construction must comply with the requirements of the seismic hazard act.

[115] In the context of the seismic hazards act, "mitigation" refers to measures that are consistent with established practice and that will reduce seismic risk to acceptable levels, rather than the mitigation measures identified in the California Environmental Quality Act (CEQA) to reduce or avoid the environmental impacts of a proposed project.

In addition to compliance with the building code and seismic hazards act, the proposed project and variant would follow the building department's local implementing procedures including Administrative Bulletins (AB) (which are part of the local building code) and Information Sheets (IS), which clarify building department requirements and procedures. On December 27, 2017, the building department issued IS S-18, Interim Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review for New Tall Buildings (interim guidelines).[116] The interim guidelines supplement and clarify the information in AB 082 (Guidelines and Procedures for Structural Design Review)[117] as well as AB 083 (Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures).[118] Tall buildings are defined as those 240 feet or taller, which includes the subject building. The interim guidelines specify requirements for Geotechnical Engineering peer reviews including the scope of geotechnical and structural review conducted by qualified geotechnical reviewers as part of a Geotechnical Engineering Design Review Team (review team).[119]

The project sponsor's engineer of record for the project or variant would work with the two-member review team to and resolve all comments related to the foundation design in order to achieve consensus on the adequacy of the building's foundation and structural design. A report of the findings from the review team shall be provided to the director of the building department. The report will provide findings and address following issues: the foundation type (shallow or deep), foundation design, interpretation of geotechnical and geological investigations, soil-foundation-structure interaction under static and seismic loading conditions, effects of dewatering and construction-related activities on the site and in the vicinity, and foundation or building settlement. The interim guidance also requires that prior to the completion of the proposed project or the variant, the project sponsor would contract with qualified monitoring surveyors and instrumentation engineers to monitor the effects of settlement on the building and foundations of the project for a period of ten years after the issuance of the certificate of final completion and occupancy. The findings from the post-occupancy surveys shall be provided to the building department annually within this 10-year period.

Approach to Analysis

In the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015,[120] the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing hazards or conditions might impact a project's users or residents, except where the project would significantly exacerbate an existing environmental hazard. Accordingly, hazards resulting from a project that places development in an existing or future seismic hazard area or an area with unstable soils are not considered impacts under CEQA unless the project would significantly exacerbate the seismic hazard or unstable soil conditions. Thus, the following analysis evaluates whether the proposed project would exacerbate future seismic hazards or unstable soils at the project site and result in a substantial risk of loss, injury, or death. The impact

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116 San Francisco Department of Building Inspection, December 27, 2017, Information Sheet No. S-18, *Interim Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review for New Tall Buildings*, http://sfdbi.org/sites/default/files/IS%20S-18.pdf, accessed April 24, 2018.

117 San Francisco Department of Building Inspection, December 19, 2016, Administrative Bulletin 082, *Guidelines and Procedures for Structural Design Review*, http://sfdbi.org/sites/default/files/AB-082.pdf, accessed April 24, 2018.

118 San Francisco Department of Building Inspection, March 25, 2008 (updated January 1, 2014 for code references), Administrative Bulletin 083, *Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures,* http://sfdbi.org//sites/default/files/Documents/Administrative_Bulletins/2013_AB/AB_083_updated_010114.pdf, accessed April 24, 2018.

119 A qualified geotechnical reviewer for Engineering Design Review Teams shall be a geotechnical engineer (G.E.) registered in California or a Civil Engineer (C.E.) registered in California with substantially demonstrated geotechnical experience.

120 *California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal.4th 369, opinion filed December 17, 2015.

would be significant if the proposed project would exacerbate existing or future seismic hazards or unstable soils by increasing the severity of these hazards that would occur or be present without the project.

Impact GE-1: The proposed project or variant would not exacerbate the potential to expose people or structures to seismic and geologic hazards, including the risk of loss, injury, or death involving rupture, ground shaking, liquefaction, or landslides. (*Less than Significant*)

As discussed above under "Regulatory Framework," the building department oversees the effective, efficient, fair and safe enforcement of the City and County of San Francisco's Building, Housing, Plumbing, Electrical, and Mechanical Codes, along with the Disability Access Regulations. To ensure that the potential for adverse geologic, soils, and seismic hazards is adequately addressed, San Francisco relies on the state and local regulatory process for review and approval of building permits pursuant to the California Building Standards Code (state building code, California Code of Regulations, title 24); the San Francisco Building Code (local building code), which is the state building code plus local amendments that supplement the state code; the building department's implementing procedures including Administrative Bulletins and Information Sheets, and the state seismic hazards act (Public Resources Code sections 2690 to 2699.6).

The project site is within a seismic hazard zone (liquefaction zone), as discussed below; thus, site design and construction must comply with the requirements of the seismic hazards act.

Fault Rupture

The project site is not within an earthquake fault zone, as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no known fault or potentially active fault exists within the project site.[121] In a seismically active area, such as the San Francisco Bay Area, the remote possibility exists for future faulting in areas where no faults previously existed, but the likelihood of such fault rupture is extremely low. Therefore, this impact would be less than significant.

Ground Shaking

The San Andreas, Hayward, and Calaveras faults are the major faults closest to the site. The site is approximately 7 miles east of the San Andreas Fault, 11 miles west of the Hayward Fault, and 22 miles west of the Calaveras Fault. The proposed project or variant would likely experience periodic minor earthquakes and perhaps a major earthquake (moment magnitude greater than 6) on one of the nearby faults during its service life. The intensity of earthquake ground motion at the site would depend upon the characteristics of the generating fault, distance to the earthquake epicenter, magnitude, and duration of the earthquake. The ground shaking at the project site during a major earthquake on one of the nearby faults would be very strong.

ABAG has classified the Modified Mercalli Intensity Shaking Severity Level of ground shaking in vicinity of the proposed project or variant due to an earthquake on the North San Andreas Fault as "VIII-Very Strong."[122] "Very strong" is defined as shaking that would result in damage to some masonry buildings, fall of stucco and some masonry walls, fall of chimneys and elevated tanks, and shifting of unbolted wood frame structures off their foundations. In accordance with the state and local building code requirements described above, the geotechnical

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121 California Department of Conservation, Division of Mines and Geology, *Seismic Hazard Zone Report for the City and County of San Francisco, California*, Seismic Hazard Zone Report 043, November 17, 2000.

122 Association of Bay Area Governments, Earthquake Hazard Map for San Francisco Scenario: Entire San Andreas Fault System, *http://resilience.abag.ca.gov/earthquakes*, accessed March 21, 2018.

investigation analyzed the potential for very strong seismic shaking and recommended that the proposed project's seismic design be in accordance with the provisions of the building code.[123] With implementation of these recommendations, as incorporated into and required by the building code, the impact of strong seismic ground shaking would be less than significant.

The proposed project and variant would comply with the latest requirements of the state and local building codes, the building departments implementing guidance and procedures as well as the seismic hazards act. The final building plans (construction documents) and the structural report would be reviewed by the building department for conformance with recommendations in the site-specific, design-level geotechnical investigation(s) to ensure compliance with state and local building code provisions related to structural safety. Furthermore, the proposed project and variant would follow the requirements of IS S-18, AB-082, and AB-083 related to structural, geotechnical, and seismic hazard design review for tall buildings 240 feet in height or more.[124] As discussed under "Regulatory Framework" above, this requires peer review of the project's site conditions and design by a two-member engineering design review team, along with monitoring for settlement during a 10-year period after the certificate of final completion and occupancy is issued.

Additional information related to vibration impacts to adjacent structures will be discussed in the EIR cultural resources and noise sections.

The building department permit review process to ensure that the project's structural and foundation plans comply with applicable building code provisions and are in conformance with the measures recommended in the project-specific geotechnical reports and as a result of the recommendations made by the engineering design review team as required by IS S-18, AB-082, and AB-083[125] would result in less-than-significant impacts related to strong seismic ground shaking.

Landslides, Liquefaction, Lateral Spreading, and Seismic Settlement

With respect to landslides, based on the general plan, the project site is relatively level and is not located within a mapped landslide zone.[126] The site is not within a designated earthquake-induced landslide zone as shown on the California Geological Survey seismic hazard zone map for the area. Therefore, the proposed project or variant would have a no impact with respect to potential for landslides, and this topic is not discussed further.

Lateral spreading typically forms on gentle slopes that have rapid fluid-like flow movement and can occur when there is potential for liquefaction in underlying, saturated soils. Liquefaction occurs when saturated soils lose strength and stiffness when there is an applied stress such as an earthquake which causes solid soils to behave like a liquid when there is no cohesion, resulting in ground deformations. Ground deformations can take on many forms, including, but not limited to, flow failure, lateral spreading, lowering of the ground surface, or ground settlement, loss of bearing, ground fissures, and sand boils. Liquefaction of subsurface layers, which could occur during ground-shaking associated with an earthquake, could potentially result in ground settlement.

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123 It should be noted that the proposed building must be built to the California Building Standards Code standards in effect at the time of application.

124 San Francisco Department of Building Inspection, Information Sheet No. S-18, *Interim Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review for New Tall Buildings*, http://sfdbi.org/sites/default/files/IS%20S-18.pdf, accessed April 24, 2018.

125 Ibid.

126 *San Francisco General Plan*, Community Safety Element, Map 4, http://www.sf-planning.org/ftp/General_Plan/Community_Safety_Element_2012.pdf, accessed September 30, 2016.

As described above, the site is within a state designated liquefaction hazard zone.[127] This means that there is a potential for permanent ground displacement onsite, such as liquefaction.[128] The California Geological Survey provided recommendations for the content of site investigation reports within seismic hazard zones in Special Publication 117A, which recommends that at least one exploration point extend to a depth of at least 50 feet to evaluate liquefaction potential. Review of borings from the geotechnical investigations indicates that loose to medium dense sand is likely present both above and below the natural groundwater table in the site area. Loose sand above the groundwater table may densify and loose to medium dense sand below the groundwater table may liquefy during strong ground shaking due to a seismic event on a nearby fault.

Based on the geotechnical investigation borings, the potential for liquefaction was analyzed. The analysis determined that soils in the Dune Sand, marsh deposit and isolated zones within the Colma formation contain potentially liquefiable material and recommended that these be removed and improved during excavation down to 50 feet bgs. The soil encountered at 50–60 feet bgs and beyond proved to have stronger layers within the Colma formation with a low likelihood to liquefy or settle. Some of the on-site sand could generally be re-used and combined to make engineered fill around the foundation including use of crushed rock or other controlled density fill to strengthen the existing soil. Where the marsh deposit and/or loose sands are present and thicker than 2 feet, the soil may have to be improved in situ using a soil-cement mixing method to create columns of soil-cement. These soil improvements would secure the foundation reducing the potential for the proposed project or variant to exacerbate the potential for seismic-related ground failure, including liquefaction and lateral spreading.

Layers of loose to medium dense sand were identified during testing below the water table that could be susceptible to liquefaction and strength loss during a major earthquake. These layers were encountered within the Dune sand and marsh deposit, and isolated, discontinuous zones within the Colma formation. The geotechnical engineers applied the standard Youd et al. (2001)[129] and the Tokimatsu and Seed (1987)[130] methods for evaluating earthquake-induced liquefaction settlement. Using these methods, it was estimated that liquefaction-induced ground settlement, or lowering of the ground surface, could be approximately 2 inches during a major earthquake. For these reasons, the proposed project or variant could result in exposure of people and structures to potential substantial adverse geologic effects.

However, in accordance with the provisions of the 2016 state building code and Special Publication 117A, the preliminary geotechnical reports provide recommendations to address these hazards. The building department permit review process would ensure that the project's structural and foundation plans comply with applicable building code provisions and are in conformance with the measures recommended in the project-specific geotechnical reports and recommendations made by the engineering design review team as required by IS S-18, AB-082, and AB-083 would ensure that the proposed project would not exacerbate the potential for seismic-related ground failure, including liquefaction and lateral spreading. Therefore, this impact would be ***less than significant***.

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127 California Department of Conservation, Division of Mines and Geology, *Seismic Hazard Zone Report for the City and County of San Francisco, California*, Seismic Hazard Zone Report 043, November 17, 2000.

128 Ibid.

129 T. L. Youd, I. M. Idriss, R. D. Andrus, I. Arango, G. Castro, J. T. Christian, R. Dobry, W. D. L. Finn, L. F. Harder Jr., M. E. Hynes, K. Ishihara, J. P. Koester, S. S. C. Liao, W. F. Marcuson III, G. R. Martin, J. K. Mitchell, Y. Moriwaki, M. S. Power, P. K. Robertson, R. B. Seed, and K. H. Stokoe II, "Liquefaction Resistance of Soils: Summary Report from the 1996 NCEER and 1998 NCEER/NSF Workshops on Evaluation of Liquefaction Resistance of Soils," *Journal of Geotechnical and Geoenvironmental Engineering* 124(10), 2001.

130 H. Tokimatsu and H. B. Seed, "Evaluation of Settlements in Sands Due to Earthquake Shaking," *Journal of Geotechnical Engineering* 113(8), pp. 861–878, 1987.

Impact GE-2: The proposed project or variant would not result in substantial loss of topsoil or erosion. (*Less than Significant*)

The project site is relatively flat, and entirely covered with impervious surfaces. The ground surface elevation of the project site is approximately 40 feet above mean sea level (msl) along Market Street and approximately 32 feet above msl at the southern end of the site. During demolition of the existing structures and foundation and construction of the proposed project or the variant, erosion could occur due to soil exposure during subgrade work. The project site would be excavated up to approximately 40 feet below grade in the northern portion, and 50 feet in the southern portion. Excavated soil would be approximately 100,000 cubic yards and would be improved and reused on site to the extent possible.

Relevant regulations related to erosion prevention include the following:

- National Pollutant Discharge Elimination System
- San Francisco Public Works Code, article 4.2, section 146.7, Erosion and Sediment Control Plan
- San Francisco Environment Code, chapter 14, Construction and Demolition Debris Recovery Ordinance

The project site is presently covered entirely with impervious surfaces; therefore, it does not contain native topsoil. Grading and excavation would expose topsoil onsite and could potentially result in erosion. However, construction-related activities would be required to comply with best management practices and standard erosion-control measures to minimize short-term construction-related erosion pursuant to the National Pollutant Discharge Elimination System Construction General Permit and San Francisco Public Works Code article 4.2. The proposed project or variant would require San Francisco Public Works approval of any grading permit and analysis for efficient stormwater management during construction activities. The construction contractor would be required to implement an erosion and sediment control plan for construction activities in accordance with article 4.2 of the San Francisco Public Works Code (as discussed in more detail in Section E.15, Hydrology and Water Quality). The SFPUC must review and approve the erosion and sediment control plan before the plan's implementation. Contractors and site supervisors are responsible for ensuring that best management practices are implemented and maintained throughout the construction process, and failure to comply would result in citation and civil penalties. Compliance with the plan would ensure that the proposed project or variant would not result substantial loss of topsoil or in soil erosion. Therefore, impacts related to loss of topsoil or substantial soil erosion would be less than significant.

Impact GE-3: The proposed project or variant would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the project or variant, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (*Less than Significant*)

The project site is not located within a state designated landslide hazard zone or area subject to the Slope Protect Act. The site is a flat urban area and does not include hills or cut slopes likely to be subject to landslide. As discussed above, the project site is located within a state designated seismic hazard zone for liquefaction and would be subject to the requirements of the state seismic hazards act.

The project sponsor would be required to provide geotechnical reports prepared by a qualified geotechnical professional that include recommendations for demolition and site preparation, excavation and construction of the proposed project or variant based on site and soil conditions. These recommendations, which would address

the potential for on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, would be implemented by the project sponsor's engineer of record and peer reviewed as required by IS S-18, AB-082, and AB-083.

In addition, as discussed in Section A, Project Description, and at the start of this section, the majority of the project site is either within the BART easement or the BART ZOI. The southernmost portion of the project site is outside of the BART ZOI. The ZOI is an area above an imaginary line drawn upward from the critical point of the BART substructure at an inclination of 1.5:1 (horizontal: vertical). Relevant BART regulations include *General Guidelines for Design and Construction Over or Adjacent to BART's Subway Structures*[131] and *Procedures for Permit and Plan Review*.[132]

The foundation for either the proposed project or the variant would differ within and outside of the BART easement. A mat-supported 12-story podium under the proposed project, or a mat-supported 15-story podium under the variant, above two levels of below-grade parking is planned in the area within the BART easement. Within the BART easement, no loads greater than the existing loads can be imposed on the BART tunnels. According to preliminary calculations, the portion of the proposed project or variant that would be within the BART easement would not impose greater stresses on the soil subgrade than currently exist within the portion of the project site within the BART easement.[133,134] Soil improvement would be designed to address loads on the BART structure within the BART easement. Therefore potential impacts to the BART tunnel associated with soil improvements would be less than significant.

Outside of the BART easement, but within the BART ZOI, the building would be supported on a deep foundation system to approximately 50–80 feet bgs, consisting of drilled cast-in-place piers. Construction in the BART easement and ZOI and placement of additional loads in the easement and ZOI could cause adverse effects on the BART structure if the proposed project or variant is not properly designed and constructed. The drilled piers would be used to support the deep foundation and the pier sections of the foundation within the ZOI would be double cased to avoid surcharging (i.e., creating additional loads on) the BART tunnels. BART would review the project or variant's structural plans, and the building department would not issue permits without receiving confirmation of BART's review. Coordination, design approval and construction monitoring would meet BART's construction requirements to ensure that impacts related to the project's lateral surcharge pressures on the BART structure would be less than significant.

Outside the BART easement and ZOI, the tower structure would be supported on a deep foundation system (drilled cast-in-place piers). The podium structure outside of the BART ZOI could be supported by a mat foundation, provided the subgrade soil is dense and not subject to loss of support during an earthquake. If weak or potentially liquefiable soil is present beneath the mat, a potentially significant impact would occur.

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131 Bay Area Rapid Transit District, *General Guidelines for Design and Construction Over or Adjacent to BART's Subway Structures, 2003,* http://www.bart.gov/sites/default/files/docs/Gen_Guide_Subway_062012.pdf, accessed June 2, 2016.

132 Bay Area Rapid Transit District, *Procedures for Permit and Plan Review*, 2012, http://www.bart.gov/sites/default/files/docs/Permits_and_Plan_Review_062012.pdf, accessed June 2, 2016.

133 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [proposed project], *10 South Van Ness Avenue, San Francisco, California,* March 16, 2017.

134 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [variant], *10 South Van Ness Avenue, San Francisco, California,* June 6, 2017.

During excavation, the shoring system could yield and deform laterally if not properly designed, which would cause the surrounding improvements, including the Muni stairway adjacent to the northern property boundary, to settle and move laterally. This would result in a potentially significant impact associated with soil instability. To avoid settlement and lateral deformation, as discussed in the geotechnical studies, the project would require the installation of shoring systems during basement excavation on all sides of the property.[135,136]

Furthermore, the building department permit review process to ensure that the project's structural and foundation plans comply with applicable building code provisions and are in conformance with the measures recommended in the project-specific geotechnical reports and recommendations made by the engineering design review team along with BART permit review requirements would ensure that the proposed project or variant would not result in unstable soil conditions that could result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

In addition, the proposed project and variant would follow the requirements of IS S-18, and require monitoring for the effects of settlement on the building and foundations of the project or variant for a period of ten years after the issuance of the certificate of final completion and occupancy. Therefore, through compliance with these regulations, the proposed project or variant would not exacerbate the potential for soil to become unstable or to result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse as a result of the project or variant, and this impact would be ***less than significant***.

Impact GE-4: The proposed project would not create substantial risks to life or property as a result of being located on expansive soil. ***(Less than Significant)***

Expansive soils expand and contract in response to changes in soil moisture, particularly when near-surface soils fluctuate from saturated to low-moisture-content conditions and back again. As outlined in the preliminary geotechnical investigation, the site is underlain by 5–10 feet of fill, 5–20 feet of Dune Sand beneath the fill, and 5–10 feet of marsh deposit beneath the Dune Sand. The bottom of the Colma formation was reached at 194 feet bgs, which is underlain by residual soil and bedrock, which was encountered at 211 feet bgs. The fill contains loose to medium dense sand and gravels intermixed with layers of medium stiff clays. Due to the low clay content within the dune sands, there would be a low likelihood for expansion, although the Colma sand below could result in some expansion-related affects. Areas not excavated, including sidewalks and other adjacent improvements, may also be affected by expansive soils, if present. Loose sand above the groundwater level may be subject to differential compaction and settlement during strong ground shaking. The available subsurface information indicates loose unsaturated sand is present beneath the site. Because the sand would be removed during basement excavation, differential compaction should not be an issue at the project site. Additionally, the San Francisco Building Code requires that the project applicant include analysis of the potential for soil expansion impacts for DBI review and approval as part of the design-level geotechnical investigation and address these effects in the design documents prepared for the proposed project. As such, potential impacts related to expansive soils would be less-than-significant.

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135 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [proposed project], *10 South Van Ness Avenue, San Francisco, California,* March 16, 2017.

136 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [variant], *10 South Van Ness Avenue, San Francisco, California,* June 6, 2017.

Impact GE-5: Construction activities for the proposed project or variant would directly or indirectly result in damage to, or destruction of, as-yet unknown paleontological resources or sites, should such resources, sites, or features exist on or beneath the project site. (*Less than Significant with Mitigation*)

Paleontological resources include the fossilized remains or traces of animals, plants, and invertebrates from a previous geological period. Paleontological resources are deposited and preserved within particular lithologic (rock) units. Lithologic units that may contain fossils include sedimentary and volcanic formations. Collecting localities and the geologic formations containing those localities are also considered paleontological resources, as they represent a limited, nonrenewable resource that, once destroyed, cannot be replaced. Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources.[137]

Paleontological resources are lithologically dependent; that is, deposition and preservation of paleontological resources are related to the lithologic unit in which they occur. Particularly important are fossils found in situ (undisturbed) in primary context (e.g., fossils that have not been subjected to disturbance subsequent to their burial and fossilization). As such, they aid in stratigraphic correlation, particularly those offering data for the interpretation of tectonic events, geomorphological evolution, paleoclimatology, the relationships between aquatic and terrestrial species, and evolution in general.

Note that significance may also be stated for a particular rock unit, predicated on the research potential of fossils suspected to occur in that unit. Such significance is often stated as "sensitivity" or "potential." In most cases decisions about how to manage paleontological resources must be based on this potential because the actual situation cannot be known until construction excavation for the project is underway.

The results of the geotechnical investigation indicate that the project site is underlain by 10 to 30 feet of sandy fill and native Dune Sand. The sands are underlain by an approximately 5- to 10-foot-thick marsh deposit consisting of loose to dense silty and clayey sand. Below the marsh deposit is dense to very dense fine sand, silty sand, and clayey sand, referred to as the Colma formation which extends approximately 194 feet bgs.[138,139]

Previous occurrences of large late Pleistocene vertebrate remains from three individuals of Colombian Mammoth (*Mammuthus columbi)* and remains from a single Giant Bison *(Bison latifrons)* have been recovered from gravelly, sandy clay of the Colma formation exposed in an excavation at the intersection of Pacific Avenue and Kearny Street, San Francisco, California.[140] The proposed project or the variant would have similar foundations and would both entail the same excavation techniques during construction through the depth of the Colma formation, and as a result the project site has a moderate potential to destroy as-yet unknown paleontological resources.
Mitigation Measure M-GE-6: Implement Appropriate Measures in Case of Inadvertent Discovery of

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137 Society of Vertebrate Paleontology, *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*, 2010, *http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx*, accessed February 2, 2017.

138 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [proposed project], *10 South Van Ness Avenue, San Francisco, California,* March 16, 2017.

139 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [variant], *10 South Van Ness Avenue, San Francisco, California*, June 6, 2017.

140 P. U. Rodda and N. Baghai, "Late Pleistocene Vertebrates from Downtown San Francisco, California," *Journal of Paleontology* 67(6), pp. 1058–1063 (1993), *http://www.jstor.org/discover/10.2307/1306122?uid=3739560&uid=2129&uid=2&uid=70&uid=4&uid=3739256&sid=2110167512486*, accessed February 2, 2017.

Paleontological Resources would be implemented to reduce potentially significant adverse effects on paleontological resources, including fossils and associated contextual data.

> **Mitigation Measure M-GE-6: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources**
> Before ground disturbance, the project sponsor shall retain a qualified paleontologist, as defined by the Society of Vertebrate Paleontology, to instruct construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance of fossils that may be unearthed during construction, and proper notification procedures should fossils be encountered. A qualified paleontologist shall monitor construction activities in the areas where construction activities have the potential to disturb previously undisturbed native sediment or sedimentary rocks. Construction shall be halted within 50 feet of any potential fossil find and a qualified paleontologist notified, who shall evaluate the significance.
>
> If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work in the vicinity of the resource and notify the project sponsor and San Francisco Planning Department. There shall be no construction work in the area to allow for the recovery of the resource in a timely manner. A qualified paleontologist shall evaluate the resource and prepare a recovery plan compliant with the standards of the Society for Vertebrate Paleontology. The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. The City and County of San Francisco shall determine which of the recommendations in the recovery plan are necessary and feasible, and these recommendations shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. The City shall be responsible for ensuring that the qualified paleontologist's recommendations regarding treatment and reporting are implemented.

With implementation of Mitigation Measure M-GE-4, impacts on paleontological resources would be less than significant.

Impact GE-6: Construction activities for the proposed project or variant would not directly or indirectly result in damage to, or destruction of, unique geologic features. (*No Impact*)

The project site is located in an urbanized area and is entirely developed with impervious surfaces. There are no undisturbed soils or rock outcroppings located on or near the project site that would constitute unique geologic features. As mentioned above, the proposed project would not substantially change the general topography of the site, and therefore, would have no impact on unique geologic features.

Impact C-GE-1: The proposed project or variant in combination with other past, present, or reasonably foreseeable future projects would not result in substantial cumulative impacts on geology and soils, and paleontological resources. (*Less than Significant*)

Geology, soils, and paleontological impacts are generally site-specific and localized. Past, present, and reasonably foreseeable projects could require various levels of excavation or cut-and-fill, which would affect local geologic conditions and may affect paleontological resources. However, the cumulative projects are also subject to the building department requirements for geotechnical review and would be required to comply with the state and local building codes.

In addition, site-specific geotechnical review and monitoring for paleontological resources would reduce each project's impacts associated with geology, seismic safety, and paleontological resources, and that site-specific mitigation would be developed, when necessary, based on site conditions. Similar to the proposed project or variant, all projects listed in Table 3 would be subject to these mandatory seismic safety standards and design review procedures. Compliance with these standards and procedures would ensure that the effects from nearby cumulative projects would be reduced to less-than-significant levels. Therefore, in combination with cumulative projects, the proposed project or variant would result in a less-than-significant cumulative impact.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
14. HYDROLOGY AND WATER QUALITY					
Would the project:					
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐	☐
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☐	☒
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☐	☒

Hydrology and Water Quality

Construction for the proposed project and the variant would involve the same activities, duration, and depth/amount of excavation. Like the proposed project, dewatering would be necessary for construction of the proposed variant. Similarly, the proposed project and variant share a comparable program of development, with the same number of units and similar amount of commercial retail uses, and a comparable amount of impermeable surfaces. For these reasons, the potential hydrology and water quality impacts resulting from construction and operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

The City and County of San Francisco is a participant in the National Flood Insurance Program. As a condition of participating in the program, San Francisco has adopted and enforces a floodplain management ordinance intended to reduce the risk of damage from flooding in the city. The Floodplain Management Ordinance governs construction in flood-prone areas and designates the City Administrator's Office as the City's Floodplain Administrator. For the purposes of assessing flood hazards, the City and County of San Francisco has developed an interim floodplain map to identify special flood hazard areas within the city limits, based on data from the Federal Emergency Management Agency.[141]

The project site is not located either: (1) within a special flood hazard area identified on San Francisco's Interim Floodplain Map;[142] (2) within the "blocks of interest" identified by SFPUC as prone to flooding;[143] or (3) adjacent to a shoreline that could be affected by sea-level rise. Furthermore, given its flat elevation and siting away from water storage facilities, coastlines, and hillsides, the project site is also not located within an area that would be: (1) flooded as the result of levee, dam, or reservoir failure;[144,145] (2) inundated in the event of a tsunami along the San Francisco coast, based on a 20-foot water level rise at the Golden Gate Bridge;[146] or (3) subject to landslides and mudflow.[147] Therefore, topics 14g, 14h, 14i, and 14j are not applicable.

Impact HY-1: The proposed project or variant would not impact water quality standards or waste discharge requirements. (*Less than Significant*)

During construction and operations stormwater and wastewater from the project site would continue to flow into the City's combined stormwater/sewer system and would be treated to the standards contained in the City's National Pollutant Discharge Elimination System permit for the Southeast Water Pollution Control Plant, before

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141 City and County of San Francisco, San Francisco Interim Floodplain Map (Preliminary), November 12, 2015, *http://sfgsa.org/sites/default/files/Document/SF_Citywide.pdf*, accessed August 10, 2017.

142 Ibid.

143 San Francisco Planning Department, Review of Projects in Identified Areas Prone to Flooding, April 1, 2007, *http://ec2-50-17-237-182.compute-1.amazonaws.com/docs/PlanningProvisions/info%20sheet%20v1.3.pdf*, accessed February 7, 2017.

144 San Francisco Planning Department, *San Francisco General Plan* Community Safety Element, October 2012, *http://generalplan.sfplanning.org/Community_Safety_Element_2012.pdf*, accessed August 9, 2017.

145 California Emergency Management Agency, California Geological Survey, and University of Southern California, Tsunami Inundation Map for Emergency Planning San Francisco North Quadrangle/San Francisco South Quadrangle (SF Bay), June 15, 2009, *http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/Inundation_Maps/SanFrancisco/Documents/Tsunami_Inundation_SouthSFNorthSF_SFBay_SanFrancisco.pdf*, accessed August 10, 2017.

146 San Francisco Planning Department, *San Francisco General Plan* Community Safety Element, October 2012, *http://generalplan.sfplanning.org/Community_Safety_Element_2012.pdf*, accessed August 9, 2017.

147 California Division of Mines and Geology, Seismic Hazard Zone Report for the City and County of San Francisco, California, *http://gmw.consrv.ca.gov/shmp/download/quad/SAN_FRANCISCO_NORTH/maps/ozn_sf.pdf*, accessed April 18, 2016.

discharge into San Francisco Bay. Treatment would be provided pursuant to the effluent discharge standards contained in the City's National Pollutant Discharge Elimination System permit for the plant.

To reduce the discharge of construction-related pollution to the local storm drain system, the Construction Site Runoff Control Ordinance was adopted in 2013 and the respective program is managed by SFPUC to ensure that all construction sites implement best management practices to control construction site runoff. Because the project would disturb 1.17 acres during construction, the project sponsor would be required to develop a storm water pollution prevention plan (SWPPP) describing the BMPs the contractor would implement to prevent erosion and discharge of sediment and other pollutants in stormwater runoff. To prevent any duplicative efforts, the project sponsor may submit the SWPPP in lieu of an erosion and sediment control plan to comply with the Construction Site Runoff Control Program.

Additionally, the proposed project or variant would be required to meet the standards for stormwater management identified in the San Francisco Stormwater Management Ordinance and meet the SFPUC stormwater management requirements per the 2016 Stormwater Management Requirements and Design Guidelines. The project sponsor would be required to submit, and have approved by the SFPUC, a stormwater control plan for managing operational stormwater runoff that complies with the City's 2016 Stormwater Management Requirements and Design Guidelines using a variety of BMPs. The stormwater management approach must reduce the existing runoff flow rate and volume through employment of a hierarchy of BMPs set forth in the Stormwater Management Requirements. The required BMP Hierarchy prioritizes infiltration-based BMPs, rainwater harvesting, vegetated roofs, and lined bioretention features (commonly known as a flow-through planter). The proposed project or the variant would include rainwater collection features to capture stormwater that would be treated and reused onsite.

Article 12C of the San Francisco Health Code also requires that all new development projects of 250,000 gross square feet or more of gross floor area install onsite water systems to treat and reuse alternate sources of water for toilet and urinal flushing and irrigation. The proposed project and variant, which are both more than 250,000 gsf, would use an onsite blackwater recycling system to treat wastewater.

Groundwater was encountered approximately 20 feet below ground surface (bgs) during the geotechnical investigation.[148,149] The proposed project or variant would necessitate excavation up to approximately 40 feet bgs in the northern portion of the project site and up to 50 feet bgs in the southern portion of the project site. Excavation in the northern portion would be to a shallower depth due to the presence of the subsurface BART tunnel and associated easement. The deep foundation cast-in-place piers would be constructed up to 250 feet bgs. Because groundwater would be encountered on site, temporary dewatering activities would be necessary. The Bureau of Systems Planning, Environment, and Compliance of the SFPUC must be notified of projects necessitating dewatering. The SFPUC may require water analysis before discharge. The proposed project or variant would be required to obtain a batch wastewater discharge permit from the SFPUC Wastewater Enterprise Collection System Division before any dewatering activities. Groundwater encountered during construction of the proposed project or variant would be subject to the requirements of Public Works Code article 4.1, Industrial Waste, which requires that groundwater meet specified water quality standards before it may be discharged into the sewer system. These measures would ensure protection of water quality during construction.

148 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [proposed project], *10 Van Ness Avenue,* March 16, 2017.

149 Langan Engineering and Environmental Services, Inc., *Geotechnical Investigation* [variant], *10 Van Ness Avenue,* June 6, 2017.

Therefore, the proposed project or variant would not substantially degrade water quality, and water quality standards or waste discharge requirements would not be violated. As such, the proposed project or variant would have a less-than-significant impact on water quality.

Impact HY-2: The proposed project or variant would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (*Less than Significant*)

San Francisco overlies seven groundwater basins: Westside, Lobos, Marina, Downtown, Islais Valley, South San Francisco, and Visitacion Valley. The project site is located above the Downtown Groundwater Basin, which is generally inadequate to supply a significant amount of groundwater for municipal supply due to low yield.[150] Based on semi-annual monitoring, the groundwater currently used for irrigation and other nonpotable uses in San Francisco meets or exceeds the water quality needs for these end uses.[151]

Currently, there is negligible recharge of groundwater at the project site, because the site is almost completely covered with impervious surfaces. Therefore, the proposed project or variant would not substantially increase the amount of impervious surface and would not result in any substantial change in infiltration or runoff on the project site.

While the proposed project or variant would encounter groundwater no substantial ongoing groundwater extraction activities would occur beyond incidental dewatering for construction. Therefore, groundwater resources would not be substantially depleted, and the proposed project or variant would not substantially interfere with groundwater recharge. Thus, there would be a less-than-significant impact on groundwater supplies.

Impact HY-3: The proposed project or variant would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation (or flooding) onsite or offsite. (*Less than Significant*)

No surface bodies of water traverse the project site. The project site is almost entirely covered by impervious surfaces, and runoff from these impervious surfaces flow to the curb and are discharged into the combined stormwater and wastewater system. Impervious surfaces at the project site would decrease under the proposed project or variant, but drainage patterns would remain generally the same. In addition, as discussed under Impact HY-1, the proposed project and single tower variant would include a rainwater capture and recycling system, and therefore less water would discharge from the project site to the combined sewer system in compliance with the Stormwater Management Ordinance. This would in turn reduce potential erosion and flooding in down-gradient areas. Therefore, the proposed project and variant would not be expected to result in substantial erosion or flooding associated with changes in drainage patterns, and impacts would be less than significant.

150 San Francisco Public Utilities Commission, *2015 Urban Water Management Plan for the City and County of San Francisco*, June 2016.

151 Ibid.

Impact HY-4: The proposed project or variant would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (*Less than Significant*)

Stormwater generated and collected at the project site flows into SFPUC's combined stormwater/sewer system. During construction and operation of the proposed project or variant, all wastewater and stormwater runoff from the project site would be treated at the Southeast Water Pollution Control Plant. Treatment would be provided pursuant to the effluent discharge standards contained in the City's National Pollutant Discharge Elimination System permit for the plant. During construction and operation, the proposed project or variant would be required to comply with all local wastewater discharge, stormwater runoff, and water quality requirements, including the 2016 San Francisco Stormwater Management Requirements and Design Guidelines. The Stormwater Management Requirements and Design Guidelines would ensure that stormwater runoff generated by the proposed project or variant would be managed on site to reduce the existing runoff flow rate and volume such that the project would not contribute additional peak volumes of polluted runoff to the city's stormwater infrastructure. The Stormwater Management Ordinance would ensure that the proposed project or variant implements and installs appropriate stormwater management systems that retain runoff on site, promote stormwater reuse, and limit site discharges from entering the city's combined stormwater/sewer system. Specifically, the proposed project and variant would include a rainwater capture and recycling system to reduce the amount of stormwater discharged from the project site to the combined stormwater/sewer system. This would reduce the potential for the site to generate substantial amounts of polluted runoff. Therefore, the proposed project or variant would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and this impact would be less than significant.

Impact HY-5: The proposed project or the variant would not otherwise substantially degrade water quality. (*Less than Significant*)

A phase I environmental site assessment was prepared for the property at 10 South Van Ness Avenue in 2014.[152] No evidence of any significant staining, spillage, and ponded liquids or uncontained solids was discovered on the project site during site reconnaissance. No recognized environmental conditions associated with the storage of hazardous materials at the project site were observed. No potential underground storage tanks, ponds, stressed vegetation or stained soil; or mining, oil and gas exploration, production and distribution were noted at the site, and no apparent signs of chemical releases or leaks were noted at any nearby facilities.

Impact HY-1 discusses potential effects to surface water and groundwater quality. There are no sources of existing contamination identified at the site and the proposed project or variant would not include uses that would be anticipated to substantially degrade water quality. In addition, measures would be implemented during construction to mitigate impacts on water quality. Therefore, impacts would be less than significant.

152 Langan Treadwell Rollo, *Updated Phase I Environmental Site Assessment, 10 Van Ness Avenue, San Francisco, California,* May 24, 2014.

Impact C-HY-6: The proposed project or variant in combination with other past, present, or reasonably foreseeable future projects would not result in substantial cumulative impacts on hydrology and water quality. (*Less than Significant*)

Cumulative development in the project area would result in intensified uses and thus a cumulative increase in wastewater generation. The SFPUC has accounted for such growth in its service projections.[153] Cumulative development could also result in an increase in polluted runoff and stormwater discharges. However, other development projects would be subject to the same water conservation, stormwater management, and wastewater discharge ordinances applicable to the proposed project or variant. The proposed project or variant would also be required to adhere to existing drainage control requirements that address water quality and quantity similar to that of other nearby current and future projects. Because other development projects would be required to follow drainage, dewatering, and water quality regulations, similar to the proposed project or variant, peak stormwater drainage rates and volumes for the design storm would gradually decrease over time with new development, meaning that no substantial cumulative effects would occur. Compliance with these ordinances would reduce the effects of nearby cumulative projects to less-than-significant levels. For these reasons, the proposed project would not combine with past, present, and reasonably foreseeable future projects to create a significant cumulative impact related to hydrology and water quality, and the impact would be less than significant.

153 San Francisco Public Utilities Commission, *2015 Urban Water Management Plan for the City and County of San Francisco*, June 2016.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
15. HAZARDS AND HAZARDOUS MATERIALS					
Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐	☐
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐	☐

Hazards and Hazardous Materials

The project site is not located within an airport land use plan area or in the vicinity of a private airstrip. Therefore, checklist topics 15e and 15f are not applicable.

Construction for both the proposed project and the variant would involve the same activities, duration, depth/amount of excavation, and removal/disposal of building materials. Similarly, the proposed project and variant share a comparable program of development, with the same number of units and similar amount of commercial retail, which would typically use the same common cleaning products. For these reasons, the

potential hazards and hazardous materials impacts resulting from construction and operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

Impact HZ-1: The proposed project or variant would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (*Less than Significant*)

Construction of the proposed project or variant would involve the demolition of an existing structure, excavation of the site, construction of a mixed-use residential building with retail spaces, dwelling units, and an underground parking structure, and streetscape improvements. Construction activities would require the use of and transport of limited quantities of hazardous materials such as fuels, oils, solvents, paints, and other common construction materials. These materials could be released during transport or disposal of building materials and cause a hazard to the public. San Francisco requires the project sponsor and its contractor to implement BMPs as part of their grading permit requirements that would include hazardous materials management measures, which would reduce short-term construction-related impacts related to transport, use, and disposal of hazardous materials to less-than-significant levels.

Operation of the proposed project or the variant would, likely, result in the use of common types of hazardous materials typically associated with retail/commercial and residential uses, such as cleaning products and disinfectants. These products are labeled to inform users of potential risks and to instruct them in appropriate handling procedures. However, most of these materials are consumed through use, resulting in relatively little waste. Businesses are required, by law, to ensure employee safety by identifying hazardous materials in the workplace, providing safety information to workers who handle hazardous materials, and adequately training workers. For these reasons, hazardous materials used during project operation would not pose substantial public health or safety hazards resulting from routine use, transport, or disposal of hazardous materials. Therefore, the proposed project or variant would result in less-than-significant impacts related to the use of hazardous materials.

Impact HZ-2: The proposed project or variant would not result in a significant hazard to the public or the environment through reasonably foreseeable conditions involving the release of hazardous materials into the environment. *(Less than Significant)*

In 2005, a phase I/II environmental site assessment was prepared for the project site.[154] The site assessment confirmed that the project site includes an auto sales and services repair facility that regularly uses hazardous materials, including oil and hydraulic fluids, used oil, filters, rags, and 55-gallon drums, which are stored on site in bulk storage and aboveground tanks, with secondary containment where necessary. The roof top parking area contains a small area where car washing/detailing is performed.[155] The project site overlies soils that contain remnants of the 1906 earthquake and fire.[156] Approximately 100,000 cubic yards of existing soil would be excavated during construction of the proposed project or variant to accommodate deep foundation cast in-place piers and an underground parking structure.

There are certain areas of San Francisco that are located on fill and fall under the jurisdiction of the Maher Ordinance. These areas, were once highly industrialized and contaminated and are underlain by imported fill

154 Green Environment, Inc., *Phase I/II Environmental Site Assessments, 10 South Van Ness Avenue, San Francisco, California*, August 2, 2005.

155 Langan Treadwell Rollo, *Updated Phase I Environmental Site Assessment, 10 Van Ness Avenue, San Francisco, California,* May 24, 2014.

156 AEI Consultants, *Phase I Environmental Site Assessment: 10 South Van Ness Avenue, San Francisco, California 94103,* September 2, 2009.

consisting of soil and debris from the 1906 earthquake. As such, these sites often contain lead and other pollutants. To protect public and worker health and safety projects that involve disturbance of more than 50 cubic yards of such soils require investigation, site management, and reporting subject to article 22A of the San Francisco Health Code (also known as the "Maher Ordinance"), which is administered and overseen by the Department of Public Health. The proposed project or variant would disturb more than 50 cubic yards of soil and is located within a Maher area, and, therefore, the proposed project or variant is subject to the Maher Ordinance.

The Maher Ordinance requires the project sponsor to retain the services of a qualified professional to prepare an environmental site assessment that meets the requirements of Health Code section 22.A.6. A site assessment determines the potential for site contamination and level of exposure risk as a result of a project. Based on that information, a project sponsor may be required to conduct soil and groundwater sampling and analysis, and where such analysis reveals the presence of hazardous substances in excess of state or federal standards, a project sponsor is required to submit a site mitigation plan to the Department of Public Health or other appropriate state or federal agencies, and to remediate any site contamination in accordance with an approved site mitigation plan before the issuance of any building permit. The project sponsor submitted a Maher application on March 18, 2016.

The 2005 environmental site assessment identified issues and provided the results of remedial actions for potential hazards identified in the report.[157] Also, in compliance with the Maher Ordinance, an updated environmental site assessment was prepared to assess the current potential for site contamination based upon the conclusions and evidence presented in the 2005 environmental site assessment combined with current conditions.[158] The updated environmental site assessment included: (1) a reconnaissance field survey of the site and vicinity; (2) review of previous site investigations and reports; (3) review of public local, state, and federal records pertinent to an environmental site assessment; (4) review of relevant documents and maps regarding local geologic and hydrogeologic conditions; and (5) review of historical documents including aerial photographs and topographic maps.

The updated environmental site assessment determined that there was:

- No observed evidence during site reconnaissance of any significant staining, spillage, and ponded liquids or uncontained solids on the project site
- No observed evidence of any recognized environmental conditions associated with the storage of hazardous materials at the project site
- No potential underground storage tanks, ponds, stressed vegetation or stained soil, or mining, oil, and gas exploration, production, or distribution
- No apparent signs of chemical releases or leaks at any nearby facilities.[159]

Based on the information and conclusions from the updated environmental site assessment, the proposed project or variant would not result in a significant hazard to the public or the environment from the release of hazardous materials associated with contaminated soil, groundwater, and storage areas.

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[157] Green Environment, Inc., *Phase I/II Environmental Site Assessments, 10 South Van Ness Avenue, San Francisco, California,* August 2, 2005.

[158] Langan Treadwell Rollo, *Updated Phase I Environmental Site Assessment, 10 Van Ness Avenue, San Francisco, California*, May 24, 2014.

[159] Ibid.

Although the project site does not contain any underground storage areas identified as containing hazardous materials, according to the environmental assessment[160] and updated environmental site assessment,[161] demolition of the existing structure would involve removal of building materials that could contain asbestos and lead based paint. Therefore, these hazardous materials could be released into the environment during construction activities and could cause a hazard to the public. However, any hazardous materials currently on the site, such as asbestos or lead-based paint, would be removed during or prior to demolition of the existing building and prior to project construction, and would be handled in compliance with applicable laws and regulations.

The California Department of Toxic Substance Control considers asbestos hazardous and removal is required. Asbestos-containing materials must be removed in accordance with local and state regulations, BAAQMD, the California Occupational Safety and Health Administration (CALOSHA), and California Department of Health Services requirements. This includes materials that could be disturbed by the proposed demolition and construction activities. Specifically, Section 19827.5 of the California Health and Safety Code, adopted January 1, 1991, requires that local agencies not issue demolition or alteration permits until an applicant has demonstrated compliance with notification requirements under applicable federal regulations regarding hazardous air pollutants, including asbestos.

The California legislature vests the BAAQMD with the authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and the BAAQMD is to be notified ten days in advance of any proposed demolition or abatement work. Any asbestos-containing material disturbance at the project site would be subject to the requirements of BAAQMD Regulation 11, Rule 2: Hazardous Materials—Asbestos Demolition, Renovation, and Manufacturing. The local office of CAL OSHA must also be notified of asbestos abatement to be carried out. Asbestos abatement contractors must follow state regulations contained in Title 8 of California Code of Regulations Section 1529 and Sections 341.6 through 341.14, where there is asbestos related work involving 100 gsf or more of asbestos-containing material. Pursuant to California law, DBI would not issue the required permit until the applicant has complied with the requirements described above.

For buildings constructed prior to 1978, such as the existing building, it is highly likely that lead-based paint was used in their construction. Work that could result in disturbance of lead-based paint must comply with Section 3423 of the Building Code, Work Practices for Exterior Lead-Based Paint on Pre-1979 Buildings and Steel Structures. Section 3423 identifies prohibited practices that may not be used in disturbance or removal of lead paint, and notification requirements. Where there is any work that may disturb or remove lead paint on the exterior of any building, or the interior of occupied buildings built prior to or on December 31, 1978, Section 3407 requires specific notification and work standards and identifies prohibited work methods and penalties.

These regulations and procedures already established as part of the building permit review process would ensure that any potential impacts due to the presence of asbestos or lead based paint on the project site are reduced to a less-than significant level.

Other hazardous building materials that could be present include fluorescent light ballasts that could contain polychlorinated biphenyl (PCBs) or diethylhexyl phthalate, and switches, thermostats, and fluorescent light tubes that could contain mercury vapors. Disruption of these materials could pose health threats for construction

[160] Green Environment, Inc., *Phase I/II Environmental Site Assessments, 10 South Van Ness Avenue, San Francisco, California,* August 2, 2005.
[161] Langan Treadwell Rollo, *Updated Phase I Environmental Site Assessment, 10 Van Ness Avenue, San Francisco, California,* May 24, 2014.

workers if not properly disposed of, a potentially significant impact. Each of these materials is subject to federal and state regulation to ensure that they are properly handled during removal and disposal, before the start of building demolition or renovation. PCBs have been prohibited in most uses since 1978, although some electrical transformers still in use today use oils that contain PCBs.

However, disposal of PCBs is regulated at both the federal level (the Toxic Substances Control Act, U.S. Code, title 15, chapter 53; and implementing regulations in title 40, part 761 of the Code of Federal Regulations) and at the state level (22 CCR section 66261.24), and diethylhexyl phthalate is covered under federal regulations (Code of Federal Regulations title 40, section 261.33). Disposal of these materials as hazardous waste must be in compliance with applicable laws and regulations and may involve incineration or other treatment or disposal in an approved chemical waste landfill. Mercury is regulated as a hazardous waste under 22 CCR sections 66262.11 and 66273.4, and its disposal as hazardous waste under 22 CCR section 66261.50. Because they are considered a hazardous waste, all fluorescent lamps and mercury-containing switches and thermostats must be recycled or taken to a handler of universal waste. Compliance with the existing legal and regulatory framework noted here would ensure that potential impacts of exposure to such other hazardous building materials would be less than significant. Therefore, with mandatory compliance with existing laws and regulatory requirements the potential hazard to the public and the environment from reasonably foreseeable conditions involving the release of hazardous materials into the environment would be less than significant with mitigation.

Impact HZ-3: The proposed project or variant would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school. (*Less than Significant*)

One school is located within 0.25 mile of the project site: the French American International School, approximately 0.14 mile north of the project site across Market Street at 150 Oak Street. The proposed project or variant would not store, handle, or dispose of significant quantities of hazardous materials and would not otherwise include any uses that would include emissions of hazardous substances. Any hazardous materials currently on the project site, such as asbestos-containing materials and lead-based paint would be removed before or during demolition of the existing building, and before construction, and would be handled in compliance with applicable laws and regulations, as described above. With adherence to these regulations, there would be no potential for such materials to affect this nearest school. Thus, the proposed project or variant would have a less-than-significant impact related to hazardous emissions or materials within 0.25 mile of a school.

Impact HZ-4: The project site is not included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5. (*Less than Significant*)

According to the updated environmental site assessment, the project site is not listed on the Hazardous Waste and Substances Sites List (commonly referred to as the "Cortese List") compiled by the California Department of Toxic Substances Control pursuant to Government Code section 65962.5.[162] In addition, the State Water Resources Control Board's GeoTracker database indicates that the project site does not contain any active

[162] California Department of Toxic Substances Control. EnviroStor Hazardous Waste and Substances Site List, *http://www.envirostor.dtsc.ca.gov/public/search.asp?cmd=search&reporttype=CORTESE&site_type=CSITES%2COPEN%2CFUDS%2CCLOSE&status=ACT%2CBKLG%2CCOM&reporttitle=HAZARDOUS%20WASTE%20AND%20SUBSTANCES%20SITE%20LIST*, accessed February 1, 2017.

underground storage tanks, cleanup sites, or other remediation efforts.[163] While a regulatory agency database report (EDR) for the project site did not identify any recognized environmental conditions for the site, due diligence detailed in the 2005 environmental site assessment, as cited in the updated environmental site assessment, identified some potential sources of contamination, including a buried fuel oil storage tank on the property, evidence of a historic fuel service station onsite, two abandoned monitoring wells in adjacent public sidewalk off of 12th Street, and three below-grade remnant hydraulic lift components. However, the current site owner responded to the environmental site assessment results in 2005 by permanently closing the monitoring wells, removing the hydraulic lift components, and testing the soil below, and investigating and sampling soil to address the historic fueling station and possible buried fuel tank; and the updated environmental site assessment concluded that all issues were determined to be resolved as a result of such actions.[164]

As a result, the project site is not included on the Cortese List, and impacts would be less than significant.

Impact HZ-5: The proposed project or variant would not interfere with the implementation of an emergency response plan nor expose people or structures to a significant risk of loss, injury, or death involving fires. (*Less than Significant*)

San Francisco ensures fire safety primarily through provisions of the Building and Fire Codes. Final building plans are reviewed by the San Francisco Fire Department to ensure conformance with these provisions. As such, potential fire hazards, including those associated with hydrant water pressures and emergency access, would be addressed during the permit review process

Implementation of the proposed project or variant could contribute incrementally to congested traffic conditions in the immediate area in the event of an emergency evacuation. However, because the proposed project or variant would be located within a dense urban setting, it is expected that traffic would be dispersed within the existing street grid such that there would be no significant adverse effects on nearby traffic conditions.

Therefore, the proposed project or variant would not impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan, and this impact would be less than significant.

Impact-C-HZ-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not result in significant cumulative impacts related to hazards and hazardous materials. (*Less than Significant*)

Impacts from hazards and hazardous materials are generally site-specific, and typically do not result in cumulative impacts. Any hazards that are present at surrounding sites would be subject to the same safety requirements discussed above for the proposed project and variant, which would reduce any hazards impacts to less than significant. Therefore, the proposed project or variant in combination with past, present, and reasonably foreseeable future projects would not result in cumulative impacts related to hazards and hazardous materials, and the impact would be less than significant.

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[163] State Water Resources Control Board, GeoTracker database and webmap, *https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=10+van+ness+ave%2C+san+francisco%2C+ca*, accessed February 1, 2017.

[164] Langan Treadwell Rollo, *Updated Phase I Environmental Site Assessment, 10 Van Ness Avenue, San Francisco, California*, May 24, 2014.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
16. MINERAL AND ENERGY RESOURCES					
Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☐	☒
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	☐	☐	☒	☐	☐

Mineral and Energy Resources

All land in San Francisco, including the project site, is designated by the California Division of Mines and Geology as Mineral Resource Zone 4 under the Surface Mining and Reclamation Act of 1975.[165] This designation indicates that adequate information does not exist to assign the area to any other mineral resource zone; thus, the area is not one designated to have significant mineral deposits.[166] The project site has previously been developed, and future evaluations of the presence of minerals at this site would therefore not be affected by the proposed project. Because of this, the development and operation of the proposed project or variant would not affect operational mineral resource recovery sites. Therefore, topics 16a and 16b are not applicable to the proposed project or variant.

Construction for both the proposed project and the variant would involve the same activities, duration, and depth/amount of excavation. Similarly, the proposed project and variant share a comparable program of development, with the same number of units and similar amount of commercial retail uses and associated energy use. For these reasons, the potential mineral and energy resources impacts resulting from construction and operation of the proposed variant are anticipated to be the same as those resulting from the proposed project.

Impact ME-1: The proposed project or variant would not encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (*Less than Significant*)

The proposed project or variant would introduce new residential, commercial and assembly uses, and an increased intensity of uses to the project site, although not to an extent that would exceed anticipated growth in the area.

As new buildings in San Francisco, the proposed project or the variant would be subject to the energy conservation standards included in the San Francisco Green Building Code that require the project to meet a number of conservation standards, including installation of water efficient fixtures and energy efficient

165 California Department of Conservation, Division of Mines and Geology, Open File Report 96-03 and Special Report 146, Parts I and II.

166 California Department of Conservation, Division of Mines and Geology, Special Report 146, Parts I and II (1986) and DMG Open File Report 96 03 (1996), *http://www.conservation.ca.gov/cgs/minerals/mlc/Pages/index.aspx*, accessed August 18, 2016.

appliances, and the proposed project or variant would provide features that encourage alternative modes of transportation, such as bicycle racks and car-share parking spaces. Documentation showing compliance with the San Francisco Green Building Code would be submitted with the application of the building permits, and would be enforced by the DBI. In addition, the proposed project or variant would be required to comply with California Code of Regulations title 24, which regulates energy consumption for the heating, cooling, ventilation, and lighting of residential and nonresidential buildings and is enforced by the DBI. Compliance with title 24 and the San Francisco Green Building Code would ensure reduction in the use of fuel, water, and energy by the proposed project or variant.

In addition, San Francisco has a lower vehicle miles traveled ratio than the San Francisco Bay Area region as a whole. The transportation analysis zone in which the project site is located (transportation analysis zone 578) has between 40 and 78 percent fewer daily VMT than the San Francisco Bay Area regional average. Furthermore, the following transportation-related aspects of the proposed project or variant would discourage single-occupancy vehicle trips: proximity to transit, bicycle storage, and a TDM Plan with strategies to discourage the use of automobiles and to encourage transit and other modes of transportation. Because the proposed project or variant is an infill mixed-use development in a transit-rich area, the vehicle trips and associated fuel use for the proposed project or the variant would not constitute wasteful use of energy and therefore would be consistent with the Plan Bay Area 2040 167 land use strategy, which seeks to reduce per capita VMT. Operation of the proposed project or variant would provide opportunities to minimize VMT, use public transit, and use nonmotorized modes of transportation (e.g., walking, biking, transit) to reach residential and employment destinations and amenities.

Therefore, the proposed project or variant would not result in the use of large amounts of fuel, water, or energy, or result in the use of these resources in a wasteful manner, and effects related to the use of these resources would be less than significant.

Impact-C-ME-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, would not result in substantial cumulative impacts related to energy and minerals. (*Less than Significant*)

The cumulative development projects shown in Table 3 would be required by the DBI to conform to the requirements of Title 24 and the San Francisco Green Building Code regarding minimizing the use of large amounts of fuel, water, or energy by, for instance, installing energy efficient appliances and water efficient fixtures. Conformance with Title 24 and the San Francisco Green Building Code would preclude significant cumulative impacts related to the use of fuel, water, or energy. In addition, the City plans to reduce GHG emissions to 40 percent below 1990 levels by 2025 and 80 percent below 1990 levels by 2050, which would be achieved through a number of different strategies, including energy efficiency. As such, the proposed project and variant, in combination with other past, present or reasonably foreseeable projects, would result in a less-than-significant cumulative impact related to the use of fuel, water, and energy resources.

167 The *Plan Bay Area 2040* is collaboration among the Association of Bay Area Governments, Bay Area Air Quality Management District, Metropolitan Transportation Commission, and the San Francisco Bay Conservation and Development Commission. *Plan Bay Area 2040* is a long-range transportation, land-use and housing plan that will support a growing economy, provide more housing and transportation choices and reduce transportation-related pollution in the nine-county San Francisco Bay Area. The *Plan Bay Area 2040* was approved on July 26, 2017.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
17. AGRICULTURE AND FORESTRY RESOURCES					
In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as a model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding State inventory of forest land, including the Forest and Range Assessment and Forest Legacy Assessment projects; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.					
Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	☐	☐	☐	☐	☒

Agriculture and Forestry Resources

The project site is located within an urbanized area of San Francisco. No land in San Francisco County has been designated by the California Department of Conservation's Farmland Mapping and Monitoring Program as agricultural land. Because the project site does not contain agricultural uses and is not zoned for such uses, the proposed project would not require the conversion of any land designated as prime farmland, unique farmland, or Farmland of Statewide Importance to nonagricultural use. The proposed project would not conflict with any existing agricultural zoning or Williamson Act contracts.[168] No land in San Francisco is designated as forest land or timberland by the California Public Resources Code. Therefore, the proposed project would not conflict with zoning for forest land, cause a loss of forest land, or convert forest land to a different use. For these reasons, topics 17a, 17b, 17c, 17d, and 17e are not applicable to the proposed project or variant.

168 San Francisco is identified as "Urban and Built-Up Land" on the California Department of Conservation Important Farmland in California Map, 2012, *http://www.consrv.ca.gov*, accessed January 12, 2017.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
18. MANDATORY FINDINGS OF SIGNIFICANCE					
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☒	☐	☐	☐	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☒	☐	☐	☐	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☒	☐	☐	☐	☐

Note: Authority cited: Sections 21083 and 21083.05, 21083.09 Public Resources Code. Reference: Section 65088.4, Gov. Code; Sections 21073, 21074 21080(c), 21080.1, 21080.3, 21083, 21083.05, 21083.3, 21080.3.1, 21080.3.2,21082.3, 21084.2, 21084.3, 21093, 21094, 21095, and 21151, Public Resources Code; Sundstrom v. County of Mendocino,(1988) 202 Cal.App.3d 296; Leonoff v. Monterey Board of Supervisors, (1990) 222 Cal.App.3d 1337; Eureka Citizens for Responsible Govt. v. City of Eureka (2007) 147 Cal.App.4th 357; Protect the Historic Amador Waterways v. Amador Water Agency (2004) 116 Cal.App.4th at 1109; San Franciscans Upholding the Downtown Plan v. City and County of San Francisco (2002) 102 Cal.App.4th 656.

Mandatory Findings of Significance

The foregoing analysis identifies potentially significant impacts to cultural resources (historic architectural resources only), transportation and circulation, noise, air quality, wind, and shadow, all of which will be analyzed further in the EIR.

A. As discussed in the various topics in this initial study, the proposed project and variant are anticipated to have less-than-significant impacts on most of the environmental topics discussed in this initial study. Where necessary, mitigation measures have been identified to reduce impacts to less than significant levels. Mitigation measures are included in the following topics: cultural resources, geology and soils and hazards and hazardous materials. However, the proposed project or variant could have potentially significant impacts related to cultural resources (historic architectural resources only), transportation and circulation, noise, air quality, wind, and shadow. These impacts will be discussed and analyzed further in the EIR.

B. The proposed project or variant, in combination with past, present, and reasonably foreseeable projects described in the Cumulative Setting would not result in cumulative impacts to land use, population and housing, cultural resources (archeological resources, human remains, and tribal cultural resources), greenhouse gas emissions, recreation, utilities and service systems, public services, biological resources, geology and soils, hydrology and water quality, hazards and hazardous materials, mineral and energy resources, and agricultural and forest resources with implementation of identified mitigation. However,

the proposed project or variant, in combination with the past, present and foreseeable projects could result in cumulative impacts related to historic architectural resources, transportation and circulation, noise, air quality, wind, and shadow. These cumulative impacts will be discussed and analyzed further in the EIR.

C. As discussed above, the proposed project or variant have the potential to result in significant impacts with respect to historic architectural resources, transportation and circulation, noise, air quality, wind, and shadow, which could adversely affect human beings. The EIR will assess these topics and identify mitigation measures where applicable.

F. MITIGATION MEASURES

The following mitigation measures are also included under each relevant topic area above.

Cultural Resources

Mitigation Measure M-CR-1: Conduct Archeological Testing and, if Required, Archeological Monitoring

Based on a reasonable presumption that archeological resources may be present within the project area, 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 rotational qualified archeological consultants list maintained by the Planning Department archeologist. The project sponsor shall contact the department archeologist to obtain the names and contact information for the next three archeological consultants on the qualified archeological consultants list. 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 at the direction of the Environmental Review Officer (ERO). 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 4 weeks. At the direction of the ERO, the suspension of construction can be extended beyond 4 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) and 15064.5(c).

Consultation with Descendant Communities. On discovery of an archeological site[169] associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group, an appropriate representative[170] of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the final archeological resources report shall be provided to the representative of the descendant group.

Archeological Testing Program. The archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing program (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,

169 The term "archeological site" is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

170 An "appropriate representative" of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the department archeologist.

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. No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. 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 redesigned 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 monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the archeological monitoring program reasonably before the commencement of any project-related soil-disturbing activities. 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), and site remediation shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context.
- 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 the 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), 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 onsite/offsite 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 soil-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 Native American Heritage Commission, which shall appoint a Most Likely Descendant (California Public Resources Code section 5097.98). The archeological consultant, the project sponsor, ERO, and the Most Likely Descendant shall have up to but

not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines section 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. Nothing in existing state regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of a Most Likely Descendant. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such an agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.

Final Archeological Resources Report. The archeological consultant shall submit a draft final archeological resources report 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 final archeological resources report shall be distributed as follows: California Archeological Site Inventory, Northwest Information Center shall receive one copy and the ERO shall receive a copy of the transmittal of the report to the Northwest Information Center. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the final archeological resources report 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.

Mitigation Measure M-CR-2: Tribal Cultural Resources Interpretive Program

If the ERO determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the ERO determines that the resource constitutes a tribal cultural resource and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned to avoid any adverse effect on the significant tribal cultural resource, if feasible.

If the ERO, in consultation with the affiliated Native American tribal representatives and the project sponsor, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the project sponsor shall implement an interpretive program of the tribal cultural resource in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the ERO would be required to guide the interpretive program. The plan shall identify, as appropriate, proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifact displays and interpretation, and educational panels or other informational displays.

Geology and Soils

Mitigation Measure M-GE-6: Implement Appropriate Measures in Case of Inadvertent Discovery of Paleontological Resources

Before ground disturbance, the project sponsor shall retain a qualified paleontologist, as defined by the Society of Vertebrate Paleontology, to instruct construction personnel involved with earthmoving activities regarding the possibility of encountering fossils, the appearance of fossils that may be unearthed during construction, and proper notification procedures should fossils be encountered. A qualified paleontologist shall monitor construction activities in the areas where construction activities have the potential to disturb previously undisturbed native sediment or sedimentary rocks. Construction shall be halted within 50 feet of any potential fossil find and a qualified paleontologist notified, who shall evaluate the significance.

If paleontological resources are discovered during earthmoving activities, the construction crew shall immediately cease work in the vicinity of the resource and notify the project sponsor and San Francisco Planning Department. There shall be no construction work in the area to allow for the recovery of the resource in a timely manner. A qualified paleontologist shall evaluate the resource and prepare a recovery plan compliant with the standards of the Society for Vertebrate Paleontology. The recovery plan may include a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. The City and County of San Francisco shall determine which of the recommendations in the recovery plan are necessary and feasible, and these recommendations shall be implemented before construction activities can resume at the site where the paleontological resources were discovered. The City shall be responsible for ensuring that the qualified paleontologist's recommendations regarding treatment and reporting are implemented.

G. PUBLIC NOTICE AND COMMENT

On July 12, 2017, the Planning Department mailed a notice of preparation of an EIR and notice of public scoping meeting to property owners within 300 feet of the project site, tenants, and other potentially interested parties. Subsequently, the Planning Department held a public scoping meeting on Wednesday, August 2, 2017, to receive input on the scope of the environmental review for the proposed project and variant. Five speakers provided oral comments at the public scoping meeting. No comment letters were received during the public scoping meeting. During the public review and comment period on the notice of preparation, a total of 13 comment letters, comment cards, and emails were submitted to the Planning Department. The written and oral comments raised the following issues:

- Potential impacts related to the proposed provision of parking at a dwelling unit to parking space ratio that would require conditional approval by the Planning Commission
- Potential transportation impacts associated with tech shuttle services, transportation network companies, and e-commerce delivery services
- The appropriateness of using an average vehicle miles traveled metric to determine significance of transportation impacts
- Desire for community benefits, such as public open space and art displays
- Potential wind impacts to bicyclists and pedestrians traveling in the vicinity of the project site
- Provision of two- and three-bedroom units in new residential projects in the project vicinity
- Provision of affordable housing
- The need to mitigate demolition of historic resources
- Cumulative impacts

The issues raised in the written and oral comments have either been addressed in this initial study or will be addressed in the EIR, as appropriate.

H. DETERMINATION

On the basis of this initial study:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

Lisa Gibson
Environmental Review Officer
for
John Rahaim
Director of Planning

DATE: May 2, 2018

I. INITIAL STUDY PREPARERS

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PLACE

POSTAGE

HERE

Rachel Schuett
San Francisco Planning Department
Environmental Planning Division
1650 Mission Street, Suite 400
San Francisco, CA 94103

PLEASE CUT ALONG DOTTED LINES

PLEASE RETURN THIS POSTCARD TO REQUEST A COPY OF
THE FINAL ENVIRONMENTAL IMPACT REPORT

(NOTE THAT THE DRAFT EIR PLUS THE RESPONSES TO COMMENTS
DOCUMENT CONSTITUTE THE FINAL EIR)

REQUEST FOR FINAL ENVIRONMENTAL IMPACT REPORT

Planning Department Case No. 2015-004568ENV

10 South Van Ness Mixed-Use Project

Check one box: ☐ Please send me a copy of the Final EIR on CD-ROM.
☐ Please send me a paper copy of the Final EIR.

Signed: _____

Name: _____

Street: _____

City: _____ State: _____ Zip: _____