DRAFT ENVIRONMENTAL IMPACT REPORT

1979 Mission Street Mixed-Use Project

CITY AND COUNTY OF SAN FRANCISCO
PLANNING DEPARTMENT
CASE NO. **2013.1543E**

STATE CLEARINGHOUSE NO. 2015012059

SAN FRANCISCO
PLANNING
DEPARTMENT

Draft EIR Publication Date:	May 4, 2016
Draft EIR Public Hearing Date:	June 9, 2016
Draft EIR Public Comment Period:	May 5, 2016 – July 5, 2016

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

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TO: Distribution List for the 1979 Mission Street Mixed Use Project Draft EIR

FROM: Sarah B. Jones, Environmental Review Officer

SUBJECT: Request for the Final Environmental Impact Report for the 1979 Mission Street Mixed Use Project (Planning Department File No. 2013.1543E)

This is the Draft of the Environmental Impact Report (EIR) for the 1979 Mission Street 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 a summary of 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 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 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 requested. 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 2 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.

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1979 MISSION STREET MIXED-USE PROJECT

Draft EIR

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LIST OF ACRONYMS AND ABBREVIATIONS

ABAG	Association of Bay Area Governments
ADA	Americans with Disabilities Act
BAAQMD	Bay Area Air Quality Management District
BART	Bay Area Rapid Transit
BART Plaza	northeastern entrance to the 16th Street Mission BART Station
Better Streets Plan	San Francisco Better Streets Plan
bgs	below ground surface
CBC	California Building Code
CEQA	California Environmental Quality Act
City	City of San Francisco
Climate Action Plan	Climate Action Plan for San Francisco: Local Actions to Reduce Greenhouse Emissions
CPE	Community Plan Exemption
DBI	Department of Building Inspection
Eastern Neighborhoods PEIR	Programmatic Environmental Impact Report for the Eastern Neighborhoods Rezoning and Area Plans
EIR	Environmental Impact Report
General Plan	San Francisco General Plan
GHG	greenhouse gas
gsf	gross square feet
lbs/day	pounds per day
LEED	Leadership in Energy and Environmental Design
LOS	level of service
Mission NCT	Mission Street Neighborhood Commercial Transit
mph	miles per hour
Muni	San Francisco Municipal Railway
MTC	Metropolitan Transportation Commission
NOP	Notice of Preparation
NO_X	oxides of nitrogen
PDR	production, distribution, and repair
Plan area	Eastern Neighborhoods Rezoning and Area Plan area
Plan Bay Area	Plan Bay Area Sustainable Communities Strategy
Planning Code	San Francisco Planning Code
Planning Commission	San Francisco Planning Commission
Planning Department	San Francisco Planning Department
$PM_{2.5}$	particulate matter less than or equal to 2.5 microns in diameter
PM_{10}	particulate matter less than or equal to 10 microns in diameter
ROG	reactive organic gas
RWDI	Rowan Williams Davies & Irwin Inc.
RWQCB	Regional Water Quality Control Board
SDC	Seismic Design Category
sfh	square-foot-hour
SFMTA	San Francisco Municipal Transportation Agency
SFUSD	San Francisco Unified School District
TAAS	Theoretical Available Annual Sunlight

TEP	Transit Effectiveness Project
VMT	vehicle miles traveled
ZOI	zone of influence

Summary

This chapter provides an overview of the topics and issues addressed in this Environmental Impact Report (EIR), which has been prepared for the 1979 Mission Street Mixed Use Project (Proposed Project). This chapter includes a summary of the Proposed Project, a list of the Proposed Project's impacts, level of significance of the environmental impacts, applicable mitigation measures, the alternatives to the Proposed Project that are analyzed in this EIR, and a comparison of their impacts to those of the Proposed Project, a summary of environmental issues to be resolved, and areas of controversy.

The San Francisco Planning Department (Planning Department) is the lead agency responsible for preparing this EIR, in compliance with the California Environmental Quality Act (CEQA). This is a focused EIR which discloses to the public and decisionmakers the impacts of the Proposed Project on wind, shadow, and geology and soils that are peculiar to the project site and that were not fully anticipated or disclosed in the Programmatic Environmental Impact Report for the Eastern Neighborhoods Rezoning and Area Plans (Eastern Neighborhoods PEIR).[1] As determined in the Community Plan Exemption (CPE) Checklist prepared for the Proposed Project, which is included in Appendix A of this document with the Notice of Preparation (NOP) of an EIR, all other potential impacts of the Proposed Project are adequately addressed in the Eastern Neighborhoods PEIR.

A. Project Synopsis

The project site is in the Inner Mission neighborhood (Assessor's Block 3553, Lot 052), on the block bounded by Mission Street to the west, 16th Street to the south, Capp Street to the east, and 15th Street to the north. The 57,312 square foot project site forms the northern and eastern boundaries of the street level plaza and northeastern entrance to the 16th Street Mission Bay Area Rapid Transit (BART) Station. The Proposed Project would demolish the two existing commercial buildings and a surface parking lot on the site, and construct a new, 331 unit mixed use residential building with ground floor retail, ranging in height from 4 to 10 stories, with a maximum height of 105 feet, and a total height of 121 feet at the elevator penthouse. The Proposed Project would be an approximately 388,912 gross square foot (gsf) mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza. Code compliant common and private usable open space, including balconies, roof terraces, and a portion of the

[1] San Francisco Planning Department, 2008. Eastern Neighborhoods Rezoning and Area Plans Programmatic Environmental Impact Report, Planning Department Case No. 2004.0160E, certified August 7, 2008. The Eastern Neighborhoods PEIR is on file for public review at the Planning Department, 1650 Mission Street, Suite 400, as part of Case No. 2004.0160E, or at www.sfgov.org/site/planning_index.asp?id=67762.

interior podium courtyard, would be provided as part of the Proposed Project. The Proposed Project would include approximately 291,027 gsf of residential uses (331 dwelling units), and approximately 34,198 gsf of commercial uses (with multiple tenant spaces). Approximately 63,687 gsf of parking and building services would be located in the basement and ground floor, including 163 parking spaces (136 for residential use, 22 for commercial use, four for car share use, and one Americans with Disabilities Act [ADA] accessible van parking space), three freight loading spaces, 162 Class I bicycle parking spaces, and mechanical/electrical equipment.[2] In addition, 30 Class II bicycle parking spaces would be provided in two on street bicycle corrals.[3] The proposed bicycle corrals would be located in the parking lane: one on Mission Street north of the existing transit stop, and one on Capp Street.

The proposed building would have three separate residential structural components above the podium level (level 2), with an interior courtyard on level 2 and roof decks that would provide open space for Project residents. These residential components include the six to ten story Mission Street residential component, the seven to ten story 16th Street residential component and the four to five story Capp Street residential component. The Mission and 16th Street residential components would each have a maximum height of 105 feet, with a total height of 121 feet at the elevator penthouse. The Capp Street residential component would have a maximum height of 55 feet reaching 71 feet at the elevator penthouse.

The project site is in the Mission Area Plan of the Eastern Neighborhoods Rezoning and Area Plans and in the Mission Street Neighborhood Commercial Transit Zoning District. The portions of the site along Mission and 16th Streets are in a 105-E height and bulk district, and the Capp Street portion is in a 55-X height and bulk district.[4] The project site is in three special use districts: the Mission Street Formula Retail Restaurant Subdistrict, the Mission Alcohol Restricted Use District, and the Fringe Financial Service Restricted Use District. The Proposed Project would require authorization for a Planned Unit Development (Planning Code Section 304) and conditional use authorization (Planning Code Section 303) exceptions from lot size limit (Planning Code Section 121.1) and use size limit (Planning Code Sections 121.2 and 121.6), rear yard size and location (Planning Code Section 134), bay window width and separation (Planning Code Section 136[c][2]), bulk limitations (Planning Code Section 270), and dwelling unit exposure to open space (Planning Code Section 140). In addition, the Proposed Project would require approvals and permits from the Planning Department, the Department of Building Inspection (DBI), the San Francisco Municipal Transportation Agency (SFMTA) Board of Directors, the San Francisco Public Works Bureau of Street Use and Mapping, the San Francisco Public Utilities Commission, the San Francisco Department of Public Health, the San Francisco Board of Supervisors, Bay Area Air Quality Management District, and BART's permit review division.

[2] Class I bicycle parking is a space 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 (Planning Code Section 155.1).

[3] Class II is a space in a publicly accessible, highly visible location intended for transient or short-term use by visitors, guests, and patrons to the building (Planning Code Section 155.1).

[4] The E bulk designation limits the portion of a building that is over 65 feet tall to a maximum length of 110 feet and a maximum diagonal dimension of 140 feet; and the X bulk designation has no bulk controls (Planning Code Section 270).

B. Summary of Impacts, Mitigation Measures, and Improvement Measures

Based on the findings in the CPE Checklist prepared for the Proposed Project, the Planning Department determined that the Proposed Project could result in significant impacts associated with wind, shadow, and geology and soils that are peculiar to the project site and that were not identified in the Eastern Neighborhoods PEIR. All other environmental topics have been addressed in the CPE Checklist. The Planning Department published an NOP of an EIR with a CPE Checklist on January 28, 2015, announcing its intent to prepare and distribute a focused EIR (the NOP and CPE Checklist are presented as Appendix A to this EIR).

Table S-1 summarizes all impacts identified for the Proposed Project and lists their levels of significance. For any impacts found to be significant, corresponding mitigation measures are included, and the level of significance after mitigation is indicated. As shown in Table S-1, the Proposed Project would have a significant and unavoidable Project level impact related to shadow.

The CPE Checklist identified mitigation measures from the Eastern Neighborhoods PEIR that would apply to the Proposed Project. The CPE Checklist also included Project improvement measures that would further reduce less than significant impacts. These mitigation and improvement measures are summarized in Table S-2 and Table S-3 respectively, and are not further addressed in this EIR. However, these measures will be included in the Mitigation Monitoring and Reporting Program, for consideration at the Planning Commission hearing of Project approvals.

Table S-4 compares key elements of the alternatives to the Proposed Project, and Tables S-5 and S-6 compare the impacts of alternatives.

Table S-1
Summary of Impacts and Mitigation Measures Identified in the EIR

Environmental Impacts	Impact Significance Prior to Mitigation Measure	Mitigation Measures	Level of Significance after Mitigation
Wind and Shadow			
Impact WS-1: The Proposed Project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site.	LS	None required.	LS
Impact C-WS-1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects, would not alter wind in a manner that substantially affects public areas in the vicinity of the project site.	LS	None required.	LS
Impact WS-2: The Proposed Project would create new shadow in a manner that could substantially affect the Marshall Elementary School outdoor recreation facilities and open space.	S	No feasible mitigation measure available.	SU
Impact WS-3: The Proposed Project would not create new shadow in a manner that would substantially affect the 16th Street Mission BART Station plazas.	LS	None required.	LS
Impact C-WS-2: The Proposed Project would have a cumulatively considerable contribution to significant cumulative shadow impacts, substantially affecting outdoor recreation facilities and open space.	S	No feasible mitigation measure available.	SU
Geology and Soils			
Impact GE-1: The Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture, ground shaking, liquefaction, or landslides.	LS	None required.	LS

Table S-1
Summary of Impacts and Mitigation Measures Identified in the EIR (Continued)

Environmental Impacts	Impact Significance Prior to Mitigation Measure	Mitigation Measures	Level of Significance after Mitigation
Impact GE-2: The Proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project.	LS	None required.	LS
Impact GE-3: The Proposed Project could impose lateral surcharge pressures on the BART subway.	S	M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure Prior to submission of structural plan addendum to the site permit for the Proposed Project to DBI, the Project Sponsor shall submit such plans to BART for its review and approval to ensure that the plans comply with BART guidelines for the construction activity in the BART Zone of Influence (ZOI), including the General Guidelines for Design and Construction Over or Adjacent to BART's Subway Structures, and Procedures for Permit and Plan Review.[5] The Project Sponsor and their structural engineer shall coordinate with BART to determine which of the following guidelines must be included in the plans to be submitted to BART for review: · Geologic Hazards Evaluation and Geotechnical Investigation reports, which shall include an engineering geology map, a site plan showing the location of subway structures and BART easement, a soil reworking plan, and the geological conclusion and recommendations; · Dewatering monitoring and recharging plans; · A vibration monitoring plan and/or movement and deformation monitoring plans for steel lined tunnels. These plans shall include locations and details of instruments in subways; · A foundation plan showing the anticipated total foundation loads; · An excavation plan for area in the ZOI, showing excavation slope or shoring system; and · A description of the procedures and control of the soil compaction operation. The Project Sponsor and their consultant shall monitor the groundwater level in the BART ZOI, and piezometers shall be installed on the Mission Street sidewalk adjacent to the site if requested by BART. The following guidelines would apply to the adjacent property owners within 50 feet of the project site: Prior to start of construction, the Project Sponsor shall engage the service of a licensed land surveyor to prepare a pre-construction survey of the adjacent permanent structures within 50 feet of the project site by a licensed surveyor. The scope of the pre-construction survey shall include, but shall not be limited to, the following tasks. · Establish survey measurements of the exterior elevations of adjacent properties to monitor any movement or settlement of adjacent permanent structures during excavation.	LSM

[5] BART (Bay Area Rapid Transit District), 2012. Procedures for Permit and Plan Review. June. Available online at: bart.gov/sites/default/files/docs/Permits_and_Plan_Review_062012.pdf. This document is available for review along with all other case materials at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, as part of Case File No. 2013.1543E.
BART (Bay Area Rapid Transit District), 2003. General Guidelines for Design and Construction over or Adjacent to BART's Subway Structures. July. Available online at: bart.gov/sites/default/files/docs/Gen_Guide_Subway_062012.pdf and as part of the case file.

Table S-1
Summary of Impacts and Mitigation Measures Identified in the EIR (Continued)

Environmental Impacts	Impact Significance Prior to Mitigation Measure	Mitigation Measures	Level of Significance after Mitigation
		· Photograph and/or video the exterior and interior of the adjacent permanent structures which shall provide a complete documentation of existing conditions prior to commencement of the Work. The photographic and video survey shall be adequate in scope to provide a legally binding "before and after" comparison of the conditions of the adjacent permanent structures. The Project Sponsor shall provide copies of the survey report, photographs and video and all other documents disclosing the results of the pre-construction inspection to the adjacent property owners within 5 working days of receipt from the surveyor. · Provide the adjacent property owners with the business addresses, telephone numbers, and names of (i) the shoring and underpinning engineer for the Project; and (ii) the contact persons for the general contractor and the subcontractor(s) responsible for completing the work at least 5 working days prior to commencement of the work. · Install inclinometers and piezometers if necessary to monitor movement of the shoring system and to monitor groundwater levels, respectively, during excavation and construction. · Notify the adjacent property owners of any change order affecting the scope of the work or the plans within 3 calendar days of such changes being proposed. Upon start of construction, the Project Sponsor's licensed land surveyor shall perform the following tasks. · Monitor the adjacent permanent structures within 50 feet of the project site. Monitoring shall be performed weekly until shoring and underpinning work has been completed; thereafter, monitoring shall be performed monthly during construction of foundation and retaining walls. · In the event that there is more than one-half inch of lateral movement, or one-quarter inch of vertical movement, the Project Sponsor's surveyor shall immediately notify the adjacent property owner, the Project Sponsor's general contractor, the shoring and excavation sub-contractor, and DBI, and the Project Sponsor shall instruct his contractor and subcontractor to stop work until such time that appropriate remedial steps have been approved by DBI.	
Impact C-GE-1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects in the vicinity, would not result in a significant cumulative impact related to geology and soils.	LS	None required.	LS

Notes:

NA= Not Applicable
LS = Less than significant impact, no mitigation required
LSM = Less than significant impact after implementation of mitigation
S = Significant impact before application of mitigation measures
SU = Significant and unavoidable impact, no feasible mitigation

Table S-2
Summary of Mitigation Measures Identified in the CPE Checklist

Environmental Topic	Mitigation Measures
Cultural and Paleontological Resources	Project Mitigation Measure M-CP-1: Archaeological Testing Based on a reasonable presumption that archaeological resources may be present in the project site, the following measures shall be undertaken to avoid any potentially significant adverse effect from the Proposed Project on buried or submerged historical resources. The Project Sponsor shall retain the services of an archaeological consultant from the rotational Department Qualified Archaeological Consultants List (QACL) maintained by the Planning Department archaeologist. The Project Sponsor shall contact the Department archaeologist to obtain the names and contact information for the next three archaeological consultants on the QACL. The archaeological consultant shall undertake an archaeological testing program as specified herein. In addition, the consultant shall be available to conduct an archaeological monitoring and/or data recovery program, if required pursuant to this measure. The archaeological consultant's work shall be conducted in accordance with this measure, and with the requirements of the project Archaeological Research Design and Treatment Plan (ARDTP),[6] at the direction of the Environmental Review Officer (ERO). In instances of inconsistency between the requirement of the project ARDTP and of this archaeological mitigation measure, the requirements of this archaeological mitigation measure shall prevail. All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archaeological 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 archaeological resource as defined in CEQA Guidelines Section 15064.5 (a)(c). Consultation with Descendant Communities: On discovery of an archaeological site[7] associated with descendant Native Americans, the Overseas Chinese, or other descendant group, an appropriate representative[8] of the descendant group and the ERO shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archaeological field investigations of the site, and to consult with ERO regarding appropriate archaeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archaeological site. A copy of the Final Archaeological Resources Report (FARR) shall be provided to the representative of the descendant group. Archaeological Testing Program. The archaeological consultant shall prepare and submit to the ERO for review and approval an archaeological testing plan (ATP). The archaeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archaeological 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 archaeological testing program will be to determine to the extent possible the presence or absence of archaeological resources, and to identify and to evaluate whether any archaeological resource encountered on the site constitutes an historical resource under CEQA. At the completion of the archaeological testing program, the archaeological consultant shall submit a written report of the findings to the ERO. If based on the archaeological testing program the archaeological consultant finds that significant archaeological resources may be present, the ERO in consultation with the archaeological consultant shall determine whether additional measures are warranted. Additional measures that may be undertaken include additional archaeological testing, archaeological monitoring, and/or an archaeological data recovery program. No archaeological data recovery shall be undertaken

[6] Shew, Dana, Mary Praetzellis, and Adrian Praetzellis, 2014. *1979 Mission Street San Francisco Archaeological Research Design and Treatment Plan*. November.

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

[8] 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 archaeologist.

Table S-2
Summary of Mitigation Measures Identified in the CPE Checklist (Continued)

Environmental Topic	Mitigation Measures
Cultural and Paleontological Resources (Continued)	without the prior approval of the ERO or the Planning Department archaeologist. If the ERO determines that a significant archaeological resource is present and that the resource could be adversely affected by the Proposed Project, then at the discretion of the Project Sponsor either: a. The Proposed Project shall be re-designed so as to avoid any adverse effect on the significant archaeological resource; or b. A data recovery program shall be implemented, unless the ERO determines that the archaeological resource is of greater interpretive than research significance, and that interpretive use of the resource is feasible. *Archaeological Monitoring Program*. If the ERO, in consultation with the archaeological consultant, determines that an archaeological monitoring program shall be implemented, the archaeological monitoring program shall minimally include the following provisions: · The archaeological consultant, Project Sponsor, and ERO shall meet and consult on the scope of the Archaeological Monitoring Plan reasonably prior to the commencement of any Project related soils disturbing activities. The ERO, in consultation with the archaeological consultant, shall determine what Project activities shall be archaeologically monitored. In most cases, any soils disturbing activities—such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc.—shall require archaeological monitoring, because of the risk these activities pose to potential archaeological resources and to their depositional context. · The archaeological 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 archaeological resource. · The archaeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archaeological consultant and the ERO until the ERO has, in consultation with the Project archaeological consultant, determined that Project construction activities could have no effects on significant archaeological deposits. · The archaeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material, as warranted for analysis. · If an intact archaeological deposit is encountered, all soils disturbing activities in the vicinity of the deposit shall cease. The archaeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If, in the case of pile driving activity (foundation, shoring, etc.), the archaeological monitor has cause to believe that the pile driving activity may affect an archaeological resource, the pile driving activity shall be terminated until an appropriate evaluation of the resource has been made in consultation with the ERO. The archaeological consultant shall immediately notify the ERO of the encountered archaeological deposit. The archaeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, and present the findings of this assessment to the ERO. Whether or not significant archaeological resources are encountered, the archaeological consultant shall submit a written report of the findings of the monitoring program to the ERO. *Archaeological Data Recovery Program*. The archaeological data recovery program shall be conducted in accord with an archaeological data recovery plan (ADRP). The archaeological consultant, Project Sponsor, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archaeological 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 archaeological 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 archaeological resources if nondestructive methods are practical.

Table S-2
Summary of Mitigation Measures Identified in the CPE Checklist (Continued)

Environmental Topic	Mitigation Measures
Cultural and Paleontological Resources (Continued)	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 archaeological data recovery program. · *Security Measures*. Recommended security measures to protect the archaeological resource from vandalism, looting, and non-intentionally damaging activities. · *Final Report*. Description of proposed report format and distribution of results. · *Curation*. Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities. *Human Remains and Associated or Unassociated Funerary Objects*. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity shall comply with applicable state and federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco, and in the event of the Coroner's determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission, who shall appoint a Most Likely Descendant (MLD) (Public Resources Code Section 5097.98). The archaeological consultant, Project Sponsor, ERO, and MLD shall make all reasonable efforts to develop an agreement for the treatment of, with appropriate dignity, human remains and associated or unassociated funerary objects (CEQA Guidelines, 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. *Final Archaeological Resources Report*. The archaeological consultant shall submit to the ERO a Draft FARR that evaluates the historical significance of any discovered archaeological resource, and describes the archaeological and historical research methods employed in the archaeological testing/monitoring/ data recovery program(s) undertaken. Information that may put at risk any archaeological resource shall be provided in a separate removable insert in the final report. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey NWIC shall receive one copy, and the ERO shall receive a copy of the transmittal of the FARR to the Northwest Information Center (NWIC). The Environmental Planning division of the Planning Department shall receive one bound, one unbound, and one unlocked, searchable PDF copy on CD of the FARR, along with copies of any formal site recordation forms (CA DPR 523 series), and/or documentation for nomination to the National Register of Historic Places/CRHR. 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.

Table S-2
Summary of Mitigation Measures Identified in the CPE Checklist (Continued)

Environmental Topic	Mitigation Measures
Noise	Project Mitigation Measure M-NO-1: Construction Noise (Mitigation Measure F-2 of the Eastern Neighborhoods PEIR) Where environmental review of a development project undertaken subsequent to the adoption of the proposed zoning controls determines that construction noise controls are necessary due to the nature of planned construction practices and the sensitivity of proximate uses, the Planning Director shall require that the sponsors of the subsequent development project develop a set of site specific noise attenuation measures under the supervision of a qualified acoustical consultant. Prior to commencing construction, a plan for such measures shall be submitted to the DBI to ensure that maximum feasible noise attenuation will be achieved. These attenuation measures shall include as many of the following control strategies as feasible: · Erect temporary plywood noise barriers around a construction site, particularly where a site adjoins noise sensitive uses; · Use noise control blankets on a building structure as the building is erected to reduce noise emission from the site; · Evaluate the feasibility of noise control at the receivers by temporarily improving the noise reduction capability of adjacent buildings that house sensitive uses; · Monitor the effectiveness of noise attenuation measures by taking noise measurements; and · Post signs on site pertaining to permitted construction days and hours, complaint procedures, and who to notify in the event of a problem, with telephone numbers listed. In addition, the following recommendations from the noise study prepared for the Proposed Project shall be implemented, as feasible: · Construct walled enclosures around all stationary equipment, such as the diesel compressor, the generator, and the concrete pumps. · Turn off dump trucks, concrete trucks, and delivery trucks in holding areas as much as possible. · Consider using jackhammers and chipping hammers fitted with mufflers, or use a jacket around the equipment assembled of several layers of a mass vinyl barrier, such as the Kinetics KNM-100, secured with Velcro straps. · Schedule superstructure and interior work to occur after the exterior façade has been erected as much as possible, especially the northern and western facades. The idea would be to use the exterior façade of the 1979 Mission Street buildings as a barrier to block noise to the neighboring receivers as much as possible. · Use all "quiet" options and mufflers on all engines as provided by the equipment manufacturer as much as possible. · Limit the use of tonal noise generators as much as possible. Tonal noise generators would include elements such as crane warning horns, manlift alarms, or backup signals. · Notify the occupants of nearby residential buildings about construction schedules. · Specify maximum noise emission sound pressure levels of the construction equipment. Have the contractor submit test data (manufacturer provided or field tested) for the pieces of equipment planned for use in the Project.
	Project Mitigation Measure M-NO-2: Interior Noise Levels (Mitigation Measure F-3 of the Eastern Neighborhoods PEIR) For new development including noise sensitive uses located along streets with noise levels above 60 dBA (Ldn), as shown in PEIR Figure 18, where such development is not already subject to the California Noise Insulation Standards in Title 24 of the California Code of Regulations, the Project Sponsor shall conduct a detailed analysis of noise reduction requirements. Such analysis shall be conducted by person(s) qualified in acoustical analysis and/or engineering. Noise insulation features identified and recommended by the analysis shall be included in the design, as specified in the San Francisco General Plan Land Use Compatibility Guidelines for Community Noise to reduce potential interior noise levels to the maximum extent feasible.

Table S-2
Summary of Mitigation Measures Identified in the CPE Checklist (Continued)

Environmental Topic	Mitigation Measures
Noise (Continued)	Project Mitigation Measure M-NO-3: Siting of Noise Sensitive Uses (Mitigation Measure F-4 of the Eastern Neighborhoods PEIR) To reduce potential conflicts between existing noise generating uses and new sensitive receptors, for new development including noise sensitive uses, the Planning Department shall require the preparation of an analysis that includes, at a minimum, a site survey to identify potential noise generating uses within 900 feet of, and that have a direct line of sight to, the project site; and including at least one 24 hour noise measurement (with maximum noise level readings taken at least every 15 minutes), prior to the first Project approval action. The analysis shall be prepared by persons qualified in acoustical analysis and/or engineering and shall demonstrate with reasonable certainty that Title 24 standards, where applicable, can be met, and that there are no particular circumstances about the Proposed Project site that appear to warrant heightened concern about noise levels in the vicinity. Should such concerns be present, the Department may require the completion of a detailed noise assessment by person(s) qualified in acoustical analysis and/or engineering prior to the first Project approval action, in order to demonstrate that acceptable interior noise levels consistent with those in the Title 24 standards can be attained.
	Project Mitigation Measure M-NO-4: Siting of Noise Generating Uses (Mitigation Measure F-5 of the Eastern Neighborhoods PEIR) To reduce potential conflicts between existing sensitive receptors and new noise generating uses, for new development including commercial, industrial, or other uses that would be expected to generate noise levels in excess of ambient noise, either short term, at nighttime, or as a 24 hour average, in the Proposed Project site vicinity, the Planning Department shall require the preparation of an analysis that includes, at a minimum, a site survey to identify potential noise sensitive uses within 900 feet of, and that have a direct line of sight to, the project site; and including at least one 24 hour noise measurement (with maximum noise level readings taken at least every 15 minutes), prior to the first Project approval action. The analysis shall be prepared by persons qualified in acoustical analysis and/or engineering and shall demonstrate with reasonable certainty that the proposed use would comply with the use compatibility requirements in the General Plan and in Police Code Section 2909l, would not adversely affect nearby noise sensitive uses, and that there are no particular circumstances about the Proposed Project site that appear to warrant heightened concern about noise levels that would be generated by the proposed use. Should such concerns be present, the Department may require the completion of a detailed noise assessment by person(s) qualified in acoustical analysis and/or engineering prior to the first Project approval action.
	Project Mitigation Measure M-NO-5: Open Space in Noisy Environments (Mitigation Measure F-6 of the Eastern Neighborhoods PEIR) To minimize effects on development in noisy areas, for new development, including noise sensitive uses, the Planning Department shall, through its building permit review process, in conjunction with noise analysis required pursuant to Mitigation Measure F-4, require that open space required under the Planning Code for such uses be protected, to the maximum feasible extent, from existing ambient noise levels that could prove annoying or disruptive to users of the open space. Implementation of this measure could involve, among other things, site design that uses the building itself to shield onsite open space from the greatest noise sources; construction of noise barriers between noise sources and open space; and appropriate use of both common and private open space in multi-family dwellings; implementation would also be undertaken consistent with other principles of urban design.
Hazards and Hazardous Materials	Project Mitigation Measure M-HZ-1: Hazardous Building Materials (Mitigation Measure L-1 of the Eastern Neighborhoods PEIR) The City shall condition future development approvals to require that the subsequent Project Sponsors ensure that any equipment containing polychlorinated biphenyls or diethylhexyl phthalate (DEPH), such as fluorescent light ballasts, are removed and properly disposed of according to applicable federal, state, and local laws prior to the start of renovation, and that any fluorescent light tubes, which could contain mercury, are similarly removed and properly disposed of. Any other hazardous materials identified, either before or during work, shall be abated according to applicable federal, state, and local laws.

The CPE Checklist also identified improvement measures for the Proposed Project. These improvement measures would further reduce impacts identified as less than significant. The improvement measures are not required by CEQA, but may be imposed as conditions of approval by City decisionmakers as part of the Proposed Project's entitlement process.

Table S-3
Summary of Improvement Measures Identified in the CPE Checklist

Environmental Topic	Improvement Measures
Transportation and Circulation	Project Improvement Measure I-TR-1: Monitoring and Abatement of Queues As an improvement measure to reduce the potential for queuing of vehicles accessing the project site, it shall be the responsibility of the Project Sponsor/ property owner to ensure that recurring vehicle queues do not occur on Capp Street, adjacent to the project site. A vehicle queue is defined as one or more vehicles (destined to the proposed basement parking garage) blocking any portion of the Capp Street sidewalk or travel lane on any adjacent street (16th, Mission, and Capp Streets) for a consecutive period of 3 minutes or longer on a daily and/or weekly basis. Because the Proposed Project would include a new off street parking facility with more than 20 parking spaces (excluding loading and car share spaces), the Project is subject to conditions of approval set forth by the Planning Department to address the monitoring and abatement of queues. It shall be the responsibility of the owner/operator of any off street parking facility with more than 20 parking spaces (excluding loading and car share spaces) to ensure that recurring vehicle queues do not occur on the public right of way. A vehicle queue is defined as one or more vehicles (destined to the parking facility) blocking any public street, alley, or sidewalk for a consecutive period of 3 minutes or longer on a daily or weekly basis. If a recurring queue occurs, the owner/operator of the parking facility shall employ abatement methods as needed to abate the queue. Appropriate abatement methods will vary depending on the characteristics and causes of the recurring queue, as well as 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: redesign of facility to improve vehicle circulation and/or onsite queue capacity; employment of parking attendants; installation of LOT FULL signs with active management by parking attendants; use of valet parking or other space efficient parking techniques; use of offsite parking facilities or shared parking with nearby uses; use of parking occupancy sensors and signage directing drivers to available spaces; travel demand management strategies such as additional bicycle parking, customer shuttles, delivery services; and/or 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 Department shall notify the property owner in writing. Upon request, the owner/operator shall hire a qualified transportation consultant to evaluate the conditions at the site for no less than 7 days. The consultant shall prepare a monitoring report to be submitted to the Department for review. If the Department determines that a recurring queue does exist, the facility owner/operator shall have 90 days from the date of the written determination to abate the queue.
	Improvement Measure I-TR-2: Active Parking Management Controls As an improvement measure to reduce the potential for queuing of vehicles accessing the project site, it shall be the responsibility of the Project Sponsor/ property owner to enforce active parking management controls at the off street parking garage. Active parking management controls shall be established for both residences and retail users of the Project parking garage. Key fobs or similar electronic devices shall be assigned and given to each resident who owns/leases a parking space in the parking garage. Residents will use the key fob (or similar electronic device) to access the parking garage. Non-residents will be required to obtain a ticket (e.g., paper card with magnetic strip) that will register the time of vehicle entry. Because there are 22 spaces in the garage dedicated for retail use, the ticketing machine shall issue up to 22 tickets. When the last ticket has been distributed, no additional tickets would be issued from the machine, and an illuminated "Garage Full" sign at the entrance of the garage shall be emplaced to inform non-residents seeking parking in the garage that all retail parking spaces are fully occupied. As vehicles using the retail parking spaces exit the garage, the "Garage Full" sign will be automatically turn off. The sign would provide advanced notification to non-resident drivers prior to entry into the parking garage; and vehicles would not stop (or queue) along Capp Street resulting in increased traffic congestion along the street or nearby intersections.

Table S-3
Summary of Improvement Measures Identified in the CPE Checklist (Continued)

Environmental Topic	Improvement Measures
Transportation and Circulation (Continued)	Project Improvement Measure I-TR-3: Implement Transportation Demand Management Strategies to Reduce Single Occupancy Vehicle Trips The Project Sponsor and subsequent property owner should implement a Transportation Demand Management (TDM) Program that seeks to minimize the number of single occupancy vehicle trips (SOV) generated by the Proposed Project for the lifetime of the Project. The TDM Program targets a reduction in SOV trips by encouraging persons to select other modes of transportation, including walking, bicycling, transit, car share, carpooling, and/or other modes. The Project Sponsor has agreed to implement the following TDM measures: 1. Identify TDM Coordinator: The Project Sponsor should identify a TDM coordinator for the project site. The TDM Coordinator is responsible for the implementation and ongoing operation of all other TDM measures described below. The TDM Coordinator could be a brokered service through an existing transportation management association (e.g., the Transportation Management Association of San Francisco), or the TDM Coordinator could be an existing staff member (e.g., property manager); the TDM Coordinator does not have to work full time at the project site. However, the TDM Coordinator should be the single point of contact for all transportation related questions from building occupants and City staff. The TDM Coordinator should provide TDM training to other building staff about the transportation amenities and options available at the project site and nearby. The TDM Coordinator shall be in charge of maintaining a log (inventory) of complaints from neighbors, including Marshall Elementary School; and the Project Sponsor/property owner will work with the neighbors to address unforeseen problems, and to maintain an ongoing, constructive relationship with neighboring residents and businesses. 2. Provide Transportation and Trip Planning Information to Building Occupants: a. *Move in packet*: Provide a transportation insert for the move in packet that includes information on transit service (local and regional, schedules and fares), information on where transit passes can be purchased, information on the 511 Regional Rideshare Program and nearby bike and car share programs, and information on where to find additional mobile or web based alternative transportation materials (e.g., Next Muni phone app). This move in packet should be continuously updated as local transportation options change, and the packet should be provided to each new building occupant. Provide Muni maps, as well as San Francisco Bicycle and Pedestrian maps upon request. b. *New hire packet*: Require the retail tenants to provide a transportation insert in the new hire packet that includes information on transit service (local and regional, schedules and fares), information on where transit passes can be purchased, information on the 511 Regional Rideshare Program and nearby bike and car share programs, and information on where to find additional web based alternative transportation materials (e.g., Next Muni phone app). This new hire packet should be continuously updated as local transportation options change, and the packet should be provided to each new building occupant. Provide Muni maps, as well as San Francisco Bicycle and Pedestrian maps upon request. c. *Posted information:* A local map and transit information could be installed on site in a prominent and visible location, such as in a building lobby. The local map should clearly identify transit, bicycle, and key pedestrian routes, and also depict nearby destination and commercial corridors.
	Project Improvement Measure I-TR-4: Installation of Traffic Calming Devices at Basement Garage Exiting Lane As an improvement measure to reduce potential conflicts between vehicles exiting the basement garage, and pedestrians traveling along the western sidewalk of Capp Street, the Project Sponsor shall install appropriate traffic calming devices (e.g., speed bump, rumble strips, "slow speed" signage, etc.) at the exiting travel lane along the garage driveway to reduce vehicle speeds of existing vehicles traveling out of the basement parking garage, and to further reduce potential vehicle-pedestrian conflicts.

Table S-3
Summary of Improvement Measures Identified in the CPE Checklist (Continued)

Environmental Topic	Improvement Measures
Transportation and Circulation (Continued)	Project Improvement Measure I-TR-5: Coordination of Move In/Move Out Operations, Large Deliveries, and Garbage Pick Up Operations To reduce the potential for parking of delivery vehicles in the travel lane adjacent to the curb lane on 16th, Mission, or Capp Streets (in the event that the on and off street loading spaces are occupied), residential move in and move out activities and larger deliveries shall be scheduled and coordinated through building management. For retail/restaurant uses, appropriate delivery times shall be scheduled and shall be restricted to occur before 7:00 a.m., and between the hours of 10:00 a.m. and 2:00 p.m., and no deliveries shall occur after 3:00 p.m. to avoid any conflicts with vehicle traffic and pedestrians associated with the nearby Marshall Elementary School. The Project Sponsor shall enforce strict truck size regulations for use of the off street loading spaces in the proposed freight loading area. Truck lengths exceeding 35 feet shall be prohibited from entering the parking garage, and shall use existing on street loading spaces along 16th Street, adjacent to the project site. Appropriate signage shall be installed at the parking garage entrance to notify drivers of truck size regulations, and to notify drivers of on street loading spaces on 16th Street. The Project Sponsor shall notify building management and related staff, and retail/restaurant tenants of imposed truck size limits in the proposed freight loading area. Appropriate move in/move out and loading procedures shall be enforced to avoid any blockages of any streets adjacent to the project site over an extended period of time, and reduce any potential conflicts between other vehicles and users of adjacent streets, as well as movers and pedestrians walking along 16th, Mission, and Capp Streets. Curb parking on 16th, Mission, or Capp Streets shall be reserved through SFMTA, or by directly contacting the local 311 service. Project Sponsor shall coordinate with Recology and enforce strict garbage pick up periods. Such pick up times shall be restricted to occur before 7:00 a.m., and between the hours of 10:00 a.m. and 2:00 p.m., and no garbage pick up activities shall occur after 3:00 p.m. to avoid any conflicts with vehicle traffic and pedestrians associated with the nearby Marshall Elementary School.
	Project Improvement Measure I-TR-6: 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 Fire Department, Muni, and the 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.
	Project Improvement Measure I-TR-7: Construction Management Plan In addition to items required in the Construction Management Plan, the Project Sponsor shall include the following: · *Carpool 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 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.

Table S-3
Summary of Improvement Measures Identified in the CPE Checklist (Continued)

Environmental Topic	Improvement Measures
Air Quality	Project Improvement Measure I-AQ-1: Construction Emissions Minimization Plan A. Prior to issuance of a construction permit, the Project Sponsor should submit a Construction Emissions Minimization Plan (Plan) to the ERO for review and approval by an Environmental Planning Air Quality Specialist. The Plan should specify the extent to which the following measures are feasible and have been incorporated into the construction contracts: 1. All off road equipment greater than 25 horsepower and operating for more than 20 total hours over the entire duration of construction activities should meet the following requirements: a Where access to alternative sources of power are available, portable diesel engines should be prohibited; and b All off road equipment should have: i. Engines that meet or exceed either U.S. Environmental Protection Agency or California Air Resources Board (ARB) Tier 2 off road emission standards, and that are retrofitted with an ARB Level 3 Verified Diesel Emissions Control Strategy (VDECS), or ii. Engines that meet Tier 3 off road emission standards, or to the extent feasible, engines that meet Tier 4 off road emission standards. 2. The Project Sponsor should require that the idling time for off road and on road equipment be limited to no more than 2 minutes, and that construction operators properly maintain and tune equipment in accordance with manufacturer's specifications. 3. The Plan should be updated quarterly, and 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 VDECS installed: technology type, serial number, make, model, manufacturer, ARB verification number level, and installation date and hour meter reading on installation date. 4. The Plan should be kept on site and available for review by any persons requesting it, and a legible sign should be posted at the perimeter of the construction site indicating to the public the basic requirements of the Plan and a way to request a copy of the Plan. The Project Sponsor should provide copies of Plan to members of the public as requested.

Table S-4
Summary of Project Alternatives and Proposed Project

Description	Proposed Project	Alternative A – No Project	Alternative B – Bulk Code Compliant Alternative	Alternative C – Raised Playground Alternative	Alternative D – Reduced Shadow Alternative 1	Alternative E – Reduced Shadow Alternative 2	Alternative F – Reduced Shadow Alternative 3
Ability to Meet Project Sponsor's Objectives	Would meet all Project Sponsor's objectives.	Would not meet any of the Project Sponsor's objectives.	Would meet all Project Sponsor's objectives but to a lesser extent than the Proposed Project.	Would meet all Project Sponsor's objectives.	Would meet all Project Sponsor's objectives but to a lesser extent than the Proposed Project.	Would meet some of the Project's Sponsor's objectives but would have less opportunities to provide affordable and high density housing adjacent to a local and regional public transit hub compared to the Proposed Project.	Would meet some of the Project's Sponsor's objectives but would have less opportunities to provide affordable and high density housing adjacent to a local and regional public transit hub compared to the Proposed Project.
Building Height/Stories	55 to 105 feet (121 feet with elevator penthouse)/6 to 10 stories	Approximately 23 to 30 feet, 1 story	Same as Proposed Project	Same as Proposed Project	35 to 105 feet (121 feet with elevator penthouse)/3 to 10 stories	15 to 105 feet (121 feet with elevator penthouse)/1 to 10 stories	15 to 105 feet (121 feet with elevator penthouse)/1 to 10 stories
Residential Units	331	None	331	331	327	310	243
Parking							
Vehicle	163 spaces (136 residential, 22 commercial, 4 car share, and 1 ADA van space), and 3 freight loading spaces	54 spaces	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Bike	192 spaces (162 secured Class I spaces in basement and 30 Class II spaces on street)	None	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project

Table S-4
Summary of Project Alternatives and Proposed Project Development (Continued)

Description	Proposed Project	Alternative A – No Project	Alternative B – Bulk Code Compliant Alternative	Alternative C – Raised Playground Alternative	Alternative D – Reduced Shadow Alternative 1	Alternative E – Reduced Shadow Alternative 2	Alternative F – Reduced Shadow Alternative 3
Building Characteristics							
Mission Street component[6]	6 to 10 stories/65 to 105 feet in height/121 feet inclusive of the elevator penthouse	NA	6 to 10 stories/ 121 feet in height inclusive of the elevator penthouse	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	6 stories/65 feet in height/81 feet inclusive of the elevator penthouse
16th Street component[6]	7 to 10 stories/75 feet to 105 feet in height/121 feet inclusive of the elevator penthouse	NA	6 to 10 stories/ 121 feet inclusive of the elevator penthouse	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Capp Street component[6]	5 stories/55 feet in height/ 71 feet inclusive of the elevator penthouse	NA	Same as Proposed Project	Same as Proposed Project	3 to 5 stories/71 feet in height inclusive of the elevator penthouse	1 to 5 stories/15 to 55 feet in height/ 71 feet in height inclusive of the elevator penthouse and set back 35 feet from the north property line above the first floor with additional setback on the fourth and fifth floors	1 to 5 stories/15 to 55 feet in height/ 71 feet in height inclusive of the elevator penthouse and set back 70 feet from the north property line above the first floor

Table S-4
Summary of Project Alternatives and Proposed Project Development (Continued)

Description	Proposed Project	Alternative A – No Project	Alternative B – Bulk Code Compliant Alternative	Alternative C – Raised Playground Alternative	Alternative D – Reduced Shadow Alternative 1	Alternative E – Reduced Shadow Alternative 2	Alternative F – Reduced Shadow Alternative 3
Ground floor	Retail: 34,198 gsf; Residential: 3 residential lobbies; 3 residential units on Capp Street; Garage: 3 freight/spaces; 1 ADA accessible van parking space; building services; and 4 Class I bicycle parking spaces for commercial tenants.	Retail: 50,915 square feet with mezzanine and partial basements and a 54 car surface parking lot	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Basement	162 vehicle parking spaces (22 retail parking spaces; 4 car share spaces; and 136 residential parking spaces); 158 Class I bicycle parking spaces; Building services, including emergency generator.	Partial basement under both buildings	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Open Space							
Publicly accessible open space (square feet)	2,175	None	2,175	2,175	2,175	2,175	2,175
Common (square feet)	28,741	None	25,596	28,741	28,053	25,508	31,508
Number of units with private deck	29	None		29			

Table S-5
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the EIR

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
IMPACTS							
Wind and Shadow							
Wind	Impact WS-1: The Proposed Project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Substantially reduced impact compared to the Proposed Project (LTS)
Cumulative Wind	Impact C-WS 1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects, would not alter wind in a manner that substantially affects public areas in the vicinity of the project site (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Substantially reduced impact compared to the Proposed Project (LTS).
Shadow	Impact WS 2: The Proposed Project would create new shadow in a manner that could substantially affect the Marshall Elementary School outdoor recreation facilities and open space (SU).	No impact (NI).	Similar to the Proposed Project impact (SU).	Similar to, but slightly less than, the Proposed Project impact (SU).	Similar to, but slightly less than, the Proposed Project impact (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).
Cumulative Shadow	Impact C-WS 2: The Proposed Project would have a cumulatively considerable contribution to significant cumulative shadow impacts, substantially affecting outdoor recreation facilities and open space (Significant and Unavoidable).	No impact (NI).	Similar to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).

Table S-5
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the EIR (Continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Geology and Soils							
Seismicity and Liquefaction	Impact GE 1: The Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture, ground shaking, liquefaction, or landslides (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Soil	Impact GE 2: The Proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Lateral Surcharge on the BART subway	Impact GE 3: The Proposed Project could impose lateral surcharge pressures on the BART subway (SM).	No impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Cumulative Geology and Soils	Impact C-GE 1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects in the vicinity, would not result in a significant cumulative impact related to geology and soils (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).

Legend

NI	No impact
LTS	Less than significant or negligible impact; no mitigation required
SM	Significant but mitigable
SU	Significant and unavoidable adverse impact, no feasible mitigation
SUM	Significant and unavoidable adverse impact, after mitigation
BART	Bay Area Rapid Transit District

Table S-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Land Use and Land Use Planning	No additional land use and land use planning impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced, impact compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).
Population and Housing	No additional population and housing impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).
Cultural and Paleontological Resources	The Eastern Neighborhoods PEIR cultural and paleontological Mitigation Measures are applicable, and no additional cultural and paleontological impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (SM).	No impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Transportation and Circulation							
Traffic	The Proposed Project is not expected to cause any new significant traffic impacts. A number of measures could be implemented to further lessen the already less than significant effect of project generated vehicle traffic in the project vicinity (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).

Table S-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Transit	The Proposed Project would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).
Pedestrians	The Proposed Project would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR. Improvement Measures documented in the CPE Checklist would further reduce less than significant pedestrian impacts (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).
Loading	The Proposed Project would result in significant impacts that were not identified in the Eastern Neighborhoods PEIR. Improvement Measures documented in the CPE Checklist would further reduce less than significant loading impacts (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).

Table S-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Construction	The Proposed Project would result in less than significant construction related transportation impacts. Improvement Measures documented in the CPE Checklist would further reduce less than significant construction related impacts (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Noise	The Eastern Neighborhoods PEIR noise Mitigation Measures are applicable, and no additional noise impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (SM).	No Impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Air Quality	No additional air quality impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No Impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to Proposed Project (LTS).	Similar to Proposed Project (LTS).	Similar to Proposed Project (LTS).
Greenhouse Gas Emissions	No additional impacts on GHG emissions beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Recreation	No additional impacts on recreation beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).

Table S-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Utilities and Service Systems	No additional impacts on utilities and service systems beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Public Services	No additional impacts on public services beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Biological Resources	No additional impacts on biological resources beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Hydrology and Water Quality	No additional impacts related to hydrology and water quality beyond those in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Hazards and Hazardous Materials							
Hazards and Hazardous Materials	The Eastern Neighborhoods PEIR hazardous materials Mitigation Measures are applicable and no additional impacts beyond those identified in the PEIR (SM).	No impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Soil and Groundwater Contamination	No additional impacts associated with soil and groundwater contamination beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).

Table S-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Mineral and Energy Resources	No additional impacts on mineral and energy resources beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Agriculture and Forest Resources	No additional impacts on agriculture and forest resources beyond those analyzed in the Eastern Neighborhoods PEIR (NI).	No Impact (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).

Legend

NI	No impact
LTS	Less than significant or negligible impact; no mitigation required
SM	Significant but mitigable
SU	Significant and unavoidable adverse impact, no feasible mitigation
SUM	Significant and unavoidable adverse impact, after mitigation

C. Summary of Project Alternatives

The six project alternatives are summarized below.

- Alternative A: No Project Alternative, under which the project site would not be redeveloped, and would remain in its existing condition and uses. Because the physical environment of the site would remain unchanged, the No Project Alternative would not achieve any of the Project Sponsor's objectives for the Project, including but not limited to development of a mixed use residential project in close proximity to a transit hub, providing high quality housing, new employment opportunities, and streetscape improvements.

- Alternative B: Bulk Code Compliant Alternative, under which the project site would be redeveloped with a building massing that would comply with the bulk district requirements for the project site. Similar to the Proposed Project, under this alternative, the project site would be developed as a mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

  Alternative B would meet the requirements of the E bulk district. The portions of the site along Mission and 16th Streets are in the 105-E height and bulk district, and the portion of the site along Capp Street is in the 55-X height and bulk district. This alternative design—with a maximum height of 105 feet (exclusive of the mechanical penthouse), 331 residential units, and ground floor retail uses—would meet the Project Sponsor's objectives regarding the development of a mixed use building with high quality housing in close proximity to transit, new employment opportunities, and improvement to the quality and safety of the Northeast BART Plaza and streetscape near the project site. This alternative would also meet the project sponsor's objective of constructing a project with the residential development density anticipated by the Mission Area Plan for this site.

  Similar to the Proposed Project, Alternative B would result in less than significant wind impacts, significant and unavoidable shadow impacts, and less than significant impacts related to geology and soils. In addition, similar to the Proposed Project, Alternative B would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR and documented in the CPE Checklist. This alternative would not reduce the significant shadow impact of the Proposed Project.

- Alternative C: Raised Playground Alternative, under which the project site would be redeveloped in the same way as the Proposed Project, but the existing Marshall Elementary School Playground (Playground) would be replaced with a one story structure with a Raised Playground on its roof. In particular, the Playground, the one story multi use room at the northwestern corner of the Playground and the temporary modular building at the southeastern corner of the Playground would be removed, and a new 15 foot high structure would be constructed at the location of the existing Playground. The roof of this structure would be the new Playground (referred to as the Raised Playground). The newly constructed structure would include a new multi-purpose room, a music room, a library, a classroom, storage space, an area for trash, recycling, and compost bins, and parking for up to eight cars below the new Raised Playground. Similar to the Proposed Project, under this alternative, the project site would be developed as mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

Similar to the Proposed Project, Alternative C would achieve all of the Project Sponsor's objectives and would result in less than significant impacts related to wind. It would result in a significant impact related to geology and soils that would be mitigated to less than significant with implementation of Mitigation Measure M-GE-3, similar to the Proposed Project. In addition, similar to the Proposed Project, Alternative C would not result in significant impacts for other environmental topic areas that were not identified in the Eastern Neighborhoods PEIR, except for shadow. Alternative C would reduce but not avoid the significant shadow impact of the Proposed Project by reducing the shadow from existing buildings, thereby reducing overall shadow load.

- Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side), under which the Mission Street and 16th Street residential components would be identical to the Proposed Project. However, the northeastern corner of the Capp Street residential component would be reduced from five stories to three and four stories. Similar to the Proposed Project, under this alternative, the project site would be developed as mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

  Alternative D would achieve the Project Sponsor's objectives, but to a lesser extent compared with the Proposed Project. Alternative D would meet the objectives for the Project regarding the development of a mixed use residential building in close proximity to transit, providing high quality housing, generating new employment opportunities, and improving the quality and safety of the open space and streetscape. However, although the affordable housing component under Alternative D would comply with the inclusionary affordable housing requirements under the Planning Code, and this alternative would include street improvements and other public improvements (similar to the Proposed Project), it would have four fewer residential units, resulting in fewer affordable units for low, moderate, and middle income households than the Proposed Project. Therefore, Alternative D would achieve the Project Sponsor's objectives to a lesser extent.

  Similar to the Proposed Project, Alternative D would result in less than significant impacts related to wind. It would result in a significant impact related to geology and soils that would be mitigated to less than significant with implementation of Mitigation Measure M-GE-3, similar to the Proposed Project. In addition, similar to the Proposed Project, Alternative D would not result in significant impacts for other environmental topic areas that were not identified in the Eastern Neighborhoods PEIR, except for shadow. Alternative D would reduce, but not avoid, the significant shadow impact of the Proposed Project.

- Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component, under which the Mission Street and 16th Street residential components would be identical to the Proposed Project. However, the northern end of the Capp Street residential component would be further reduced in height through a series of setbacks from the northern property line, ranging between 35 and 55 feet. Similar to the Proposed Project, under this alternative, the project site would be developed as mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

  Alternative E would redevelop the project site with a mixed use building (residential/retail), and would meet some of the objectives of the Project Sponsor to develop a mixed use high quality residential building for residents with varying incomes that would (1) be in close proximity to a major transit hub, (2) generate employment opportunities, (3) enhance the safety of public open space, and (4) improve the streetscape. However, although the affordable housing component under

Alternative E would comply with the inclusionary affordable housing requirements under the Planning Code, and this alternative would include street improvements and other public improvements (similar to the Proposed Project), it would have 21 fewer residential units, resulting in fewer affordable units for low, moderate, and middle income households than the Proposed Project. Therefore, Alternative E would achieve the Project Sponsor's objectives to a lesser extent.

Similar to the Proposed Project, Alternative E would result in less than significant impacts related to wind. It would result in a significant impact related to geology and soils that would be mitigated to less than significant with implementation of Mitigation Measure M-GE-3, similar to the Proposed Project. In addition, similar to the Proposed Project, Alternative E would not result in significant impacts for other environmental topics that were not identified in the Eastern Neighborhoods PEIR, except for shadow. Shadow impacts under Alternative E would be significant and unavoidable, similar to the Proposed Project. However, Alternative E would result in somewhat reduced shadow impacts on the Playground compared to the shadow impacts on the Playground under the Proposed Project.

- Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components, under which the 16th Street residential component would be identical to the Proposed Project. However, the northern end of the Capp Street residential component would be set back 70 feet from the northern property line above the podium, and the height of the Mission Street residential component would be reduced from 105 to 65 feet. Similar to the Proposed Project, under this alternative, the project site would be developed as mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

  Alternative F would redevelop the project site with a mixed use building (residential and retail) that would meet some of the objectives of the Project Sponsor to develop a mixed use high quality residential building for residents with varying incomes that would (1) be in close proximity to a major transit hub, (2) generate employment opportunities, (3) enhance the safety of the open space, and (4) improve the streetscape. However, although the affordable housing component under Alternative F would comply with the inclusionary affordable housing requirements under the Planning Code, and this alternative would include street improvements and other public improvements (similar to the Proposed Project), it would have 88 fewer residential units, resulting in fewer affordable units for low, moderate, and middle income households than the Proposed Project. Therefore, Alternative F would achieve the Project Sponsor's objectives to a much lesser extent.

  Similar to the Proposed Project, Alternative F would result in less than significant impacts related to wind. It would result in a significant impact related to geology and soils that would be mitigated to less than significant with implementation of Mitigation Measure M-GE-3, similar to the Proposed Project. In addition, similar to the Proposed Project, Alternative F would not result in significant impacts for other environmental topics that were not identified in the Eastern Neighborhoods PEIR, except for shadow. Shadow impacts under Alternative F would be significant and unavoidable, similar to the Proposed Project. However, Alternative F would result in somewhat reduced shadow impacts on the Playground compared to the shadow impacts on the Playground under the Proposed Project.

D. Areas of Known Controversy and Issues to be Resolved

The Planning Department received an Environmental Evaluation Application for the Proposed Project on January 29, 2014. This application was revised on August 21, 2014, to reflect changes to the Proposed Project's program and design requested by the Planning Department. The Planning Department prepared a CPE Checklist and published an NOP of an EIR with the CPE Checklist on January 28, 2015, announcing its intent to prepare and distribute a focused EIR (the NOP and CPE Checklist are presented as Appendix A to this EIR). Publication of the NOP and CPE Checklist initiated a 30 day public review and comment period that began on January 29, 2015, and ended on March 2, 2015. Individuals and agencies that received these notices included owners of properties within 300 feet of the project site and potentially interested parties, including regional and state agencies. During the review and comment period, approximately 282 emails, letters, and comment cards were submitted to the Planning Department by interested parties. The Planning Department has considered the comments made by the public in preparation of the Draft EIR for the Proposed Project. The emails, letters, and comment cards received in response to the NOP and CPE Checklist are available for review as part of Case File No. 2013.1543E. Comments pertaining to environmental issues associated with the Proposed Project expressed concern about the following topics:

- Project Description: Comments expressed concern with the size of the Proposed Project and associated parking garage. Other comments requested changes to the associated private open space.
- Environmental Review Process: One comments requested the extension of the public comment period following the publication of the NOP and CPE Checklist.
- Adequacy of Eastern Neighborhoods PEIR: Comments expressed concern with the reliance of this EIR on the Eastern Neighborhoods PEIR because substantial new information has become available since its release.
- Land Use: Comments expressed concern about the impacts of the Proposed Project on gentrification of the neighborhood and displacement.
- Transportation and Circulation: Comments expressed concern about the impacts of the proposed streetscape improvements and parking garage on the drop off or pick up of children at the Marshall Elementary School. Other comments expressed concern about the impacts of the Proposed Project on other modes of transportation.
- Noise: Comments expressed concerns with the noise impacts associated with the construction of the Proposed Project.
- Air Quality: Comments expressed concerns about construction dust affecting the children attending Marshall Elementary School.
- Wind and Shadow: Several comments noted that the Proposed Project would have the potential to create wind and shadow impacts, particularly shadows cast on Marshall Elementary School.
- Utilities and Service Systems: One comment expressed concern about the increased water supply needs as a result of the Proposed Project.

- Hazards and Hazardous Materials: One comment noted the potential impacts from the demolition of existing buildings that may contain lead and asbestos.

- Public Services: One comment expressed concern about the capacity of the public infrastructure and services.

- Geology and Soils: One comment expressed concern with the potential impacts of the Proposed Project on the BART tunnel in the event of an earthquake.

A more detailed summary of the comments and how they have been addressed is provided in Chapter 5, Other CEQA Issues, under Areas of Known Controversy and Issues to be Resolved. All comments related to environmental topics have been addressed in this EIR or were previously addressed in the CPE Checklist, as indicated. Comments expressing support for the Proposed Project or opposition to it are comments on project merits and will be considered independently of the environmental review process by City decisionmakers, as part of their decision to approve, modify, or disapprove the Proposed Project.

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CHAPTER 1

Introduction

This Environmental Impact Report (EIR) analyzes the potential environmental effects associated with the proposed 1979 Mission Street Mixed Use Project (Proposed Project). This chapter describes the type, purpose, and function of the EIR, and provides background information related to the Programmatic EIR for the Eastern Neighborhoods Rezoning and Area Plans (Eastern Neighborhoods PEIR). It also describes the environmental review process for the Proposed Project. Chapter 2, Project Description, explains how the Proposed Project would demolish the two existing commercial buildings and a surface parking lot on the project site, and construct an approximately 388,912 gross square foot (gsf) mixed use residential building ranging in height from 4 to 10 stories, with a maximum height of 105 feet (121 feet inclusive of the elevator penthouse). The Proposed Project would have 331 residential units, with approximately 34,198 gsf of ground floor commercial uses, off street ground level loading and basement parking, publicly accessible open space along the adjacent Northeast 16th Street Mission Bay Area Rapid Transit (BART) plaza, and private and common open space for the residents.

A. Purpose and Function of this Environmental Impact Report

The San Francisco Planning Department (Planning Department), serving as lead agency responsible for administering environmental review on behalf of the City and County of San Francisco, determined that preparation of an EIR was required for the Proposed Project.

The California Environmental Quality Act (CEQA) requires that before a decision can be made on whether to approve a project that could have potential significant and avoidable adverse physical effects, an EIR must be prepared that fully describes the environmental effects of the project. The information contained in an EIR is reviewed and considered by the decisionmakers before electing to approve, disapprove, or modify a proposed project.

CEQA requires that the lead agency neither approve nor implement a project unless the project's significant environmental effects have been reduced to a less-than-significant level, essentially "eliminating, avoiding, or substantially lessening" the expected impact, except when certain findings are made. If the lead agency approves a project that will result in the occurrence of significant adverse impacts that cannot be mitigated to less than significant levels, the agency must adopt a Statement of Overriding Considerations stating the reasons for its action in writing, based on the EIR or other information in the record. The Planning Department has prepared this EIR to provide the public, and the responsible and trustee agencies reviewing the Proposed Project, with information about the Proposed Project's potential effects on the environment. This EIR describes the potential environmental impacts

resulting from implementation of the Proposed Project, identifies mitigation measures for reducing the impacts to a less-than-significant level where feasible, and evaluates alternatives to the project.

This document is a project level EIR that does not determine or recommend whether a project should or will be approved, but aids the planning and decision making process by analyzing and disclosing the potential significant and adverse physical environmental impacts of the Proposed Project. In conformance with the California Public Resources Code Section 21000 et seq. (CEQA), this EIR provides information addressing the environmental consequences of the Proposed Project and identifies possible means of reducing or avoiding its potentially significant impacts. The CEQA Guidelines define the role and expectations for this EIR as follows:

- Informational Document. An EIR is an informational document that will inform public agency decisionmakers and the public generally of the significant environmental effect(s) of a project, identify possible ways to minimize or avoid the significant effects through the identification of mitigation measures, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information that may be presented to the agency (Section 15121[a]).

- Standards for Adequacy of an EIR. An EIR should be prepared with a sufficient degree of analysis to provide decisionmakers with information that enables them to make a decision that intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure (Section 15151).

B. Environmental Review Process

1. Eastern Neighborhoods Rezoning and Area Plans

The project site is within the Mission Area Plan boundaries, which is one of the planning areas included in the Eastern Neighborhoods Program. The Eastern Neighborhoods Rezoning and Area Plans were adopted in December 2008, after years of analysis, community outreach, and public review. The plans were developed to support housing development in some areas previously zoned to allow industrial uses, while preserving an adequate supply of land for existing and future production, distribution, and repair (PDR) employment and businesses. The Eastern Neighborhoods Rezoning and Area Plans also included changes to existing height and bulk districts in some areas. With respect to the project site, these changes applied to the portion on Capp Street that was rezoned from 50-X to 55-X for height and bulk, and to the portion fronting on 16th Street that was rezoned from 50-X to 105-E for height and bulk.

During the Eastern Neighborhoods Rezoning and Area Plans adoption phase, the San Francisco Planning Commission (Planning Commission) held public hearings to consider the various aspects of the proposed area plans, and amendments to the San Francisco Planning Code (Planning Code) and Zoning Map. On

August 7, 2008, the Planning Commission certified the Eastern Neighborhoods PEIR (Motion 17659),[1] and adopted one of the alternatives analyzed, referred to as the Preferred Project, for final recommendation to the Board of Supervisors.[2]

In December 2008, after further public hearings, the Board of Supervisors approved and the Mayor signed the Eastern Neighborhoods rezoning and Planning Code amendments. New zoning districts included districts that would permit PDR uses in combination with commercial uses, districts mixing residential and commercial uses and residential and PDR uses, and new residential only districts. These districts replaced existing industrial, commercial, residential single use, and mixed use districts.

The Eastern Neighborhoods PEIR is a comprehensive programmatic document that presents an analysis of the environmental effects of implementation of the Eastern Neighborhoods Rezoning and Area Plans, as well as the potential impacts under several proposed alternative scenarios. The Eastern Neighborhoods PEIR evaluated three rezoning alternatives, two community proposed alternatives that focused largely on the Mission District, and a "No Project" alternative. The alternative selected, the Preferred Project, represents a combination of Options B and C described in the Eastern Neighborhoods PEIR. The Planning Commission adopted the Preferred Project after fully considering the environmental effects of the Preferred Project and the various scenarios discussed in the Eastern Neighborhoods PEIR.

As a result of the Eastern Neighborhoods Rezoning and Area Plans, the project site was rezoned from Moderate Scale Neighborhood Commercial District (NC-3) to Mission Street Neighborhood Commercial Transit (Mission NCT). The Mission NCT District provides a selection of goods serving the day to day needs of the residents of the Mission District. Additionally, the Mission NCT District serves a wider trade area with its specialized retail outlets. Eating and drinking establishments contribute to the neighborhood's mixed use character and activity in the evening hours. The Mission NCT District is extremely well served by transit, including regional serving BART stations at 16th Street (adjacent to the project site) and 24th Street; major bus routes along Mission Street and cross town, and local serving buses intersecting Mission Street along the length of this district, including along 16th Street adjacent to the project site. Given the area's central location and accessibility to San Francisco's transit network, accessory parking for residential uses is not required. Any new parking is required to be set back or be below ground. In addition, the Mission NCT District encourages new neighborhood serving commercial development at the ground level. Housing development in new buildings is encouraged above the ground level. Housing density is not controlled by the size of the lot, but by the allowable building envelope. In the Eastern Neighborhoods Rezoning and Area Plans, at least 40 percent of the units in a residential development must be two bedroom or larger.

2. Notice of Preparation and Community Plan Exemption Checklist

Section 15183 of the CEQA State Guidelines streamlines environmental review for projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was previously certified. The Proposed Project was addressed at a program

[1] San Francisco Planning Department, 2008. Eastern Neighborhoods Rezoning and Area Plans Programmatic Environmental Impact Report, Planning Department Case No. 2004.0160E, certified August 7, 2008. The Eastern Neighborhoods PEIR (and all other documents cited in this report, unless otherwise noted) is on file for public review at the Planning Department, 1650 Mission Street, Suite 400, as part of Case No. 2004.0160E, or at www.sfgov.org/site/planning_index.asp?id=67762.

[2] San Francisco Planning Commission Motion 17659, August 7, 2008.

level in the Eastern Neighborhoods PEIR.[3] Individual projects that occur under the Eastern Neighborhoods Rezoning and Area Plans undergo project level environmental evaluation to determine whether they would result in unique impacts specific to the development proposal, the site, and the time of development that were not analyzed and disclosed in the PEIR for the underlying plan. The project level environmental evaluation also assesses whether additional environmental review is required.

For this streamlined review, Section 15183 specifies that examination of environmental effects shall be limited to those effects that: (1) are peculiar to the project or parcel on which the project would be located; (2) were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan with which the project is consistent; (3) are potentially significant offsite and cumulative impacts that were not discussed in the underlying EIR; and (4) are previously identified in the EIR, but are determined to have a substantially greater adverse impact than that discussed in the underlying EIR. Section 15183(c) specifies that if an impact is not peculiar to the parcel or to the proposed project, then an EIR need not be prepared for that proposed project solely on the basis of that impact.

The Planning Department determined that the Proposed Project is consistent with the zoning controls and the provisions of the Planning Code applicable to the project site.[4, 5] Therefore, because the Proposed Project is consistent with the programmatic document prepared for the area, the environmental review can be streamlined per CEQA State Guidelines Section 15183.

The Planning Department received an Environmental Evaluation Application for the Proposed Project on January 29, 2014. The Planning Department, serving as lead agency, published and distributed a Community Plan Exemption (CPE) Checklist and a Notice of Preparation (NOP) of an EIR for the 1979 Mission Street Mixed use Project on January 28, 2015, announcing its intent to prepare and distribute a focused EIR (the NOP and CPE Checklist are included as Appendix A to this EIR, and the analysis is incorporated by reference into this document). The NOP was published in the Examiner newspaper (San Francisco, California), posted at the San Francisco County Clerk's Office, submitted to the State Clearinghouse, posted at the project site, and posted to the Planning Department website, along with other information related to the Proposed Project (see Planning Department File No. 2013.1543E). The NOP, together with the CPE Checklist, was mailed to responsible and trustee agencies, as well as to interested entities and individuals.

Publication of the NOP initiated a 30-day public comment period from January 29, 2015, through March 2, 2015. During this time, the Planning Department received approximately 282 public comment emails, letters, and comment cards. A summary of the public comments received on the NOP and CPE Checklist, and how they have been addressed, is provided in Chapter 5, Other CEQA Issues, under Areas of Known Controversy and Issues to Be Resolved. Based on the requirements specified in CEQA Guidelines Section 15082(c)(1), the Planning Department determined that a public scoping meeting was not required for the Proposed Project.

The NOP included a brief project description and indicated which topics were addressed in the CPE Checklist, and which issues would be addressed in this EIR (see Appendix A of this EIR). The CPE

[3] San Francisco Planning Department, 2008. Eastern Neighborhoods Rezoning and Area Plans Programmatic Environmental Impact Report, Planning Department Case No. 2004.0160E, certified August 7, 2008.

[4] Varat, Adam, 2014. San Francisco Planning Department, Community Plan Exemption Eligibility Determination, Citywide Planning and Policy Analysis, 1979 Mission Street, August 20.

[5] Joslin, Jeff, 2014. San Francisco Planning Department, Community Plan Exemption Eligibility Determination, Current Planning Analysis, 1979 Mission Street, September 10.

Checklist described the potential environmental impacts from the implementation of the Proposed Project, and indicated whether the impacts were addressed in the Eastern Neighborhoods PEIR. The Planning Department concluded from the CPE Checklist that the Proposed Project is generally consistent with and encompassed within the analysis in the Eastern Neighborhoods PEIR. The Planning Department also found that the Eastern Neighborhoods PEIR adequately anticipated and described the majority of the impacts of the Proposed Project, and identified the mitigation measures from the Eastern Neighborhoods PEIR that are applicable to the Proposed Project.

Based on the analysis in the CPE Checklist, the NOP identified that the Proposed Project has the potential to result in a significant wind impact, a significant shadow impact, and a significant geology and soils impact. For these environmental topics, the Proposed Project's potential impacts may be peculiar (unique) to the project site, and may not have been identified in the Eastern Neighborhoods PEIR. For all the other environmental topics, the Proposed Project would not result in new significant impacts, nor would it result in more severe adverse impacts to these resources than were identified in the Eastern Neighborhoods PEIR.

3. Focused EIR

In accordance with Section 15183, the Planning Department has prepared this focused EIR to examine the Proposed Project's specific impacts on wind, shadow, and geology and soils; identify mitigation measures for potentially significant impacts; and analyze whether proposed mitigation measures would reduce the significant environmental impacts to less than significant levels. This focused EIR also analyzes alternatives to the Proposed Project that could substantially reduce or eliminate one or more of the significant impacts of the Proposed Project, but could still feasibly attain most of the basic Project objectives. All other environmental topics are addressed only in the CPE Checklist, because the analysis in the Eastern Neighborhoods PEIR was determined to have adequately addressed the Proposed Project's potential impacts associated with these topics.

Subsequent to publication of the NOP and CPE Checklist for the 1979 Mission Street Mixed Use Project on January 28, 2015, the Project Sponsor modified the design to address the preliminary wind tunnel analysis, which identified a hazardous wind condition on the Northeast 16th Street Mission BART Station Plaza that would result from the proposed building. The modified design entailed changes to the building design at the southwestern corner of the Mission Street component to include a chamfered corner,[6] instead of having a 90 degree right angle. In addition, canopies were added on the ground floor along the principal retail frontages. The modified design eliminated the potentially hazardous wind conditions (see Section 4.B, Wind and Shadow, for a description of wind impacts for the Proposed Project). These design modifications would result in a very minor reduction in overall building square footage, less than 1,000 square feet from that described in the NOP and CPE Checklist. The overall programming and number of residential units would remain the same as originally proposed. Because the changes to the Proposed Project design are minor, and would result in a slightly smaller project than described in the CPE Checklist, the Proposed Project as currently described in this EIR is within the parameters of the project analyzed in the CPE Checklist, and no further analysis of the environmental topics addressed in the CPE Checklist is required.

[6] A chamfer is a flat surface resulting from cutting off the edge of a volume.

4. Draft EIR and Final EIR

This Draft EIR is available for public review and comment during the approximately 60-day public review period from May 5, 2016, to 5:00 p.m. on July 5, 2016, during which time the Planning Commission will hold a public hearing on the Draft EIR. The Draft EIR hearing before the Planning Commission will occur on June 9, 2016. Following the close of the public comment period, the Planning Department will prepare and publish a Responses to Comments document containing all substantive comments received on the Draft EIR, as well as the Planning Department's responses to those comments. The document may also contain specific changes to the Draft EIR.

This Draft EIR, together with the Responses to Comments document (including revisions to the Draft EIR), will be considered by the Planning Commission in an advertised public meeting, and then certified as a Final EIR if deemed adequate.

5. Public Participation

Chapter 31 of the San Francisco Administrative Code encourages public participation in the planning and environmental review processes. The public has opportunities to state its views during a public review and comment period, and a public hearing before the Planning Commission.

This Draft EIR was published on May 4, 2016. The public comment period for this EIR is 61 days.[7] The public is invited to submit written comments on the adequacy and accuracy of the Draft EIR. Comments should address the sufficiency of the document in identifying and analyzing possible significant environmental impacts and how they may be avoided or mitigated. CEQA Guidelines Section 15096(d) also requests responsible agencies to review project activities that are in the agency's areas of expertise, that are required to be carried out or approved by the agency, or that will be subject to the exercise of powers by the agency, and to provide comments supported by either oral or written documentation.

Written comments should be submitted to:

Sarah B. Jones, Environmental Review Officer
San Francisco Planning Department
1650 Mission Street, Suite 400
San Francisco, California 94103

Public comments may also be submitted by email to Sarah.B.Jones@sfgov.org or Debra.Dwyer@sfgov.org. Comments must be received by 5:00 p.m. on July 5, 2016.

Public comments may also be provided during the public hearing, which has been scheduled before the Planning Commission for June 9, 2016, in Room 400, City Hall, 1 Dr. Carlton B. Goodlett Place, San Francisco, California. Please call (415) 558-6422 the week of the hearing for a recorded message that provides the Commission agenda or visit the Planning Department's website for the Commission agenda and the link to the EIR.

[7] The 60th day of the review period falls on the July 4 holiday, when the Planning Department is closed. Therefore, written public comments will be accepted until 5:00 p.m. on Tuesday, July 5, 2016.

Copies of the Draft EIR are available at the Planning Information Center, San Francisco Planning Department, 1660 Mission Street, 1st Floor, San Francisco, California 94103. The Draft EIR is also available for viewing or downloading at the Planning Department website: http://www.sf-planning.org/sfceqadocs (search for File No. 2013.1543E). You may also request that a copy be sent to you by calling (415) 575-9031, or by emailing the EIR Coordinator, Debra Dwyer, at debra.dwyer@sfgov.org. The distribution list for the Draft EIR, and all documents referenced in this Draft EIR, are available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400, San Francisco, California 94103, as part of File No. 2013.1543E.

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CHAPTER 2

Project Description

This chapter describes the Proposed Project evaluated in this EIR. Topics addressed in this chapter include an overview of the Proposed Project, the Project Sponsor's objectives, a description of the Project location, a description of the existing conditions at the site, a description of the Project vicinity and the surrounding land uses, a description of the Proposed Project's characteristics, and the intended uses of this EIR, including the required approvals.

A. Project Overview

The 57,312 square foot project site is in the Inner Mission neighborhood of San Francisco (Assessor's Block 3553, Lot 052) on the block bounded by Mission Street to the west, 16th Street to the south, Capp Street to the east, and 15th Street to the north. The project site forms the northern and eastern boundaries of the street level plaza and northeastern entrance to the 16th Street Mission Bay Area Rapid Transit (BART) Station (hereinafter called the Northeast BART Plaza). The 16th Street Mission BART Station is one of the region's most significant transit hubs. No residential uses exist on the project site.

The two existing commercial buildings and surface parking lot on the site would be demolished, and the Proposed Project would be constructed to include 331 residential units, ground floor retail uses, off street loading and basement parking, publically accessible open space along the Northeast BART Plaza, and private and common open space inside the building. Specific project details are provided in Section 2.F, Project Characteristics, on page 2-7. The Proposed Project would include an affordable housing component that would provide an equivalent number of affordable units that would meet the Planning Code Section 415 requirements. The Proposed Project would have approximately 291,027 gross square feet (gsf) of residential uses, with approximately 34,198 gsf of multiple tenant commercial spaces and approximately 63,687 gsf of parking and building services. The parking and building services would be in the basement and ground floor and would include 163 parking spaces (136 for residential use, 22 for commercial use, four for car share use, and one Americans with Disabilities Act [ADA] accessible van parking space), three freight loading spaces, 162 Class I bicycle parking spaces, and areas for mechanical and electrical equipment.[1] The Proposed Project would also provide 30 Class II bicycle parking spaces in two on street bicycle corrals: one on Mission Street and another on Capp Street.[2]

[1] Class I bicycle parking is a space 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 (Planning Code Section 155.1).

[2] Class II is a space in a publicly accessible, highly visible location intended for transient or short term use by visitors, guests, and patrons to the building or use (Planning Code Section 155.1). Bicycle corrals are installed within the parking lane in the public right-of-way.

The Proposed Project would have three separate residential components above the podium level (level 2 above the ground floor retail), including a six to ten story Mission Street residential component, a seven to ten story 16th Street residential component, and a four to five story Capp Street residential component. An interior courtyard on level 2 and rooftop areas above all three components would provide a combination of private and common open space for residents. The Mission Street and 16th Street residential components would each have a height of 105 feet to 121 feet inclusive of the elevator penthouse. The Capp Street residential component would have a maximum height of 55 feet (71 feet when including the elevator penthouse). The Proposed Project is consistent with the maximum building height limits established by the City's Zoning Map. The rooftop mechanical equipment would be screened.[3] Commercial uses would be at the ground floor level along Mission and 16th Streets. Three residential units, truck loading, ADA accessible van space, and the entrance to the basement garage would be at the ground floor level on Capp Street.

The project site is in the Mission Area Plan of the Eastern Neighborhoods Rezoning and Area Plans. Development of the site was addressed at the program level in the Programmatic Environmental Impact Report for the Eastern Neighborhoods Rezoning and Area Plans (Eastern Neighborhoods PEIR), as described further under Section 2.G, Intended Uses of the EIR.

B. Project Sponsor's Objectives

The Project Sponsor and developer is Maximus BP Real Estate Partners, and the project architect is Skidmore Owings & Merrill. The Project Sponsor's objectives for the Proposed Project are to:

- Implement the objectives and policies of the Mission Area Plan of the Eastern Neighborhood Rezoning and Area Plans by activating a key site along the Mission District transit corridor, 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 Mission Neighborhood Commercial Transit District.

- 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 General Plan and the Mission Area Plan of the Eastern Neighborhoods Plan.

- Replace the existing one story structures on the site with a mixed use and mixed income residential project of superior design that would continue to implement the vision of the Mission Area Plan.

- Revitalize the Northeast BART Plaza by setting the retail storefronts back from the common property line with BART property to allow active ground floor uses that would enhance pedestrian safety and offer pedestrian interest and small business opportunities.

- Redevelop a site that currently has no housing, is adjacent to a local and regional public transit hub, and has been identified for high density housing through multiple public community processes for more than 50 years with a mixed use residential project, with a portion of the units at market rate and

[3] 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 the environmental review.

below market rate housing units affordable to low, moderate workforce, and middle class income households without displacing any existing residential units.

- Improve the safety and accessibility of the streetscape along Mission, 16th, and Capp Streets adjacent to the project site by improving or adding street tree wells and special sidewalk paving, installing sidewalk bulb-outs along Capp Street, and widening the Capp Street sidewalk.

- Provide publicly accessible open space on a site that would be privately owned by the Project Sponsor.

C. Project Location

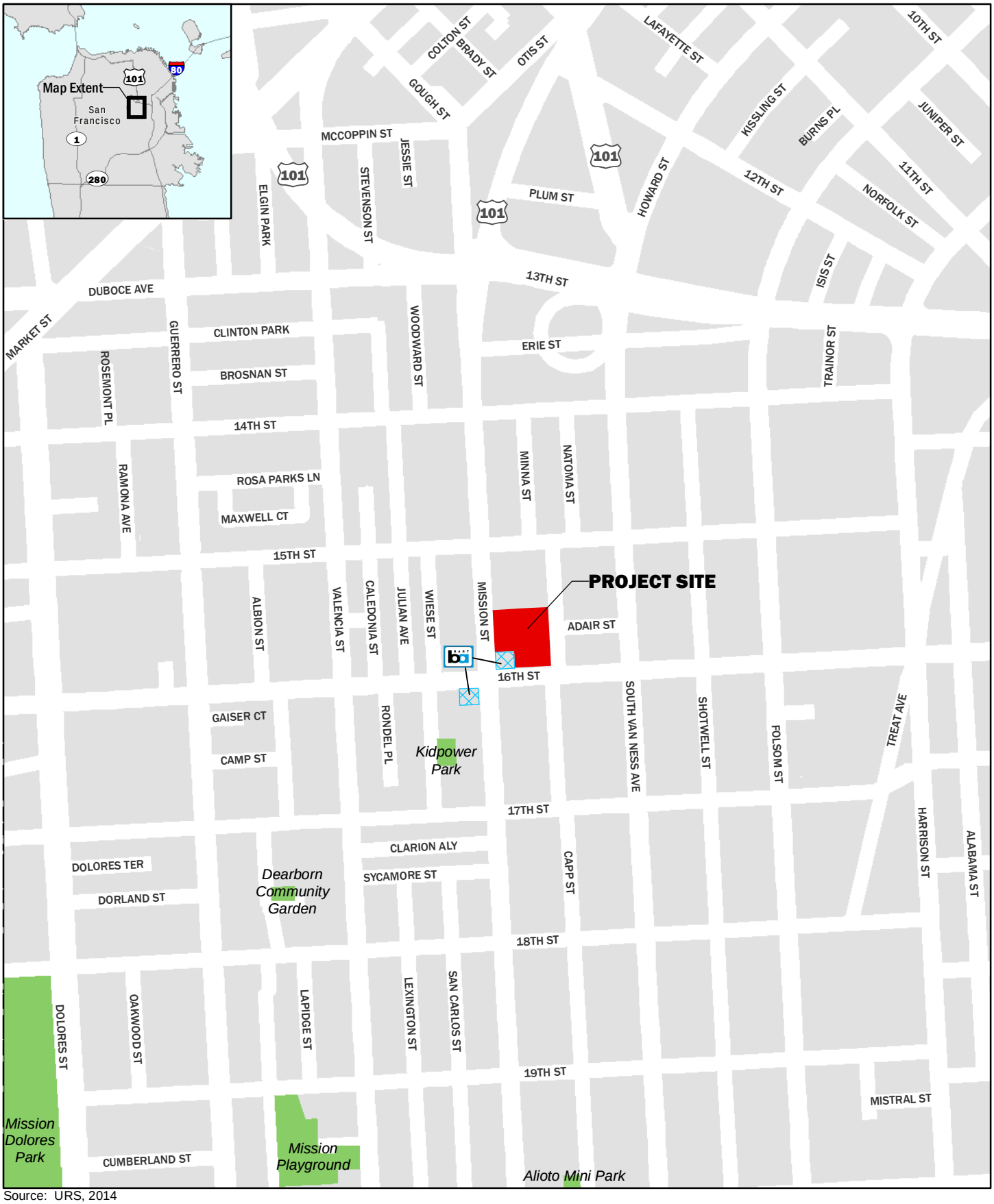
The project site comprises Assessor's Block 3553, Lot 052, which is improved with two one story retail/ commercial buildings (1979/1985 Mission Street and 2950 to 2978 16th Street) (currently occupied by a Walgreens pharmacy, a Burger King fast food restaurant, a bar, and a small grocery store) and a surface parking lot with about 54 parking spaces. No residential uses exist on the project site. The 57,312 square foot parcel is in the Inner Mission neighborhood of San Francisco, on the block bounded by Mission Street to the west, 16th Street to the south, Capp Street to the east, and 15th Street to the north. The project site forms the northern and eastern boundaries of the Northeast BART Plaza at the 16th Street Mission BART Station, as shown on Figure 2-1.

The project site is in the Mission Area Plan of the Eastern Neighborhoods Rezoning and Area Plans and in the Mission Street Neighborhood Commercial Transit Zoning District. The portions of the site along Mission and 16th Streets are in a 105-E height and bulk district and in a 55-X height and bulk district along Capp Street.[4] The project site is also in three special use districts: the Mission Street Formula Retail Restaurant Subdistrict, the Mission Alcohol Restricted Use District, and the Fringe Financial Service Restricted Use District.

Both Mission Street and South Van Ness Avenue, which is two blocks to the east of the project site, are major roadways through the Mission neighborhood. The regional roadways that serve the site are U.S. Highway 101, Interstate 80, and Interstate 280. U.S. Highway 101 south provides access to and from the project vicinity via an on-ramp at South Van Ness Avenue and Division Street, and an off-ramp at Mission Street and Duboce Avenue. In addition to BART service adjacent to the project site, several San Francisco Municipal Railway (Muni) bus routes—14 Mission, 14R Mission Rapid (formerly 14L Mission Limited), 14X Mission Express, 22 Fillmore, 33 Stanyan, 55 16th Street, and 49 Van Ness-Mission[5] — provide connections from the site to various locations in San Francisco. Two University of California San Francisco shuttle service lines have a stop near the Northeast BART Plaza. The red line connects the 16th Street Mission BART Station with the Mission Bay Campus. The yellow line provides connection with the 16th Street Mission BART Station and the San Francisco General Hospital.

[4] The E bulk designation limits the portion of a building that is over 65 feet tall to a maximum length of 110 feet and a maximum diagonal dimension of 140 feet; and the X bulk designation has no bulk controls (Planning Code Section 270).

[5] As part of the Transit Effectiveness Project (TEP) now called Muni Forward, the 49 Van Ness-Mission bus is approved for limited stop service and will become the 49L Van Ness-Mission Limited. Additional information regarding Muni Forward/TEP is available online at https://www.sfmta.com/projects-planning/projects/muni-forward-0. Accessed February 12, 2016.



Source: URS, 2014

BART Station Entrance and Plaza

Park/Open Space

0 250 500 FEET

PROJECT LOCATION

1979 Mission Street Project
San Francisco, California

FIGURE 2-1

D. Existing Conditions

The project site is improved with two buildings, both constructed in 1909, totaling approximately 50,915 gsf and ranging in height from 23 to 30 feet, and a surface parking lot. No residential uses exist on the project site. The existing buildings and uses on the site are summarized in Table 2-1, and are shown on Figure 2-2. The 1979/1985 Mission Street building on the northwestern portion of the site is an approximately 15,477 gsf, one story building with a mezzanine and partial basement. Constructed in 1909, the northern portion of the building is currently occupied by a retail pharmacy (Walgreens), and the southern portion is vacant. The 2950-2978 16th Street building along the southern portion of the site is an approximately 35,438 gsf one story building with a mezzanine and basement, both of which extend along most of the building. The 16th Street building is currently occupied by two restaurants, a grocery store, and a bar (Burger King and Mission Hunan Restaurant, HWA Lei Market, and City Club, respectively). The northern portion of the 2950-2978 16th Street building is vacant. An approximately 24,210 square foot surface parking lot with 54 parking spaces is at the northeastern corner of the site, is accessed from Capp Street, and is designated for Walgreens shoppers.

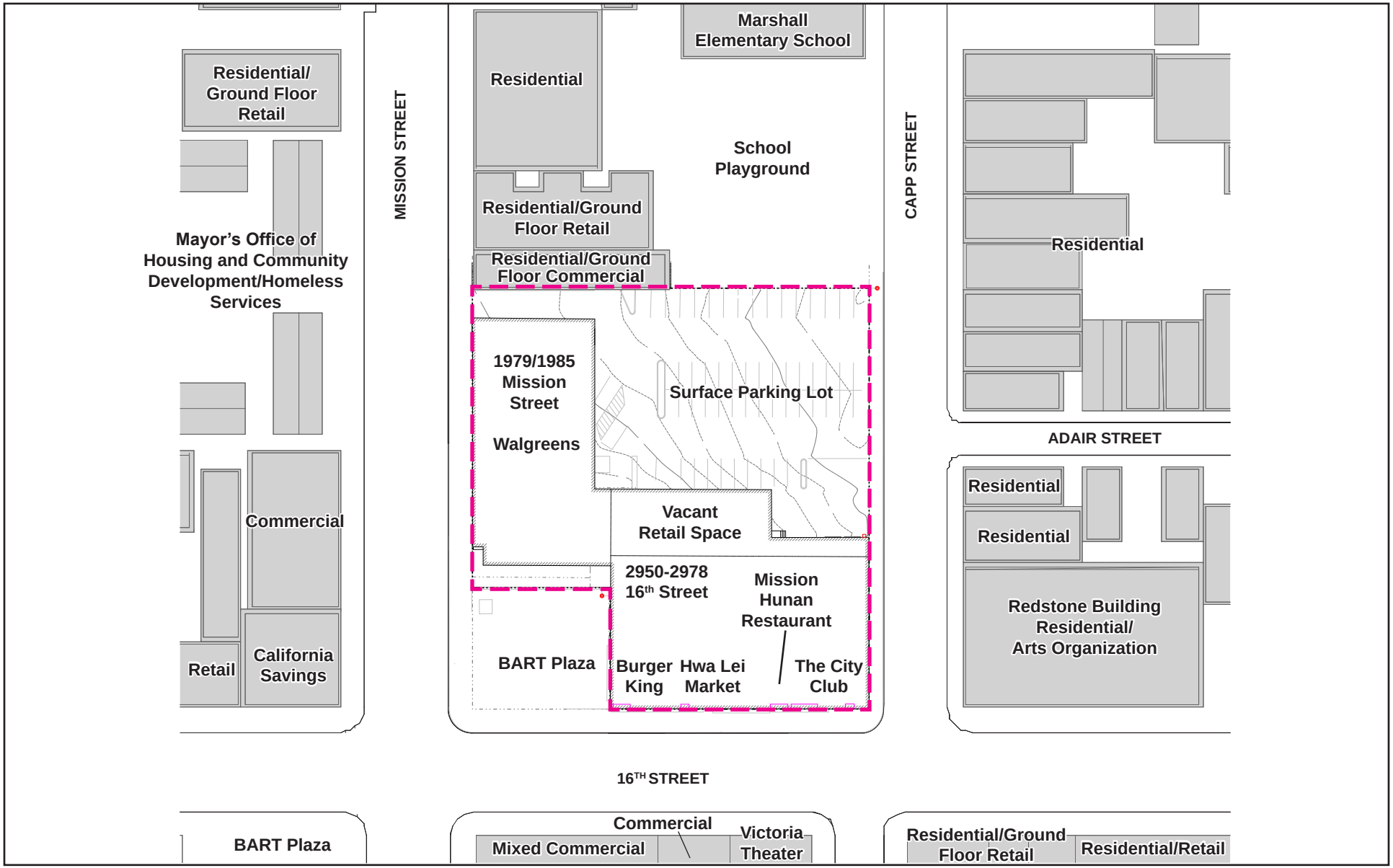
Table 2-1
Existing Site Characteristics

Address	Building Area (square feet)	Year Constructed	Building Characteristics/Use
1979/1985 Mission Street	15,477	1909	One story building with basement and mezzanine/retail use, retail pharmacy (Walgreens)
2950 to 2978 16th Street	35,438	1909	One story building with partial basement and partial mezzanine/ restaurant, retail, bar/entertainment uses
None (Capp Street)	—	N/A	Surface parking lot
Total	50,915	—	—
Source: Maximus Real Estate Partners, 1979 Mission Street Environmental Evaluation Application, January 2014.			

The project site is fairly level, sloping gently downward to the east, and is entirely covered by buildings or surface pavement. There are five street trees along Mission Street, and no street trees adjacent to the project site on 16th or Capp Streets.

The existing buildings on the project site were previously evaluated in the Inner Mission North Historic Resource Survey and found to be ineligible for individual listing in the National Register of Historic Places or the California Register of Historical Resources, and found to be not qualified for a local listing,[6] or as a contributor to any potential historic districts in the area. Individually designated historical resources are located directly to the east and to the south of the project site along Mission and 16th Streets.

[6] San Francisco Planning Department, 2011. Inner Mission North Historic Resource Survey. Available online at: sf-planning.org/index.aspx?page=2686; and at the Planning Department, 1650 Mission Street, Suite 400, San Francisco as part of Case file 2011.0401U. Accessed June 2014.



Source: Skidmore, Owings & Merrill LLP, 2014.

Project Site

Not to Scale

EXISTING SITE PLAN

1979 Mission Street Project
San Francisco, California

FIGURE 2-2

Available street parking along the Proposed Project's frontage consists of five 20 foot long general metered spaces on the eastern side of Mission Street, three metered commercial loading spaces (two 26 foot long spaces and one 22 foot long space with restricted loading hours) on the northern end of 16th Street, and 10 to 11 unmarked and unmetered general on street parking spaces on the western side of Capp Street.

E. Project Vicinity and Surrounding Land Uses

The project site is in the Inner Mission neighborhood, immediately adjacent to the Northeast BART Plaza at the 16th Street Mission BART Station. The immediate neighborhood is characterized by a mix of commercial and residential uses, as shown on Figure 2-2. Buildings range in height from two to five stories, typically with ground floor retail and residential or commercial uses above. Generally, there are retail/commercial uses along Mission and 16th Streets, and residential uses along Capp Street. Marshall Elementary School, at 1575 15th Street, is immediately north of the site on Capp Street, with its main entrance on 15th Street and pick up and drop off on Capp Street.

F. Project Characteristics

The Proposed Project would demolish the two existing commercial buildings and a surface parking lot on the site and construct a new 388,912 gsf mixed use project. The Proposed Project would include 331 dwelling units, 34,198 gsf of commercial space inclusive of common areas, 163 off street parking spaces (136 for residential use, 22 for commercial use, four for car share use, and one ADA accessible van parking space), three freight loading spaces, and 192 bicycle parking spaces (162 Class I secure parking and 30 Class II bicycle parking spaces in two bicycle corrals on the street). The Proposed Project would have an interior courtyard, three roof decks, and accessible privately owned open space next to the Northeast BART Plaza (as summarized in Table 2-2). The Proposed Project would range in height from 4 to 10 stories, with a height of 105 feet and a maximum height of 121 feet, including the elevator penthouse as allowed under the Planning Code.

The ground floor would have commercial uses along Mission and 16th Streets and residential uses along Capp Street. Three residential components would be above the podium level (level 2): a 6 to 10 story Mission Street residential component; a 7 to 10 story 16th Street residential component; and a 4 to 5 story Capp Street residential component. The Mission Street and 16th Street residential components would be 105 feet high, with a maximum height of 121 feet inclusive of the elevator penthouse. The Capp Street residential component would be 55 feet, with a maximum height of 71 feet inclusive of the elevator penthouse. An interior courtyard on level 2, patios, and rooftop terraces would provide common open space for project residents as well as private usable open space for 29 units.

The proposed site plan is shown on Figure 2-3, the basement parking garage is shown on Figure 2-4, and the proposed floor plans are shown on Figures 2-5 through 2-12. Figure 2-13 shows the roof plan with open space, and Figure 2-14 shows the streetscape improvements. Figures 2-15 through 2-20 show the Proposed Project elevations, sections, and massing. Figures 2-21 through 2-23 show visual simulations for the Proposed Project.

Table 2-2
Project Characteristics

Lot	Dimensions
Size	57,312 square feet
Length	185 feet (Mission Street)/160 feet (16th Street)/260 feet (Capp Street)
Height	Ranging from 55 to 105 feet/up to 71 to 121 feet with elevator penthouses[1]
Proposed Uses	**Area (gsf)**
Residential	291,027
Commercial (Retail)	34,198
Parking and Building Services	63,687
Total	388,912
Proposed Units	**Amount (Approx. Percent)**
Dwelling Units	331 (100%)
Micro	8 (2.4%)
Studio	114 (34.4%)
1 Bedroom	75 (23%)
2 Bedroom	122 (36.8%)
3 Bedroom	11 (3.3%)
4 Bedroom	1 (0.1%)
Vehicle Parking Spaces	163[2]
Bicycle Parking Spaces	192[3]
Open Space	**Area (sf)**
Publicly accessible (adjacent to the Northeast BART Plaza to the northern and eastern sides)	2,175
Common (roof decks and interior podium courtyard)	28,741[4]
Private decks	10,234[5]

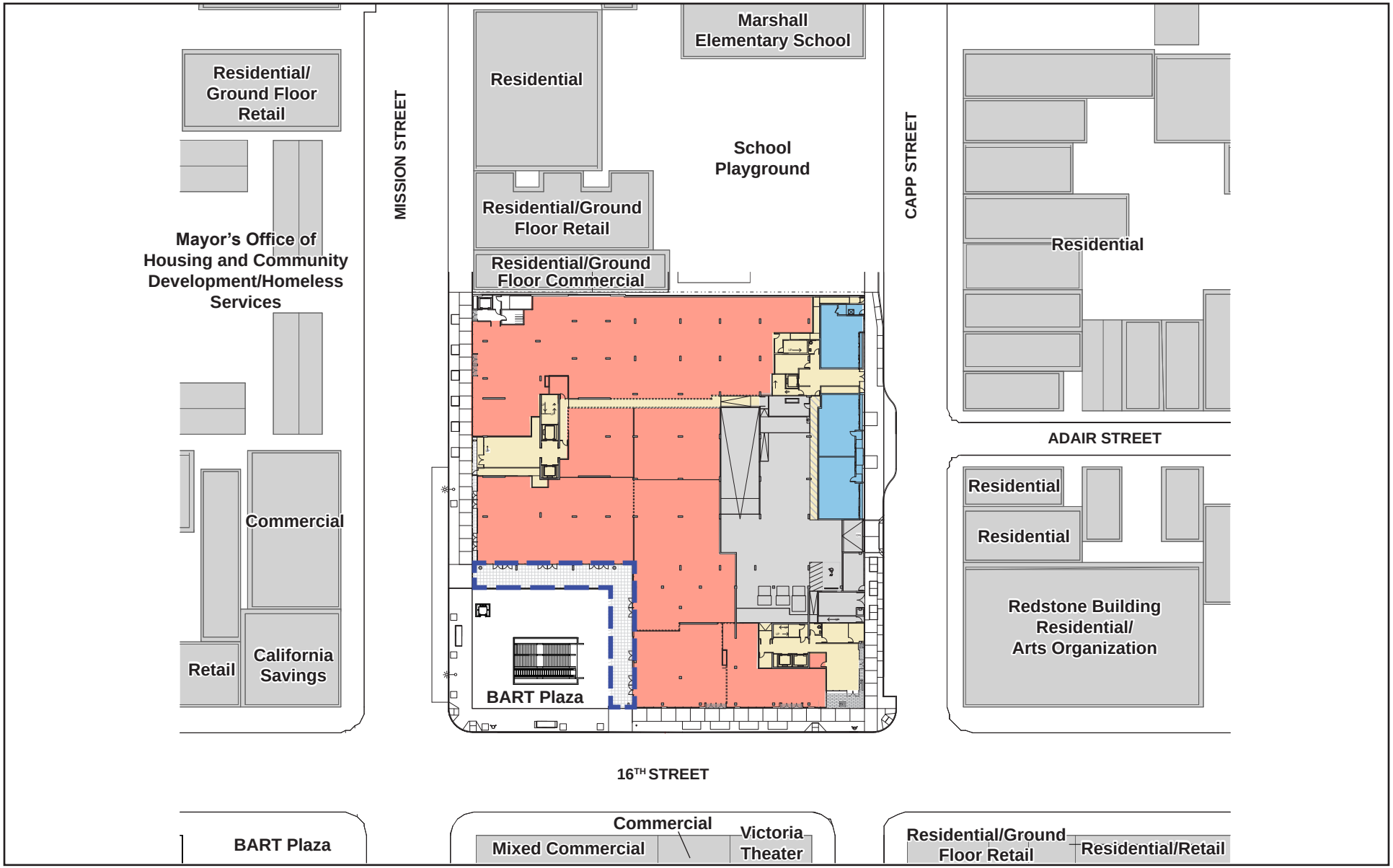
Table 2-2
Project Characteristics (Continued)

Building Characteristics	Description
Mission Street residential component[6]	6 to 10 stories (ground floor retail, residential above)/ 65 feet to 105 feet in height, 121 feet inclusive of the elevator penthouse
16th Street residential component[6]	7 to 10 stories (ground floor retail, residential above)/ 75 feet to 105 feet in height, 121 feet inclusive of the elevator penthouse
Capp Street residential component[6]	4 to 5 stories (residential)/ 55 feet in height, up to 71 feet inclusive of the elevator penthouse
Ground floor	Retail: 34,198 gsf multiple tenant spaces exclusive of common areas; Residential: 3 residential lobbies; 3 residential units on Capp Street; and Garage: 3 freight loading spaces; 1 ADA accessible van parking space; building services; and 4 Class I bicycle parking spaces for commercial tenants.
Basement	162 vehicle parking spaces (22 retail parking spaces; 4 car share spaces; and 136 residential parking spaces); 158 Class I bicycle parking spaces; and Building services, including an emergency generator.

Source: Maximus Real Estate Partners, 1979 Mission Street Conditional Use Authorization Application, June 2015.
Notes:
[1] Consistent with the Planning Code Height and Bulk designations for the project site, the building heights range from 45 to 105 feet; up to 16 feet for the elevator penthouse are exempt from this height limit.
[2] Vehicle parking spaces: for residents – 136 off street parking spaces (92 of which would be stacker spaces); for retail – 22 off street parking spaces. In addition, there would be four car share spaces and one ADA accessible van space.
[3] Bicycle parking spaces: 162 Class I bicycle parking spaces in the basement floor; 30 Class II bicycle parking spaces in on street bicycle corrals.
[4] Usable open space requirement for the residential units are provided in compliance with Planning Code Section 736.93 .
[5] 29 units have private balconies, terraces, or patios as usable open space that meet the Planning Code requirements Section 135. Of the 29 units, 10 have qualifying patios on the courtyard in excess of 100 square feet each, 15 have qualifying balconies or terraces exceeding 80 square feet, and 4 have qualifying balconies exceeding 26.67 square feet.
[6] The Proposed Project is one building with three separate structures (i.e., residential components) above a common ground floor and basement level.
ADA = Americans with Disabilities Act
BART = Bay Area Rapid Transit
gsf = gross square feet
sf = square feet

The Proposed Project would be supported with a mat foundation. The mat foundation would be supported by drilled piers that would transfer the building load to the dense native sand below. Pile driving would not be used for construction of the Proposed Project.[7,8] The site would be excavated up to approximately 22 feet below grade, removing approximately 34,523 cubic yards of soil.

[7] Maximus – BP 1979 Mission LLC, 2014. Environmental Evaluation Application for 1979 Mission Street Project, Attachment to Application for Block 3553, Lot 052. January 14.
[8] Treadwell and Rollo, 2013. *Geotechnical Investigation for 1979 Mission Street San Francisco, California*. January 30.



Source: Skidmore, Owings & Merrill LLP, 2014.

Retail

Multi-family Residential Lobby

Residential Unit

Garage/Loading

New Privately Owned, Publicly Accessible Open Space

Not to Scale

PROPOSED SITE PLAN AND GROUND FLOOR PLAN

1979 Mission Street Project
San Francisco, California

FIGURE 2-3

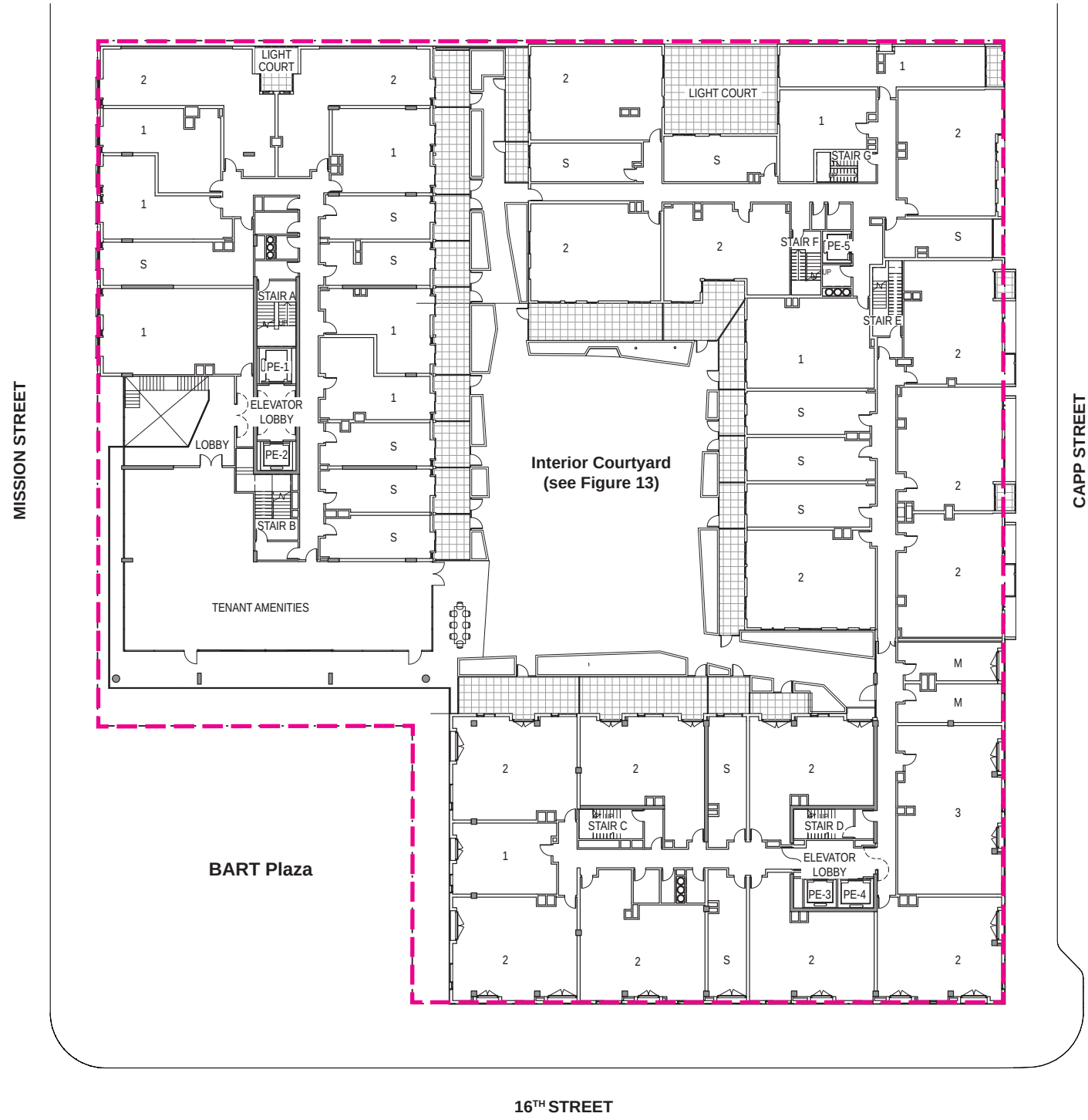
Source: Skidmore, Owings & Merrill LLP, 2014.

Not to Scale

BASEMENT PLAN – PARKING GARAGE

1979 Mission Street Project
San Francisco, California

FIGURE 2-4



Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

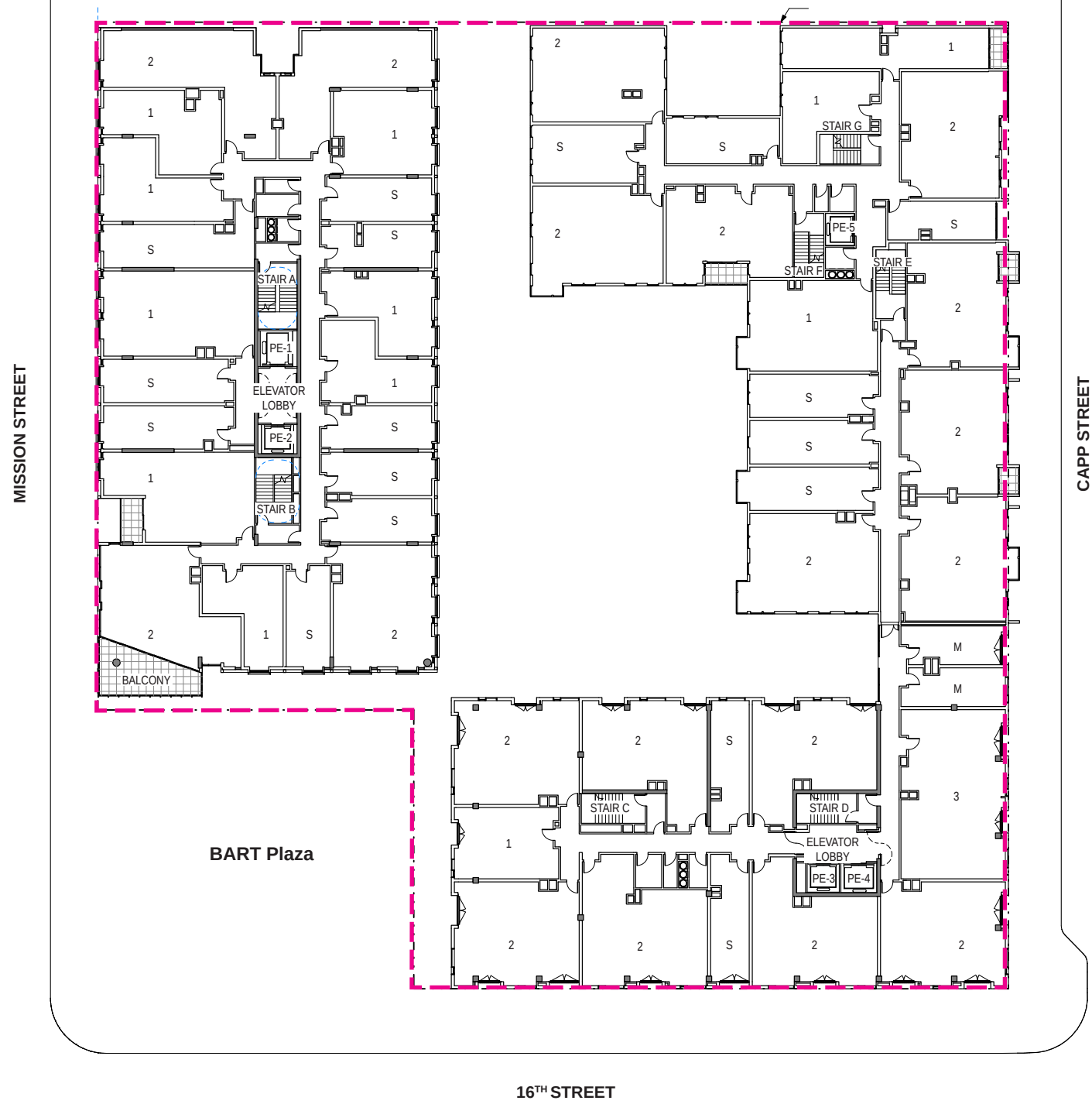
M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVEL 2

1979 Mission Street Project
San Francisco, California

FIGURE 2-5



Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVELS 3 TO 4

1979 Mission Street Project
San Francisco, California

FIGURE 2-6

Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

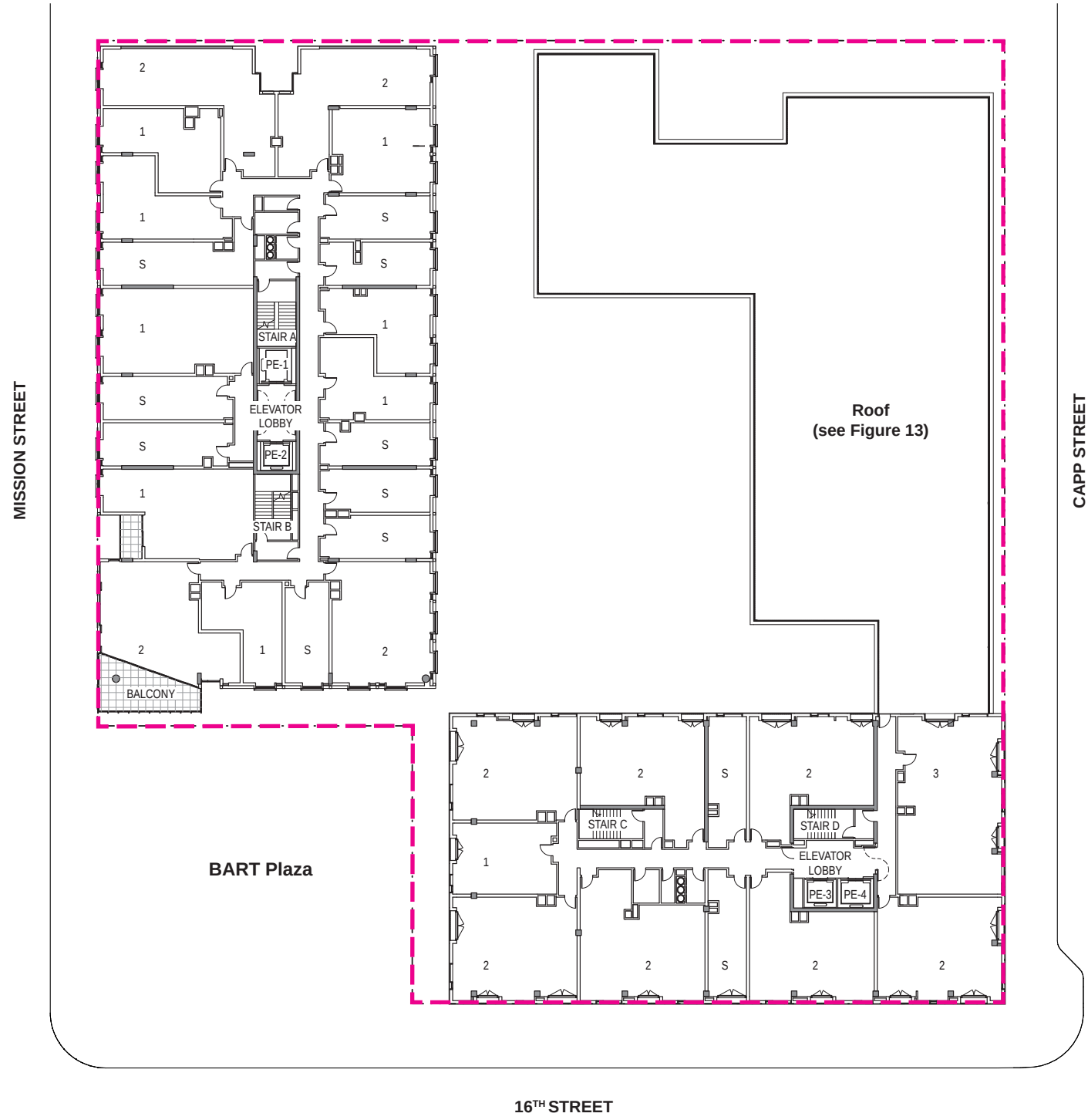
M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVEL 5

1979 Mission Street Project
San Francisco, California

FIGURE 2-7



Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

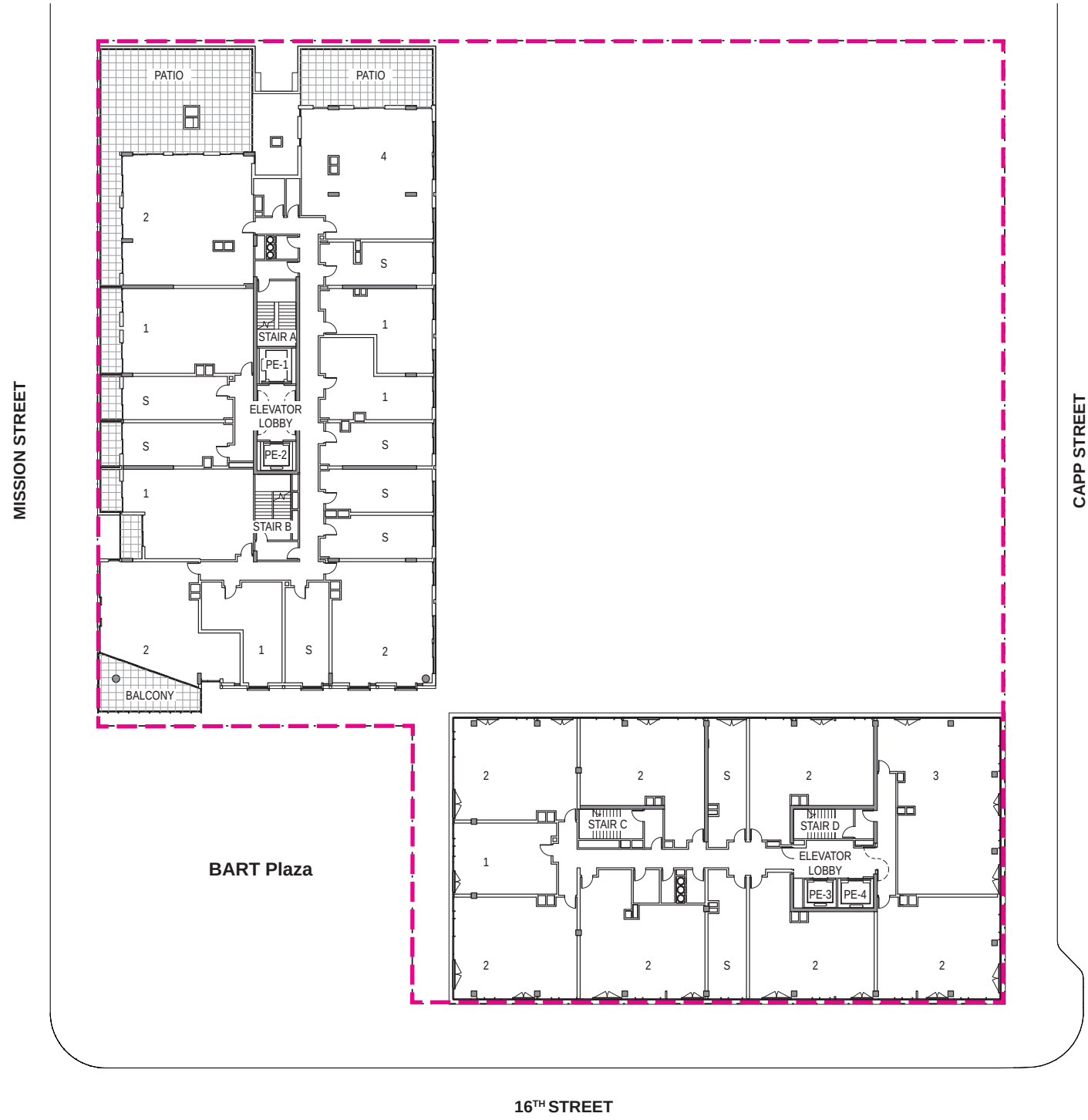
M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVEL 6

1979 Mission Street Project
San Francisco, California

FIGURE 2-8



Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

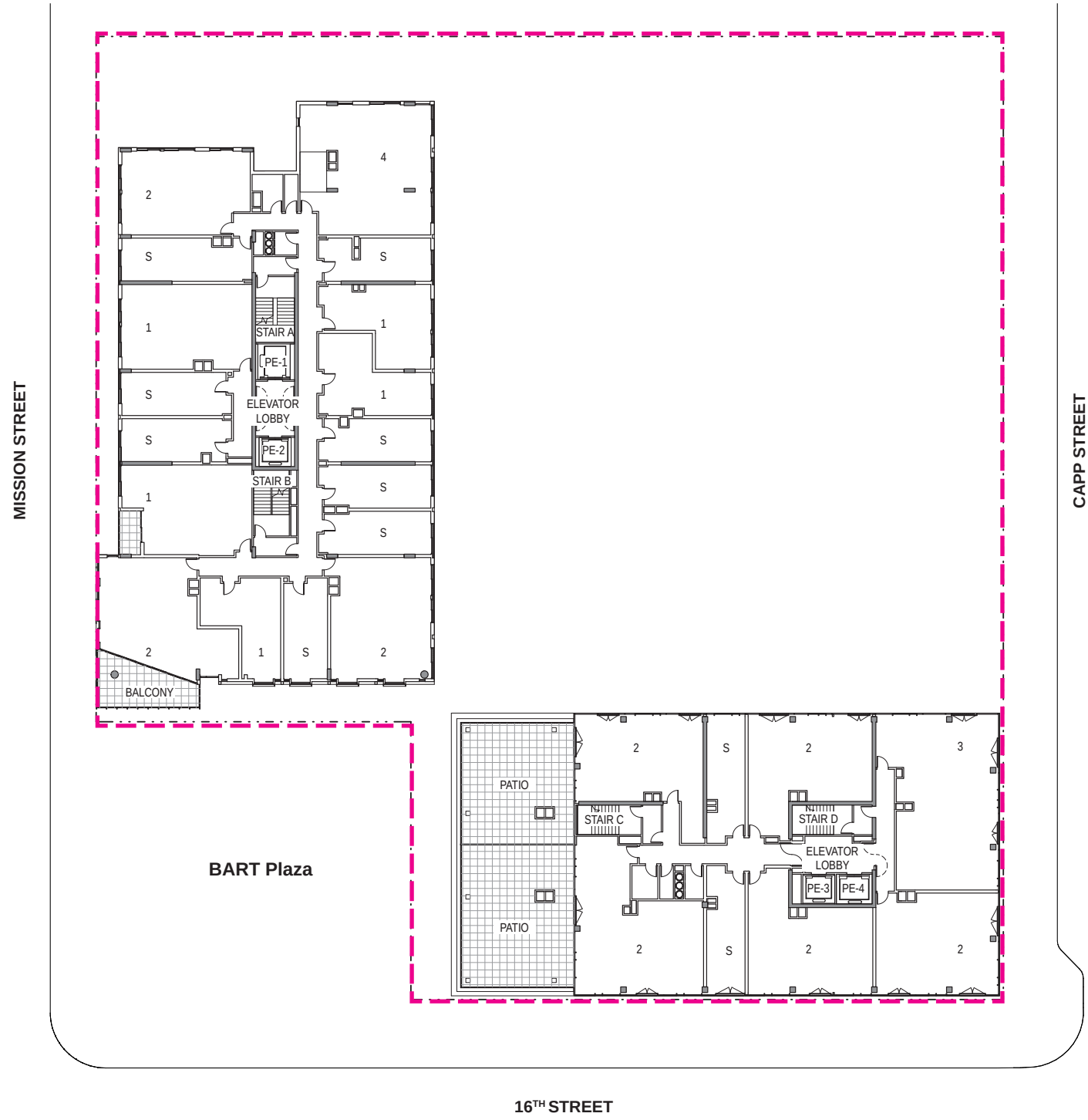
M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVEL 7

1979 Mission Street Project
San Francisco, California

FIGURE 2-9



Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

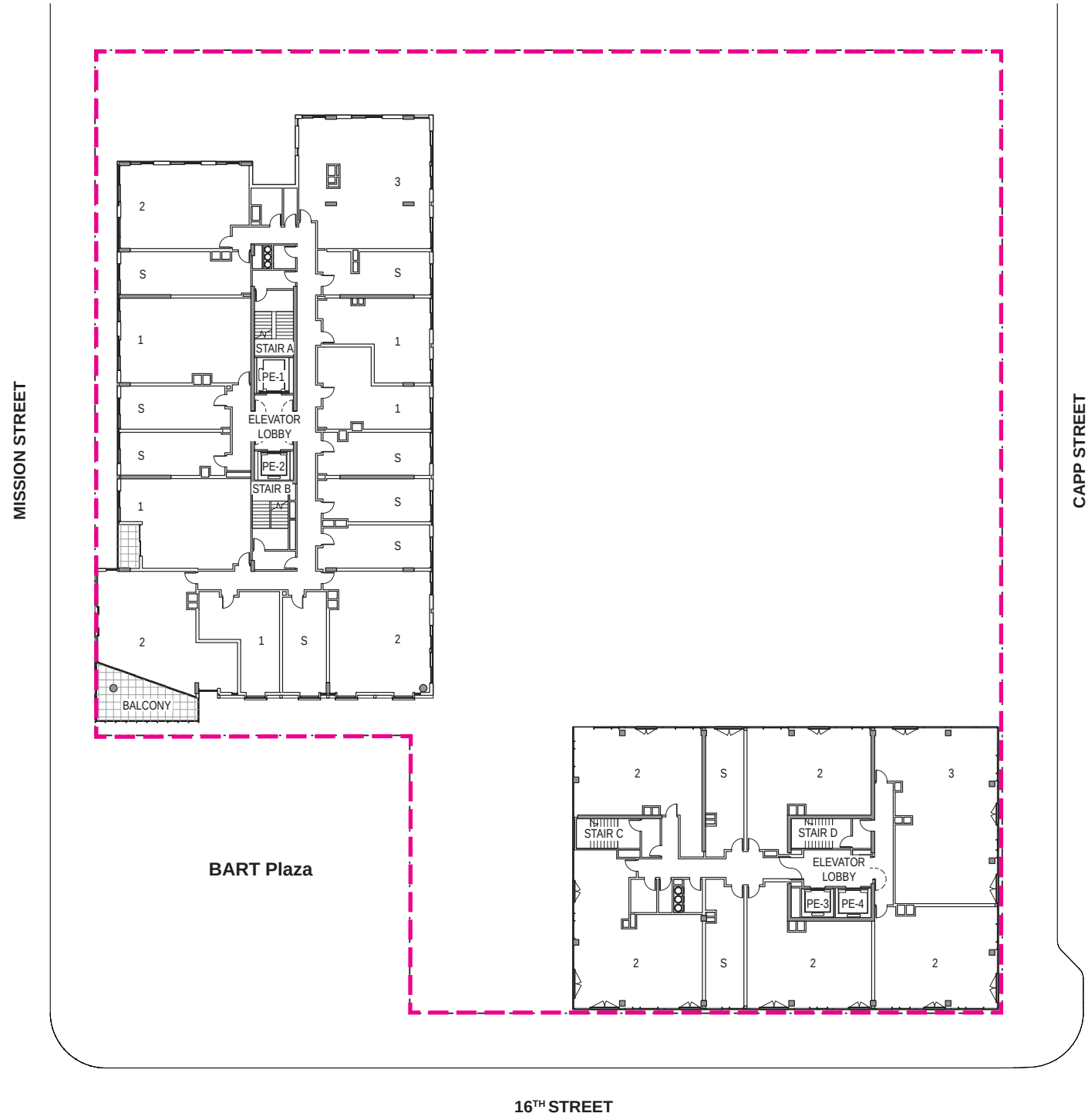
M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVEL 8

1979 Mission Street Project
San Francisco, California

FIGURE 2-10



Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

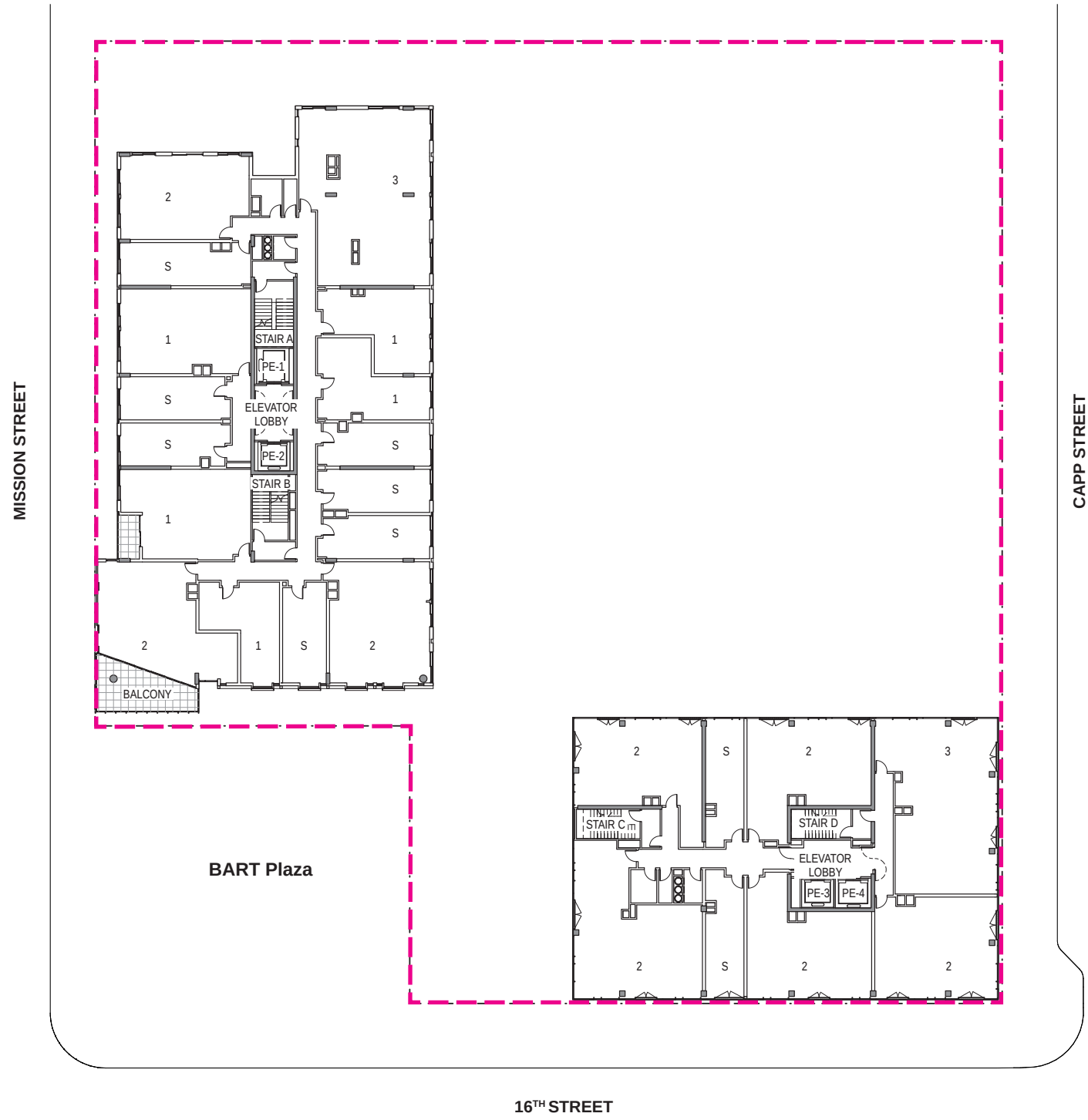
M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVEL 9

1979 Mission Street Project
San Francisco, California

FIGURE 2-11



Source: Skidmore, Owings & Merrill LLP, 2015.

Project Site

Private Open Space

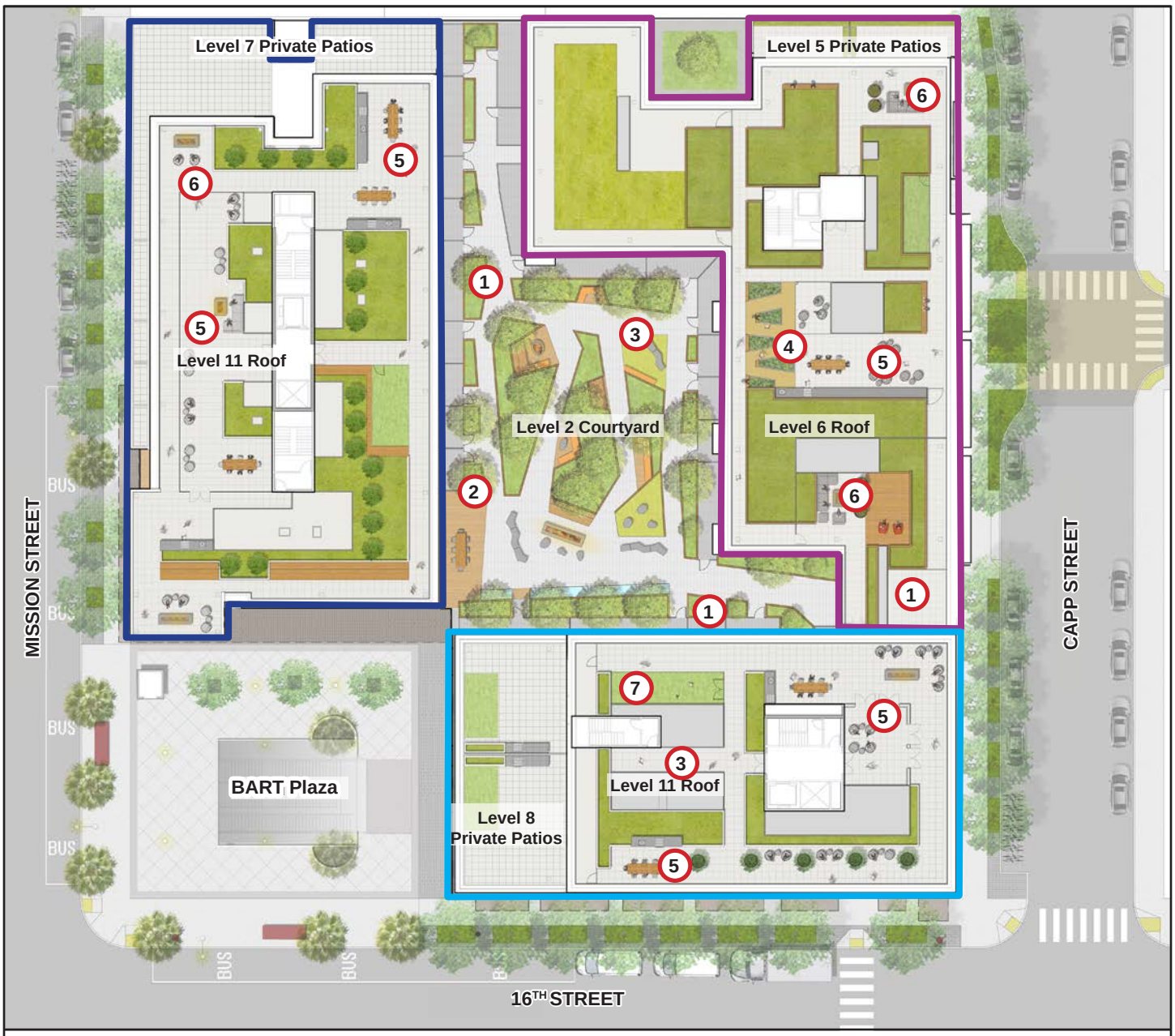
M = Micro
S = Studio
1 = One Bedroom
2 = Two Bedroom
3 = Three Bedroom
4 = Four Bedroom

Not to Scale

FLOOR PLAN – LEVEL 10

1979 Mission Street Project
San Francisco, California

FIGURE 2-12



1 Private Patios, typical
2 Amenity Space
3 Informal Play Area
4 Urban Agriculture Area
5 Event Space
6 Outdoor Lounge Area
7 Dog Run

Mission Street Building (105 Feet, 10 Stories)
Capp Street Building (55 Feet, 5 Stories)
16th Street Building (105 Feet, 10 Stories)

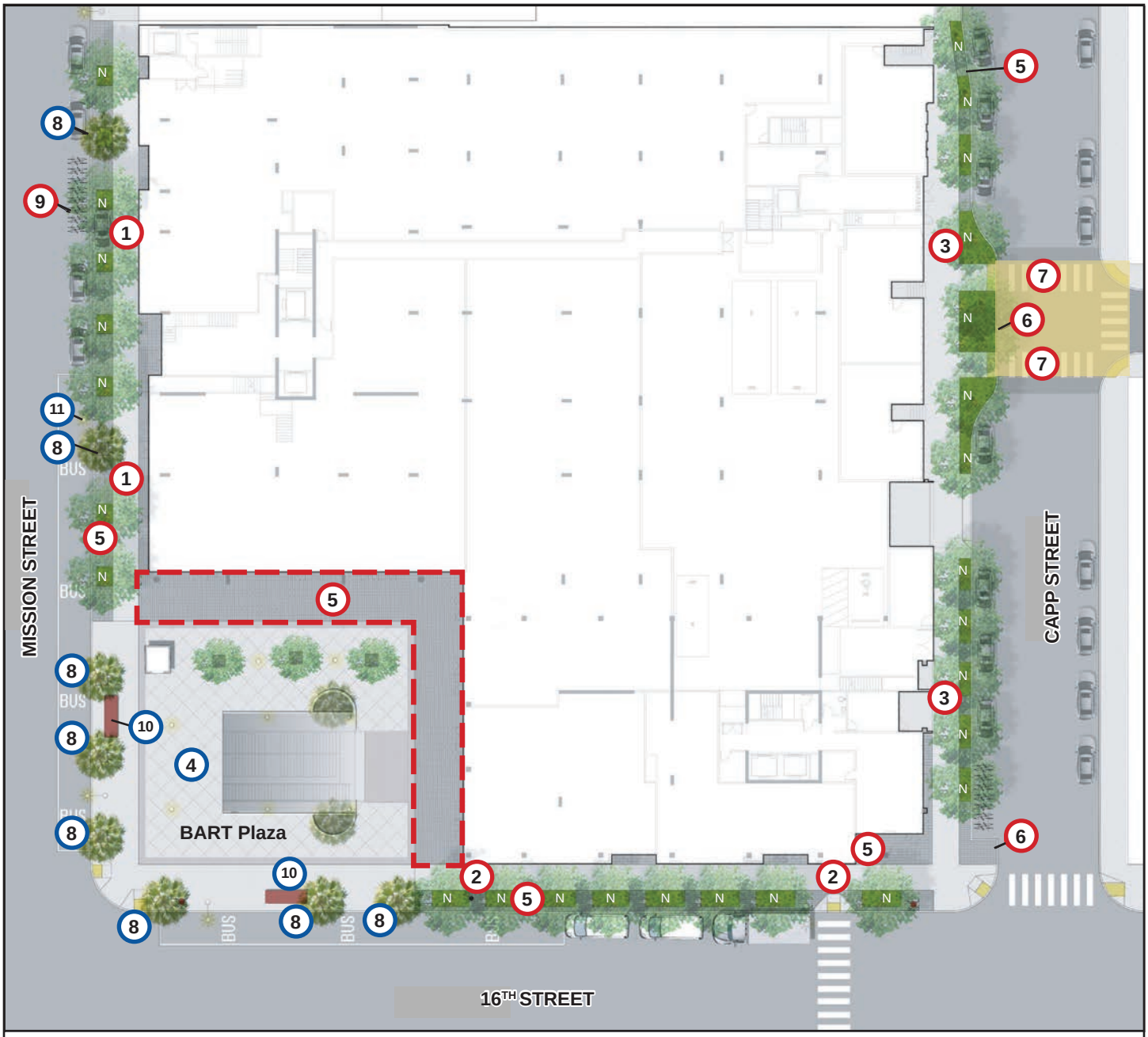
Source: Skidmore, Owings & Merrill LLP, 2014.

0 30 60 FEET

FLOOR PLAN – ROOF

1979 Mission Street Project
San Francisco, California

FIGURE 2-13



1. Mission Street
   Planted tree wells with pedestrian pass-throughs and special paving.
2. 16th Street
   Planted tree wells with pedestrian pass-throughs and special paving.
3. Capp Street
   Stormwater planting tree wells with pedestrian pass-throughs and special paving.
4. BART Plaza
5. Special Paving
6. Bulb-out
7. Raised Crossing
8. Palm
9. Bike Corral, typical
10. Bus Shelter
11. Street Light, typical

New Privately Owned, Publicly Accessible Open Space

Proposed

Existing to Remain

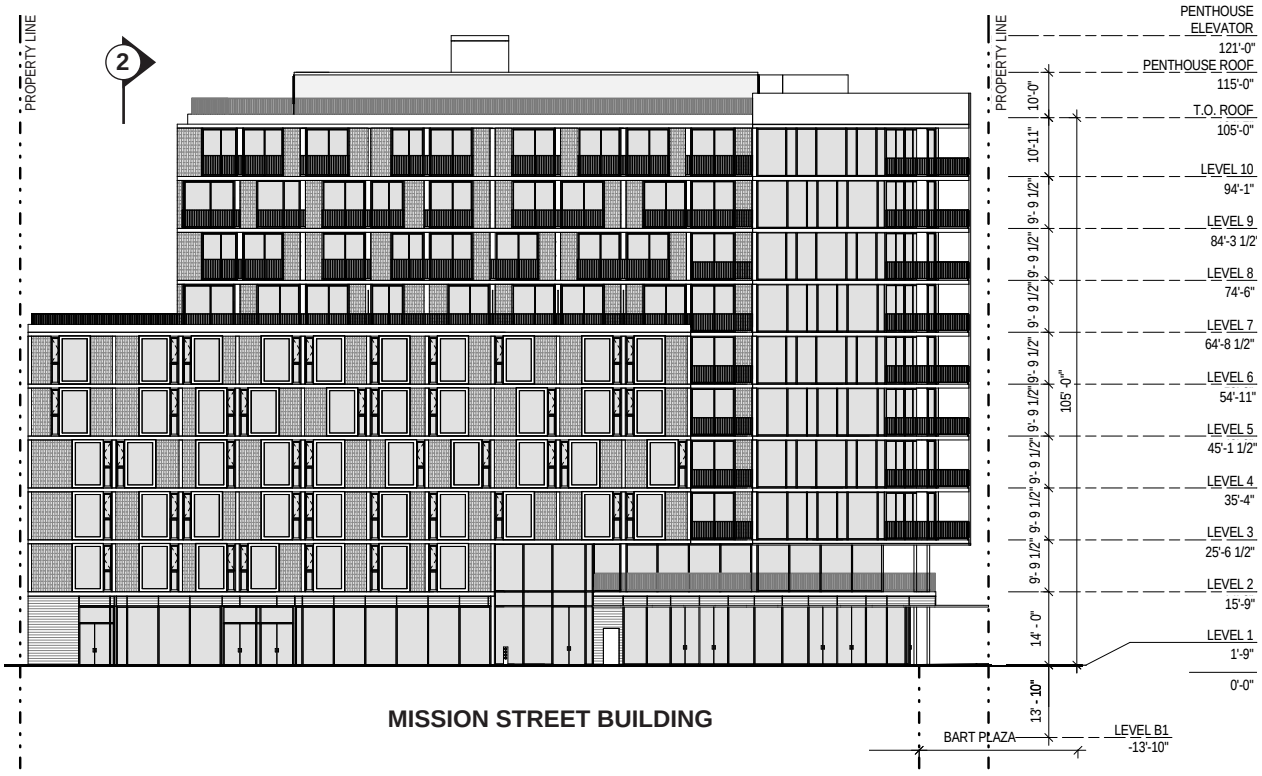
Source: Skidmore, Owings & Merrill LLP, 2014.

0 30 60 FEET

STREETSCAPE IMPROVEMENTS

1979 Mission Street Project
San Francisco, California

FIGURE 2-14



Not to Scale

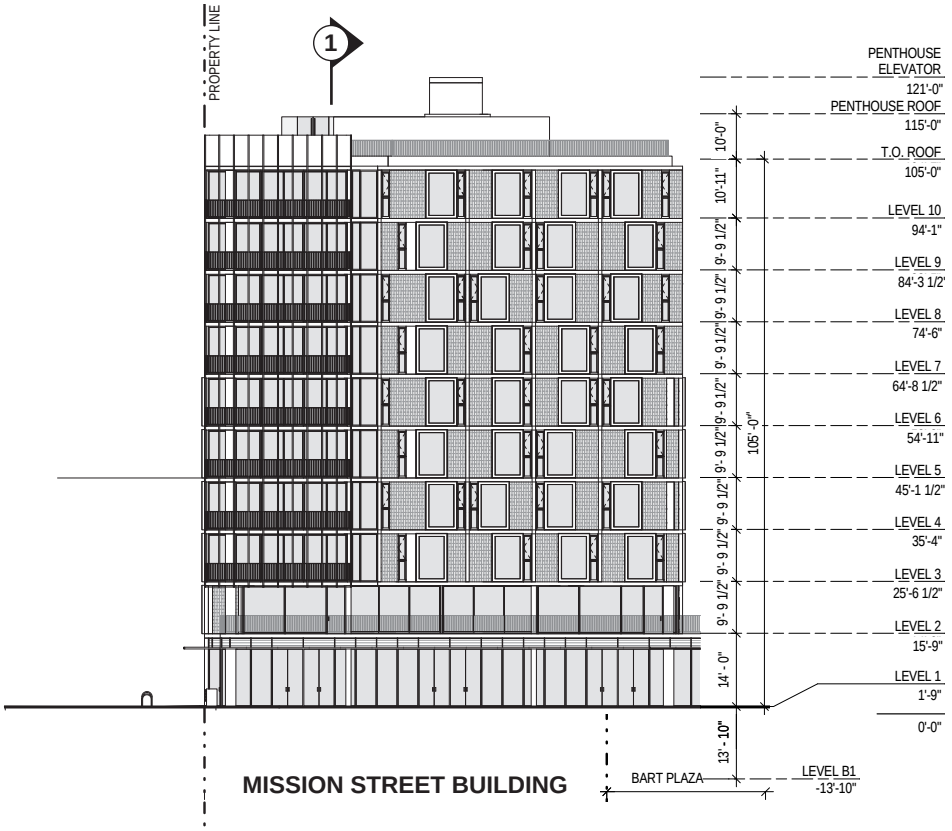
Source: Skidmore, Owings & Merrill LLP, 2015.

2 **See Figure 2-19 Longitudinal Section (2)**

PROPOSED ELEVATIONS – WEST, MISSION STREET

1979 Mission Street Project
San Francisco, California

FIGURE 2-15



Not to Scale

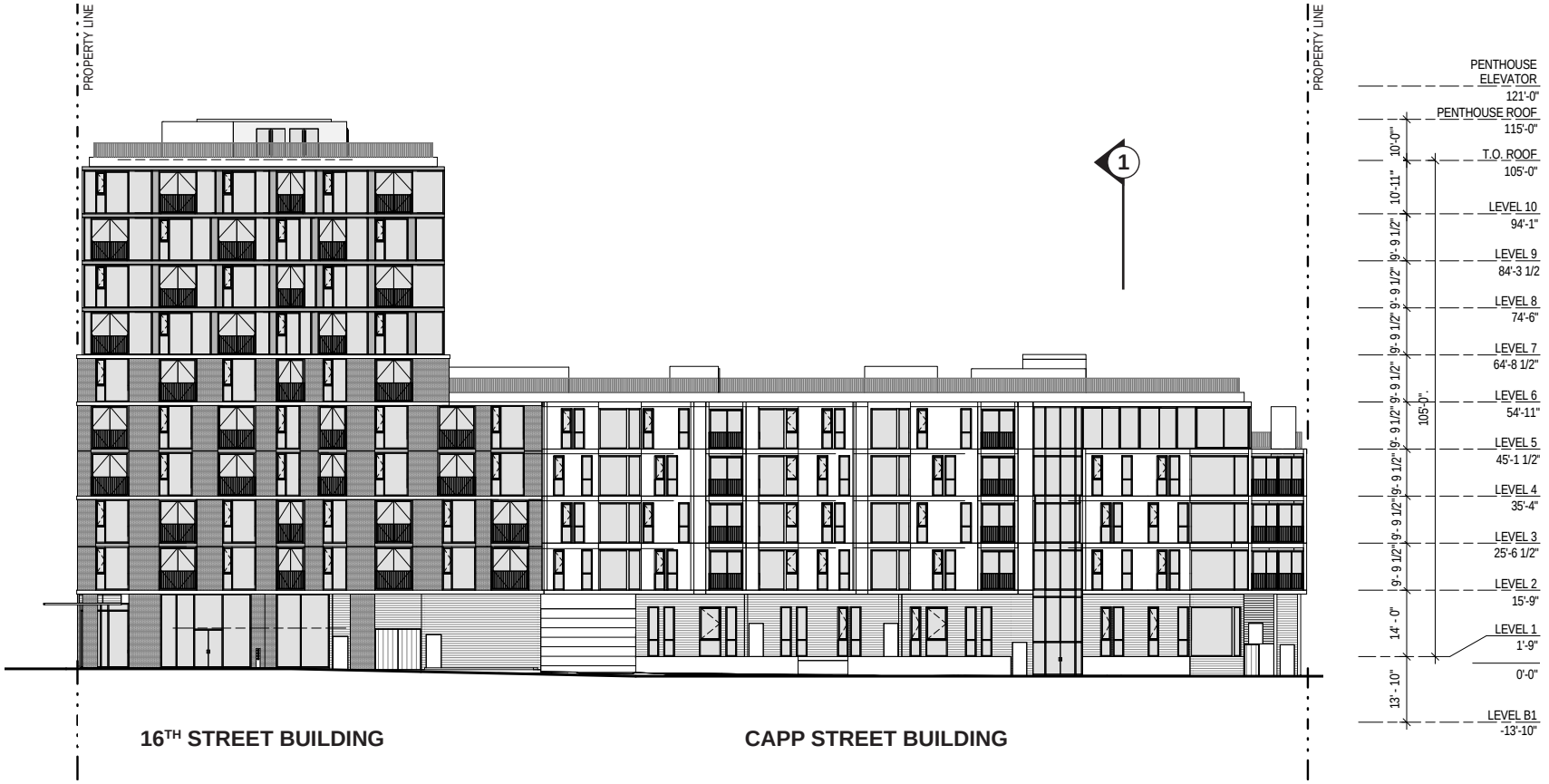
Source: Skidmore, Owings & Merrill LLP, 2015.

1 **See Figure 2-19 Cross Section (1)**

PROPOSED ELEVATIONS – SOUTH, 16TH STREET

1979 Mission Street Project
San Francisco, California

FIGURE 2-16



Not to Scale

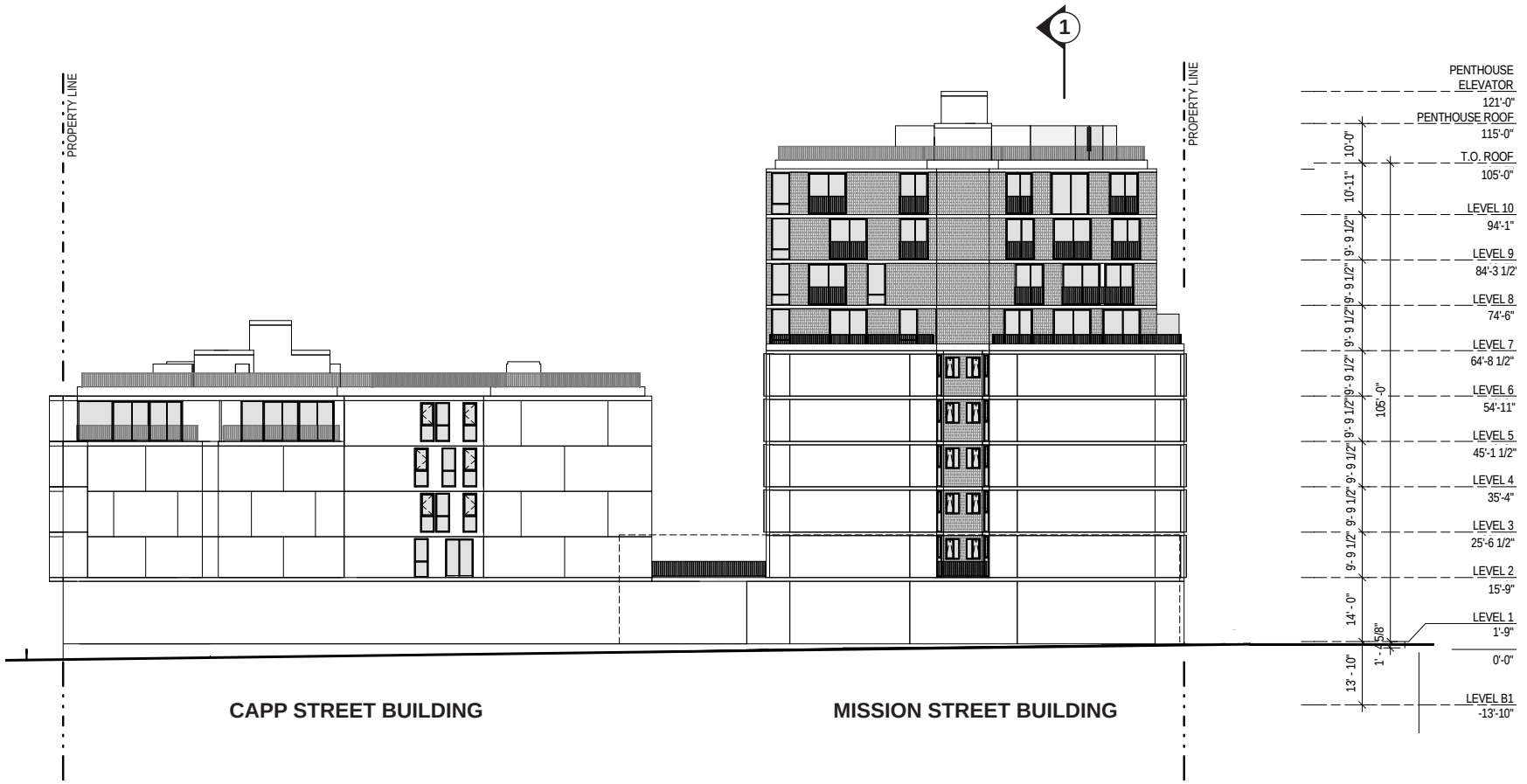
Source: Skidmore, Owings & Merrill LLP, 2015.

1 **See Figure 2-19 Cross Section (1)**

PROPOSED ELEVATIONS – EAST, CAPP STREET

1979 Mission Street Project
San Francisco, California

FIGURE 2-17



Not to Scale

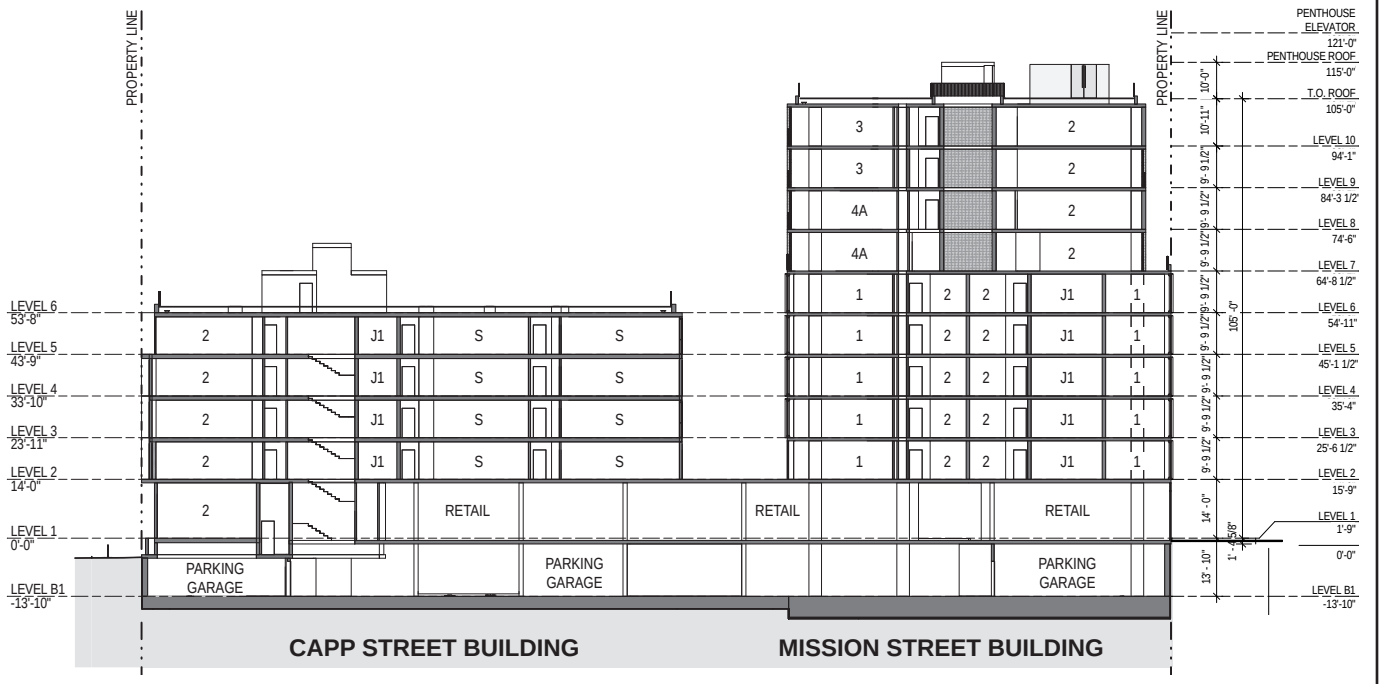
Source: Skidmore, Owings & Merrill LLP, 2015.

1 **See Figure 2-19 Cross Section (1)**

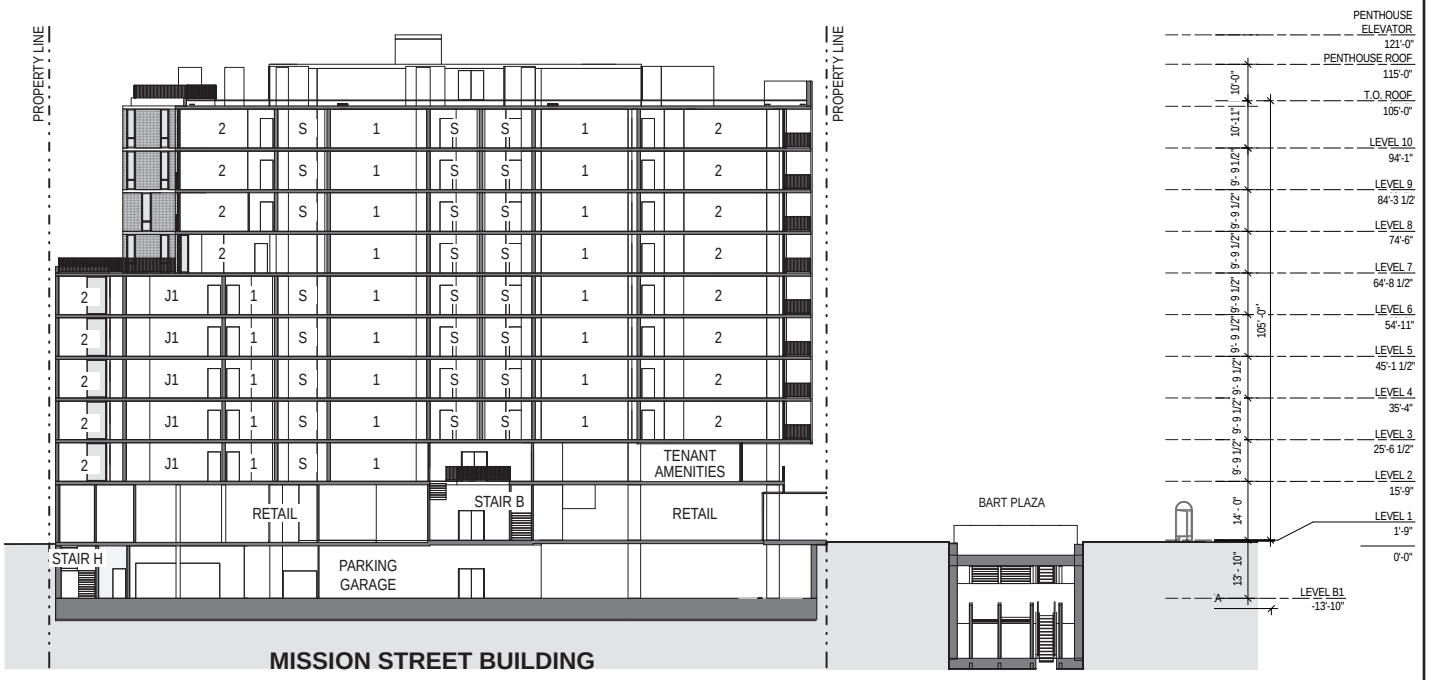
PROPOSED ELEVATIONS – NORTH

1979 Mission Street Project
San Francisco, California

FIGURE 2-18



Cross Section (1)



Longitudinal Section (2)

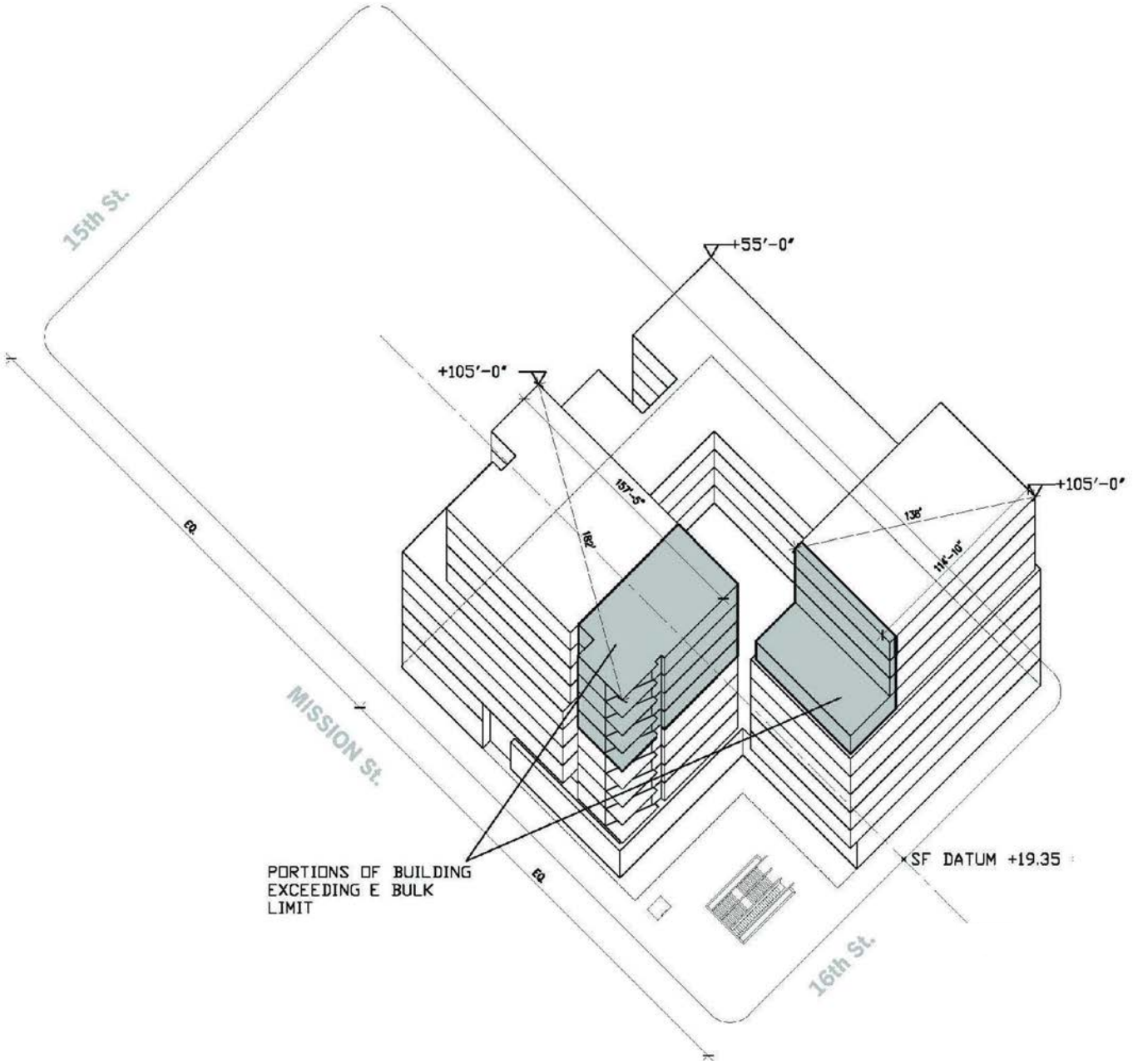
Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2015.

PROPOSED SECTIONS

1979 Mission Street Project
San Francisco, California

FIGURE 2-19



Source: Skidmore, Owings & Merrill LLP, 2015.

PROPOSED MASSING SCHEME

1979 Mission Street Project
San Francisco, California

FIGURE 2-20

Source: Skidmore, Owings & Merrill LLP, 2015.

VISUAL SIMULATION
MISSION STREET
– VIEW LOOKING NORTHEAST

1979 Mission Street Project
San Francisco, California

FIGURE 2-21

Source: Skidmore, Owings & Merrill LLP, 2014.

VISUAL SIMULATION
16TH STREET – VIEW LOOKING EAST

1979 Mission Street Project
San Francisco, California

FIGURE 2-22

Source: Skidmore, Owings & Merrill LLP, 2014.

VISUAL SIMULATION
CAPP STREET – VIEW LOOKING NORTH

1979 Mission Street Project
San Francisco, California

FIGURE 2-23

1. Residential

The Proposed Project would have 331 residential units, which would include 8 micro units,[9] 114 studios, 75 one bedroom units, 122 two bedroom units, 11 three bedroom units, and 1 four bedroom unit. With the exception of three ground-floor units fronting on Capp Street, all of the residential uses would be on floors 2 through 10, in three separate residential components above the podium level. The floor plans for the residential portion of the Proposed Project are shown on Figures 2-5 through 2-12. Entrances to the three project residential components would be located on Mission Street for the Mission Street residential component, at the corner of 16th and Capp Streets for the 16th Street residential component, and at the northern end of the Capp Street residential component, as shown on Figure 2-3. The affordable housing component of the Proposed Project would include on site units, in lieu fees, and a portion of the sale proceeds from the below market rate units to bridge the affordable housing gap of low income housing. The proposed affordable housing component would provide an equivalent number of affordable units that would meet the Planning Code Section 415 requirements.

2. Commercial

The ground floor of the Proposed Project would include approximately 34,198 gsf of retail space for use by multiple tenants, as shown on Figure 2-3. Retail uses may include a pharmacy, marketplace/store, and restaurants. The retail spaces would have a minimum floor to ceiling height of 14 feet and multiple entrances off Mission Street, 16th Street, and the Northeast BART Plaza.

3. Parking Garage/Trash Storage and Mechanical Equipment

Approximately 63,687 gsf of parking and building services would be provided in the ground floor and basement level garage with ingress and egress via a single 20 foot wide curb cut on Capp Street, as shown on Figures 2-3 and 2-4. A total of 163 vehicle parking spaces would be provided, with 22 independently accessible spaces for the retail uses, 4 car share spaces, and 136 spaces for residential uses (92 of which would be stacker spaces, and 3 tandem spaces for 6 cars) in the basement level, and three freight loading spaces and one ADA accessible van space on the ground level. Approximately 162 Class I bicycle spaces would be provided. Four Class I secure bicycle spaces provided on the ground floor would be for commercial tenants, and 158 Class I secure bicycle spaces provided in the basement would be for residents, in compliance with Planning Code requirements. On street bicycle parking would include 30 Class II bicycle spaces in two bicycle corrals, one on Mission Street, and another on Capp Street, as described under Street Improvements below.

A diesel powered emergency generator would be located in the garage to serve as a backup power supply for life safety. Trash storage and mechanical/electrical equipment would also be located in the garage. The building's maintenance staff would move the trash from the trash room in the basement garage to the trash, recycle, and compost compactors at the ground level, to be retrieved by Recology.[10] Recology vehicles would drive forward into the loading dock spaces to retrieve the compactor or bins, maneuver in the loading area, and exit onto Capp Street to empty the compactor or bins at an offsite location and return the emptied bins to the garage. The retail tenants would arrange for trash/recycling/

[9] A micro unit is defined in Planning Code Section 318 as an efficiency unit with less than 220 square feet of living room space and a kitchen and bathroom and the requirements set forth in San Francisco Building Code Supplement Section 1208.4.

[10] Recology is the company that manages municipal solid waste disposal and recycling services in San Francisco.

compost pick up directly with Recology, and place their bins at the curb on Mission and 16th Streets for pick up. The garage would be secured and accessible to residents; 22 of the parking spaces would be available to the retailers and their customers.

4. Circulation and Vehicular Access

All vehicular access into the Proposed Project for truck loading and off street parking would be via a new 20 foot curb cut on Capp Street, which would provide access to the proposed basement garage and the freight loading area on the ground level. Truck deliveries to the retail spaces would be accommodated by the three loading spaces in the ground floor freight loading area. Deliveries by trucks in excess of 35 feet would use on street loading space along the north side of 16th Street adjacent to the project site.

Three elevators from the parking garage operated by a key card/fob would provide access to the Mission Street, 16th Street, and Capp Street residential lobbies and residential units. A separate elevator from the parking garage would serve the ground floor and retail spaces. Residents would be able to access the residential lobbies from the ground floor loading area.

5. Pedestrian Access

As described above, there would be three street level residential lobbies, one for each residential component, accessible for pedestrian access. Residential lobbies would be located mid building for the Mission Street residential component, at the corner of 16th and Capp Streets for the 16th Street residential component, and at the northern end of the Capp Street residential component. In addition, the three ground floor residential units of the Capp Street residential component would be accessed directly from Capp Street. Access to the retail space would be from the storefronts along Mission and 16th Streets and from the Northeast BART Plaza.

6. Open Space

Along the northern and eastern sides of the Northeast BART Plaza, the Proposed Project's ground floor retail would be set back 15 feet from the property line, creating 2,175 feet of privately owned but publicly accessible open space, as shown on Figure 2-14. In accordance with Planning Code Section 736.93, usable open space for building residents would be provided through a combination of private and common usable open spaces that include balconies, roof decks, and a portion of the interior podium courtyard, as shown on Figure 2-13. The common usable open space would provide areas for the residents to have events and gatherings. Private open space would consist of 10,234 square feet of balconies, terraces, and patios for the exclusive use of 29 residential units. Approximately 28,741 square feet of common usable open space would be provided by roof decks, terraces, and a portion of the interior courtyard open space.

7. Street Improvements and On Street Parking

In addition to the open space improvements described above, the Proposed Project would include the street improvements shown on Figure 2-14, in lieu of a portion of the Eastern Neighborhoods impact fee. These improvements would include a raised crosswalk across Capp Street at Adair Street, widening of the existing sidewalk on the western side of Capp Street between 16th and 15th Streets from 9 feet to 12 feet, and the addition of bulb-outs at the northwestern corner of 16th and Capp Streets and the western side of the Adair Street and Capp Street intersection. These improvements are designed to calm traffic

and improve pedestrian safety. A bioswale[11] feature for stormwater infiltration may be installed along the widened sidewalk area along Capp Street immediately adjacent to the ground floor residential units. Additional improvements along Mission, 16th, and Capp Streets would include planted tree wells, special paving, and two bicycle parking corrals. The Project Sponsor would apply to the SFMTA and fund the installation of two bicycle corrals in the public right of way in the parking lane: a 16 bicycle corral on Mission Street and a 14 bicycle corral on Capp Street.

The proposed street improvements would require the removal of two curbside parking spaces on Mission Street, and three to four curbside parking spaces on Capp Street. After construction of the Proposed Project, the on street parking and commercial loading spaces along the project site would consist of four 22 foot long general metered parking spaces on Mission Street (a net loss of one general metered parking space on Mission Street), three commercial loading spaces on 16th Street, and seven unmetered parking spaces on Capp Street (a net loss of up to four unmetered parking spaces).

8. Building Design

The project design for each of the three residential components of the Proposed Project is described below.

a. Mission Street Residential Component

The Mission Street residential component would range in height from 6 to 10 stories, or approximately 65 feet to 105 feet in height, with a maximum height of 121 feet to the top of the elevator penthouse. The Mission Street residential component would be divided into three sections. The one story ground level base would be separated from the residential units above by projecting canopies along the retail frontage along Mission Street, then would wrap around the Northeast BART Plaza and extend along 16th Street. The Mission Street lobby would be two stories high, and the ground floor retail stores would have a minimum 14 foot floor to ceiling height.

The middle section of the Mission Street residential component would comprise the second or third through sixth stories, with amenities for the residents on the second floor facing the Northeast BART Plaza and the southern half of Mission Street. The façade of the middle section would incorporate various window types to distinguish the residential space from the retail space below. The façade would have floor to ceiling punched windows framed by a series of metal fins. Variegated glazed tile brick panels would be installed between the expressed concrete slabs to add depth to the façade while creating interest with shade and shadow. The introduction of vertical elements would break down the building scale further to create a smaller scale modulation and articulation across the façade. The building's architectural textures with its glass to solid wall ratio and colors are intended to complement and reflect the exterior materials found in the surrounding Mission neighborhood. The walls of the corner units facing the Northeast BART Plaza would be chamfered (instead of having a 90 degree right angle, the corner would be beveled or have an angled edge) for floors two through ten, as shown on Figure 2-21.

The top section of the Mission Street residential component would comprise the upper four stories (floors seven through ten). This section would begin at a height of 65 feet. It would be set back 6 feet from the floors below along the Mission Street property line, and approximately 17.5 to 30 feet from the northern

[11] Bioswales are landscape elements consisting of soils, vegetation, and/or riprap; they are designed to remove silt and pollution from surface runoff water before it enters the storm drain.

property line. An increase in the proportion of the glass to solid panels would reduce the visibility from Mission Street.

Balconies at the southwestern corner of the Mission Street residential component would face directly onto the Northeast BART Plaza. At the same corner, a trellis element woven with climbing plants would wrap down from the roof in front of the balconies, creating a marquee-like architectural feature to further mark the importance of the corner of 16th and Mission Streets, as shown on Figure 2-21.

b. 16th Street Residential Component

The 16th Street residential component would range in height from 7 to 10 stories, or approximately 75 feet to 105 feet, with a maximum of 121 feet in height at the elevator penthouse. Above the ground level, the 16th Street residential component would be separated from the Mission Street residential component by 25 feet to allow additional sunlight penetration into the podium level courtyard. In addition, floors eight through ten would be set back approximately 40 feet from the Northeast BART Plaza, creating further separation between the two residential components. The base and middle sections would have vertical brick elements. The ground floor retail, with storefront glazing and canopies, would constitute the base of the 16th Street residential component. The second through sixth floors would be the middle section, with two story high punched glazed openings. The upper four stories would have an increased ratio of glass to solid walls, and the vertical brick elements below would not continue upward. The proposed height difference and the unique façade designs of the Mission Street and 16th Street residential components facing the Northeast BART Plaza are intended to reinforce the visual separation and impression of two distinct buildings.

c. Capp Street Residential Component

The Capp Street residential component would have three to four stories of wood frame construction above the podium level, would be 55 feet high in compliance with the Planning Code, and would have a maximum height of 71 feet to the top of the elevator penthouse. The Capp Street façade would include three ground floor residential units with stoops facing directly onto Capp Street. The façade would be divided into four smaller 30 foot wide framed sections. As shown on Figure 2-23, the fifth floor would be set back 13 feet from the northern property line and stepped down to the third level relative to the scale of the existing buildings along Capp Street to allow additional sunlight access to the adjacent schoolyard.

9. Construction

Construction is anticipated to occur over 21 months in five phases: (1) demolition; (2) excavation, shoring, and underpinning; (3) foundation and podium; (4) superstructure/skin; and (5) interior work. Construction hours would typically be from 7:00 a.m. to 4:00 p.m., Monday through Friday. Limited evening work (4:00 p.m. to 8:00 p.m.) and work on weekends (8:00 a.m. to 4:00 p.m.) would be required for Phases 3, 4, and 5.

The site would be excavated up to approximately 22 feet below grade, removing approximately 34,523 cubic yards of soil. All excavated soil would be removed from the project site and disposed of at an appropriate facility, except for a small amount of soil to be placed under the vehicle ramp at the parking garage.

A pre-drilled soldier-pile-and-lagging system[12] with internal bracing would be used for stabilizing the area of excavation adjacent to Mission Street and the Northeast BART Plaza. The shoring system would be designed and installed in compliance with BART requirements, as discussed below. Where the excavation abuts the existing buildings on the northern side of the project site, 16th Street and Capp Street, tiebacks[13] would be used.[14]

Approximately the first 50 horizontal feet of the project site parallel to Mission Street is in the BART zone of influence (ZOI), which is subject to BART's design and engineering requirements.[15,16] The Proposed Project's foundation in the BART ZOI would be designed to avoid imposing any loads on the BART structure. The foundation would be a mat foundation with a maximum thickness of 5.5 feet that is supported by drilled piers that would transfer the building load to the dense native sand below. Pile driving would not be used for construction of the Proposed Project.[17]

Construction activities would require temporary sidewalk and parking lane closures for the entire construction period. On the eastern side of Mission Street, the bus stop adjacent to the Northeast BART Plaza would remain open, and a lighted and covered pedestrian walkway would be constructed over the adjacent sidewalk. The sidewalk north of the bus stop on Mission Street would be closed, and a pedestrian detour would be provided in the parking lane. On the northern side of 16th Street, adjacent to the project site, the bus stop would remain open, and a lighted and covered walkway would be provided on the existing sidewalk. The parking lane east of the bus stop would be closed to accommodate deliveries and staging for the Proposed Project. The sidewalk and parking lane adjacent to the project site on the western side of Capp Street would be closed, and pedestrian traffic would be redirected to the eastern side of Capp Street. A total of 15 to 16 on street parking spaces and two metered loading spaces along the project site's street frontage would be temporarily closed during construction of the Proposed Project.

G. Intended Uses of the EIR

The section below provides a summary of the purpose and process for the EIR (see additional details provided in Chapter 1, Introduction), and a list of the required approvals for the Proposed Project.

1. Purpose and Process

As described in Section 1.B of Chapter 1, Introduction, the CEQA State Guidelines, Section 15183 streamlines environmental review for projects that are consistent with the development density established by existing zoning, community plan, or general plan policies for which an EIR was previously

[12] A soldier pile and lagging system is a construction technique for retaining soil during excavation using vertical piles (i.e., column elements) with horizontal lagging (i.e., panel elements).

[13] Tiebacks are used in construction to anchor shoring to soil walls and prevent damage to adjacent properties.

[14] Treadwell & Rollo, 2013. Geotechnical Investigation, 1979 Mission Street. Prepared for Maximus Real Estate Partners. January 30.

[15] BART, 2012. Procedures for Permit and Plan Review. June. Available online at: bart.gov/sites/default/files/docs/Permits_and_Plan_Review_062012.pdf.

[16] BART, 2003. General Guidelines for Design and Construction over or Adjacent to BART's Subway Structures. July. Available online at: bart.gov/sites/default/files/docs/Gen_Guide_Subway_062012.pdf. Accessed April 7, 2016

[17] Maximus – BP 1979 Mission LLC, 2014. Environmental Evaluation Application for 1979 Mission Street Project, Attachment to Application for Block 3553, Lot 052. January 14.

certified. The Proposed Project was addressed at a program level in the Eastern Neighborhoods PEIR.[18] The Citywide Planning and Current Planning Divisions of the San Francisco Planning Department (Planning Department) have determined that the Proposed Project is consistent with the requirements (i.e., development density) of the Area Plan, as evaluated in the Eastern Neighborhoods PEIR.[19,20] Therefore, because the Proposed Project is consistent with the programmatic document prepared for the Area Plan, the environmental review can be streamlined per CEQA State Guidelines Section 15183.

The Planning Department prepared a Community Plan Exemption (CPE) Checklist for the Proposed Project to determine whether its impacts were adequately addressed in the Eastern Neighborhoods PEIR. Based on the analysis in the CPE Checklist (see Appendix A), the Proposed Project would potentially result in significant impacts on wind, shadow, and geology and soils that are peculiar to the project site, and that were not identified in the Eastern Neighborhoods PEIR. For all the other environmental topics, the Proposed Project would not result in new significant impacts, nor would it result in more severe adverse impacts to these resources than were identified in the Eastern Neighborhoods PEIR. Therefore, the Planning Department has prepared this focused EIR to address the Proposed Project's impacts to wind, shadow, and geology and soils.[21] This is a project specific EIR, intended to inform the public and decisionmakers of the potential significant impacts that the Proposed Project could have on wind, shadow, and geology and soils that were not fully disclosed in the Eastern Neighborhoods PEIR, and to present mitigation measures and feasible alternatives to avoid or reduce these significant impacts. Subsequent to publication of the CPE Checklist, the originally proposed design was modified to eliminate a hazardous wind impact. The modified Project design is described in Section 2.F of the Project Description in this Draft EIR.

2. Required Approvals

The Proposed Project would be subject to compliance and permitting requirements under local regulations. The anticipated approvals necessary for the implementation of the Proposed Project are listed below.

a. Actions by the San Francisco Planning Commission

- Certification of the Final EIR and adoption of CEQA findings.
- The Proposed Project is seeking approval as a Planned Unit Development, which would require a conditional use authorization and exceptions from the Planning Code pursuant to Section 303 and Section 304 for the following:
  - Planned Unit Development with additional requirements and criteria to be considered;
  - Lot size limit (Planning Code Section 121.1);
  - Use size limit (Planning Code Sections 121.2 and 121.6);

[18] San Francisco Planning Department, 2008. Eastern Neighborhoods Rezoning and Area Plans Programmatic Environmental Impact Report (Eastern Neighborhoods PEIR), Planning Department Case No. 2004.0160E, State Clearinghouse No. 2005032048, certified August 7, 2008. Available online at: http://www.sf-planning.org/index.aspx?page=1893, accessed October 2, 2014.

[19] Varat, Adam, 2014. San Francisco Planning Department, Community Plan Exemption Eligibility Determination, Citywide Planning and Policy Analysis, 1979 Mission Street, August 20.

[20] Joslin, Jeff, 2014. San Francisco Planning Department, Community Plan Exemption Eligibility Determination, Current Planning Analysis, 1979 Mission Street, September 10.

[21] Applicable CEQA regulations and guidelines are: California Public Resources Code Sections 21000 et seq., California Code of Regulations Title 14, Sections 15000 et seq. (State CEQA Guidelines); and San Francisco Administrative Code, Chapter 31.

- Required rear yard (Planning Code Section 134);
- Residential open space (Planning Code Section 135);
- Permitted obstructions (Planning Code Section 136[c][2]);
- Bulk limitations (Planning Code Section 270); and
- Dwelling unit exposure (Planning Code Section 140).

· The Proposed Project would be subject to the Mission 2016 Interim Controls that govern certain permit applications during the development of the Mission Action Plan (MAP) 2020.

b. Actions by the San Francisco Board of Supervisors

· Approval of a Development Agreement for the Proposed Project; and
· Approval of legislation for sidewalk widening.

c. Actions by Other City Boards and Departments

· *Planning Department* – Approval of the demolition and site permits, and addenda thereto. General Plan Referral for proposed condominium map and sidewalk widening.

· *Department of Building Inspection* – Approval of demolition, site permit and addendum thereto, and building permits for the demolition of the existing buildings, construction of the new building and underpinning permits of adjacent structures. Approval of construction outside the permitted hours.

· *SFMTA Board of Directors* – Approval of the proposed curb modifications, parking space removal, and bicycle corrals on Mission Street right-of-way and Capp Street sidewalk and right-of-way.

· *Bureau of Streets and Mapping, San Francisco Public Works* – Subdivision and condominium map approval and encroachment permits for sidewalk underground vaults. Street and sidewalk permits for any modifications to public streets, sidewalks, protected trees, street trees, or curb cuts.

· *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; required for projects that result in ground disturbance of an area greater than 5,000 square feet.

· *San Francisco Department of Public Health* – Approval of a dust control plan because the site is in excess of ½ acre in size.

d. Actions by Other Agencies

· *Bay Area Air Quality Management District* – Issuance of permits for installation and operation of the emergency generator.

· *BART* – Plan review and approval of shoring and foundation within BART ZOI, and issuance of permit to work within or adjacent to the BART right-of-way.

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CHAPTER 3

Plans and Policies

Pursuant to CEQA Guidelines Section 15125(d), this Chapter discusses any inconsistencies of the Proposed Project with applicable plans and policies and focuses on those that may result in physical environmental impacts. Policy consistency determinations are ultimately made by the City of San Francisco's (City's) local decision making body (i.e., the Planning Commission and the Board of Supervisors). The analysis in this chapter is intended to provide decisionmakers with a discussion of planning considerations that are pertinent to the Proposed Project and associated development site. This chapter also provides a preliminary conclusion regarding whether the Proposed Project may be inconsistent with identified plans and policies that relate to physical environmental impacts. These preliminary conclusions are intended to supplement understanding of the various and often competing public policy considerations. This consideration of policies would occur independently of the environmental review process, as part of the decision to approve, modify, or disapprove the Proposed Project.

Conflicts and inconsistencies with a policy do not constitute, by themselves, significant environmental impacts, unless such conflicts or inconsistencies result in direct physical environmental effects. With the exception of the effects on wind, shadow, and geology and soils, all physical impacts of the Proposed Project are discussed in the Community Plan Exemption (CPE) Checklist prepared for the Proposed Project (see Appendix A). Physical impacts associated with wind, shadow, and geology and soils are discussed in this Focused Environmental Impact Report (EIR) in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.

Plans and policies addressed in this chapter include:

- San Francisco Plans and Policies. This section describes the San Francisco General Plan (General Plan) and the Eastern Neighborhoods Rezoning and Area Plans, focusing particularly on the Mission Area Plan. This section also discusses the applicable provisions of the San Francisco Planning Code (Planning Code), including the Accountable Planning Initiative, Transit First Policy, San Francisco Bicycle Plan, San Francisco Better Streets Plan (Better Streets Plan), Sustainability Plan, Climate Action Plan for San Francisco, and Local Actions to Reduce Greenhouse Emissions (Climate Action Plan).

- Regional Plans and Policies. The Bay Area Air Quality Management District's (BAAQMD's) 2010 Clean Air Plan, San Francisco Regional Water Quality Control Board's (RWQCB's) San Francisco Bay Basin Plan, Metropolitan Transportation Commission's (MTC's) and Association of Bay Area Governments' (ABAG's) Plan Bay Area Sustainable Communities Strategy (Plan Bay Area) are all described in this section.

The Proposed Project is consistent with the development density established by the Mission Area Plan for the project site and the building height limits established by the Zoning Map. The Proposed Project

would not obviously conflict with local and regional plans, policies, and Planning Code land use controls. As described in Chapter 2, Section G.2.(a) above, the Proposed Project would require conditional use authorization under certain sections of the Planning Code pursuant to Section 304 of the Planning Code. With the necessary approvals, the Proposed Project would be generally consistent with Planning Code provisions. As stated above, potential inconsistencies of the Proposed Project with applicable plans, policies, and regulations do not, by themselves, indicate a significant environmental effect. To the extent that physical environmental impacts associated with wind, shadow, and geology and soils may result from such conflicts, these impacts are analyzed in this EIR in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures. Any inconsistencies between the Proposed Project and plans, policies, and Planning Code land use controls that do not relate to physical environmental issues or result in physical environmental effects will be considered by City decisionmakers as part of their determination on whether to approve, modify, or disapprove the Proposed Project.

A. San Francisco Plans and Policies

1. San Francisco General Plan

The General Plan provides the City's vision for the future of San Francisco. The General Plan is divided into ten 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. Development in the City is subject to the General Plan, which provides objectives and policies to guide land use decisions, and contains some policies that relate to physical environmental issues, some of which may conflict with each other. Achieving complete consistency with the General Plan is not always possible for a proposed project. CEQA does not require an analysis of a proposed project in relation to all General Plan policies; it asks whether a proposed project would conflict with any plans or policies adopted to protect the environment.

Two General Plan elements that are particularly applicable to planning considerations associated with the Proposed Project are the Urban Design and Housing elements. The Urban Design Element is concerned "both with development and with preservation. It is a concerted effort to recognize the positive attributes of the city, to enhance and conserve those attributes, and to improve the living environment where it is less than satisfactory." The Urban Design Element also seeks to protect public views of open space and water bodies, and to protect and enhance the aesthetic character of San Francisco. Objective 3 of the Urban Design Element seeks to ensure that major new development complements existing land use patterns, protects important natural resources, and preserves neighborhood character. The Proposed Project is consistent with the type and intensity of development envisioned for the project site (refer to Eastern Neighborhoods Plan and Planning Code discussions, below), and would not obviously conflict with any goals, objectives, or policies in the Urban Design Element.

The key objective of the Housing Element is to promote the development of new housing (both market rate and affordable housing) in areas in San Francisco close to the City's job centers and well served by transit, while retaining existing housing in a way that strengthens the economy, reduces environmental impacts, and creates a stronger sense of place and community. A particular focus of the Housing 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 the existing housing stock), and a constrained supply of land (necessitating infill development and increased density). The Proposed Project, which is adjacent to a local and regional public transit hub and is a mixed-use project containing housing, would

not remove existing housing and would not obviously conflict with any objectives or policies in the Housing Element. The Proposed Project would include an affordable housing component with an equivalent number of affordable units that would meet the Planning Code Section 415 requirements.

Any potential conflicts with General Plan objectives and policies not identified in the EIR would be considered in the Project evaluation process, and would not alter the physical environmental effects of the Proposed Project. The Planning Department, the Zoning Administrator, the Planning Commission, the Board of Supervisors, and other City decisionmakers will evaluate the Proposed Project's conformance with the objectives and policies of the General Plan, and will consider potential conflicts as part of the decision making process.

2. Eastern Neighborhoods Rezoning and Area Plans

After several years of community input and technical analysis, the Eastern Neighborhoods Rezoning and Area Plans were adopted in December 2008. The goal of the Eastern Neighborhoods Rezoning and Area Plans is to transition about half of the existing industrial areas in the Mission, Central Waterfront, East South of Market, and Showplace Square/Potrero Hill neighborhoods to mixed use zones that encourage new housing. The remaining half would be rezoned for production, distribution, and repair (PDR) districts, where a wide variety of uses such as San Francisco Municipal Railway (Muni) vehicle yards, light industrial uses, caterers, performance spaces, and industrial and manufacturing uses can continue to thrive.

The Eastern Neighborhoods rezoning and Planning Code amendments included new zoning districts that would permit PDR uses in combination with commercial uses; mixed use districts for residential and commercial uses, residential, and PDR uses; and residential districts. In addition to the Planning Code map and text amendments, the Eastern Neighborhoods Rezoning and Area Plans created four new area plans: the Mission Area Plan, the East South of Market Area Plan, the Showplace Square/Potrero Hill Area Plan, and the Central Waterfront Area Plan. Each Area Plan articulates a vision for a neighborhood that would promote transit, bicycle, and pedestrian friendly areas, strengthen and encourage vibrant neighborhood serving commercial areas, provide and maintain community facilities and open space to ensure neighborhood livability, and increase both the supply and variety of housing, with an emphasis on affordable housing.

3. Mission Area Plan

The project site is in the Mission Area Plan, a subarea of the Eastern Neighborhoods Rezoning and Area Plans. The Mission Area Plan covers the area bounded by Guerrero Street to the west, Potrero Avenue to the east, Division Street to the north, and Cesar Chavez Street to the south. The Mission Area Plan envisions a pattern of development that would preserve the diversity and vitality of the Mission, increase the amount of affordable housing, preserve and enhance the existing PDR businesses, preserve and enhance the unique character of the Mission's distinct commercial areas, promote alternative means of transportation to reduce traffic and automobile use, improve and develop additional community facilities and open space, and minimize displacement.

Objectives of the Mission Area Plan that relate to the Proposed Project include:

- Strengthening the Mission's existing mixed use character, while maintaining the neighborhood as a place to live and work (Objective 1.1);

- Maximizing development potential in areas of the Mission where housing and mixed use is encouraged, in keeping with neighborhood character (Objective 1.2);
- Ensuring that a significant percentage of new housing created in the Mission is affordable to people with a wide range of incomes (Objective 2.1);
- Ensuring that new residential development satisfies an array of housing needs with respect to tenure, unit mix, and community services (Objective 2.3);
- Promoting an urban form that reinforces the Mission's distinctive place in the City's larger form, and strengthens its physical fabric and character (Objective 3.1);
- Promoting an urban form and architectural character that supports walking and sustains a diverse, active, and safe public realm (Objective 3.2); and
- Ensuring that new development includes high quality, private open space (Objective 5.2).

The Proposed Project would not obviously conflict with any objectives or policies of the Mission Area Plan.

4. San Francisco Planning Code

The Planning Code, which incorporates by reference the City's Zoning Maps, implements the General Plan and governs permitted uses, densities, set-backs, open space, and other controls governing the exterior envelope of buildings in the City. Permits to construct new buildings (or to alter or demolish existing ones) may not be issued unless (1) the Proposed Project conforms to the Planning Code, (2) allowable exceptions are granted pursuant to provisions of the Planning Code, or (3) necessary amendments to the Planning Code have been or will be approved by the Board of Supervisors or voters.

Use Districts. The project site is within the Mission Area Plan boundaries, and is zoned Mission Street Neighborhood Commercial Transit Zoning District (Mission Street NCT). The Mission Street NCT promotes continuous retail frontage by requiring ground floor commercial uses in new developments and prohibiting curb cuts on Mission Street. The NCT also promotes housing development in new buildings above the ground story.

The project site is also in three special use districts: the Mission Street Formula Retail Restaurant Subdistrict, which restricts approving permits for formula (chain) retail restaurants; the Mission Alcoholic Beverage Special Use District, which controls the transfer of liquor licenses under specific circumstances and restricts the sale of alcohol for offsite consumption; and the Fringe Financial Service Restricted Use District, which does not permit new fringe financial services (check cashing or pay day lenders) within the district itself or within a quarter mile buffer zone. The Proposed Project would not conflict with any regulations of the three special use districts.

Height and Bulk Districts. The portions of the site along Mission and 16th Streets are in a 105-E height and bulk district, and the portion of the site along Capp Street is in a 55-X height and bulk district.

The Proposed Project is consistent with the maximum building heights permitted in these districts. The Proposed Project would require conditional use authorization for an exception to the E bulk limitations, because the length and diagonal dimension of the Mission and 16th Streets residential components would not comply with the limits set for in Planning Code Section 270.

Other Planning Code Requirements. The Proposed Project would require conditional use authorization for the following exceptions: lot size limit (Planning Code Section 121.1) (for development on lots larger than 10,000 square feet in size); use size limit (Planning Code Sections 121.2 and 121.6) (for retail uses larger than 6,000 square feet in size); rear yard size and location (Planning Code Section 134); bay window width and separation (Planning Code Section 136[c][2]); and dwelling unit exposure to open space (Planning Code Section 140). These exceptions are required because (1) the existing lot exceeds the lot size limit of 10,000 square feet, (2) the existing pharmacy use, which the neighborhood would like to retain, exceeds the maximum 6,000 square foot use size limit, (3) deviation from the unit exposure requirement is a common request for a small number of units which face the inner court, to maximize the number of dwelling unit, and (4) deviation from the bay window width and separation requirement would create a finer façade section for the Capp Street residential component that would be compatible with the scale of the residential buildings on the eastern side of Capp Street.

Accountable Planning Initiative. In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added Section 101.1 to the Planning Code, establishing eight Priority Policies. These policies are set forth in Section 101.1(b) and provide as follows: (1) that existing neighborhood serving retail uses be preserved and enhanced and future opportunities for resident employment in, and ownership of, such businesses be enhanced; (2) that existing housing and neighborhood character be conserved and protected to preserve the cultural and economic diversity of our neighborhoods; (3) that the City's supply of affordable housing be preserved and enhanced; (4) that commuter traffic not impede Muni transit service or overburden our streets or neighborhood parking; (5) that a diverse economic base be maintained by protecting the City's industrial and service sectors from displacement due to commercial office development, and that future opportunities for resident employment and ownership in these sectors be enhanced; (6) that the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake; (7) that landmarks and historic buildings be preserved; and (8) that our parks and open space and their access to sunlight and vistas be protected from development.

Policies 1, 2, and 5 are addressed in the CPE Checklist in Topic 1, Land Use and Land Use Planning. Policy 3 is addressed in the CPE Checklist in Topic 2, Population and Housing. Policy 4 is addressed in the CPE Checklist in Topic 4, Transportation and Circulation. Policy 6 is addressed in this EIR in Section 4.C., Geology and Soils. Policy 7 is addressed in the CPE Checklist in Topic 3, Cultural and Paleontological Resources. Policy 8 is addressed in this EIR in Section 4.B., Wind and Shadow.

The Proposed Project would not conflict with any of the eight Priority Policies. The Planning Commission and the Board of Supervisors (on appeal) will review the Proposed Project for consistency with the Priority Policies during the public hearing on the Proposed Project prior to acting on the Conditional Use and Planned Unit Development Applications. The case report and approval motions for the Proposed Project that are presented to the Planning Commission will contain the Planning Department's comprehensive project analysis and findings regarding the Proposed Project's consistency with the Priority Policies, plans, policies, and Planning Code provisions that do not relate to physical environmental issues. The Planning Commission and the Board of Supervisors will also consider the information in this EIR when they determine whether to approve, modify, or disapprove the Proposed Project.

5. San Francisco Transit First Policy

The City's Transit First Policy was adopted by the Board of Supervisors in 1973, amended in 1999, and is contained in Section 8A.115 of the City Charter. 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 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.

The Proposed Project would provide 163 vehicle parking spaces, inclusive of four car share spaces and one Americans with Disabilities Act–accessible van parking space. The number of off street parking spaces is less than the estimated demand of 603 parking spaces based on the transportation impact study prepared for the Proposed Project, and is less than the maximum number of parking spaces allowed by the Planning Code.[1] Many of the trips associated with the Proposed Project are anticipated to be made via public transportation because of the project site's close proximity to numerous Muni routes and the 16th Street Mission BART station. In addition, the Proposed Project would provide approximately 162 Class I secure bicycle spaces and 30 Class II bicycle spaces along Mission and Capp Streets. Therefore, the Proposed Project would not obviously conflict with the Transit First Policy.

6. San Francisco Bicycle Plan

In August 2009, the San Francisco Board of Supervisors approved the San Francisco Bicycle Plan *(*Bicycle Plan), which is intended to provide a 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 Bicycle Plan identifies goals, objectives, and policies to support these proposed improvements. The Proposed Project, which would provide the required number of Class I and Class II bicycle parking spaces and would not affect the bicycle routes or the travel lanes of the streets in the vicinity of the project site and would not conflict with the Bicycle Plan.

7. San Francisco Better Streets Plan

In December 2010, the Better Streets Plan was adopted in support of the City's efforts to enhance the streetscape and the pedestrian environment. The Better Streets Plan carries out the intent of San Francisco's Better Streets Policy, which was adopted by the Board of Supervisors on February 6, 2006. The Better Streets Plan classifies the City's public streets and right 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 right of way.

The 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 midblock curb extensions, pedestrian countdown and priority signals, and other traffic calming features; (2) universal pedestrian oriented design, with incorporation of street trees, sidewalk plantings, furnishing, lighting, efficient utility location for unobstructed sidewalks, shared single surface 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; and (5) improved ecological

[1] CHS Consulting Group, 2014. 1979 Mission Street Mixed-Use Residential Project Transportation Impact Study. December 15.

performance with incorporation of stormwater management techniques and urban forest maintenance. The requirements of the Better Streets Plan were incorporated into the Planning Code as Section 138.1.

The Proposed Project would be consistent with the Better Streets Plan by complying with Planning Code Section 138.1 through the implementation of the following measures: constructing streetscape improvements such as a raised crosswalk across Capp Street at Adair Street, widening of the existing sidewalk on the western side of Capp Street between 16th and 15th Streets from 9 feet to 12 feet, and the addition of bulb-outs at the northwestern corner of 16th Street/Capp Street and the western side of the Adair Street/Capp Street intersection. Planted tree wells, special paving, landscaping, bioswales, and bicycle parking corrals would also be installed along Mission, 16th, and Capp Streets.

8. 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 San Francisco's long term environmental sustainability. The goal of the San Francisco Sustainability Plan is to enable the City 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: 10 that 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), and five that 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 San Francisco Sustainability 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)[2] certification levels or Green Point Rated[3] 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 during construction and operation. The California

[2] 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.

[3] 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). From "Green Point Rated." Available online at: http://www.builditgreen.org/greenpoint-rated/. Accessed on February 2, 2010.

Building Standards Commission adopted a green building code as part of the California Building 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 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. Specifically, the Proposed Project would comply with measures such as diverting a minimum of 75 percent of construction and demolition debris from landfill; using low emitting adhesives, sealants, caulks, paints, coatings, composite wood, and flooring in the building; generating onsite renewable energy or purchasing renewable energy credits; demonstrating a 15 percent energy efficiency compliance margin; designating approximately twelve parking spaces for either low emitting, fuel efficient, or carpool/vanpool vehicles; and reducing potable water demand by 30 percent by using low flow faucets, water closets, showerheads, and urinals.

The Proposed Project would increase residential density in a neighborhood that is well served by transit, and incorporate the abovementioned energy efficiency, water conservation, and waste management measures. Therefore, the Proposed Project would not obviously conflict with the San Francisco Sustainability Plan.

9. Climate Action Plan

In February 2002, the San Francisco Board of Supervisors passed the Greenhouse Gas Emissions Reduction Resolution, committing the City and County of San Francisco to a greenhouse gas (GHG) emissions reduction goal of 20 percent below 1990 levels by 2012. The resolution also directed the San Francisco Department of the Environment, the San Francisco Public Utilities Commission, and other appropriate City agencies to complete a local action plan targeting GHG emissions reduction activities. In September 2004, the San Francisco Department of the Environment and the San Francisco Public Utilities Commission published the Climate Action Plan.

The Climate Action Plan examines the causes of global climate change and human activities that contribute to global warming. It provides projections of climate change impacts on California and San Francisco based on recent scientific reports and presents estimates of San Francisco's baseline GHG emissions inventory and reduction targets. It describes recommended emissions reduction actions in key target sectors—transportation, energy efficiency, renewable energy, and solid waste management—to meet stated goals by 2012. The Climate Action Plan also presents steps required over the near term to implement the plan. Although the Board of Supervisors has not formally committed the City to perform the actions addressed in the Climate Action Plan and many of the actions require further development and commitment of resources, the Climate Action Plan serves as a blueprint for reduction of GHG emissions. Recommended actions of the Climate Action Plan under transportation include the increased use of public transit as an alternative to driving and increased urban infills close to transit service. The Climate Action Plan also promotes the increased use of driving alternatives such as bicycling and walking. The Proposed Project would be adjacent to a major transit hub for Muni and BART. It would also provide 192 bicycle parking spaces. Therefore, the Proposed Project would not obviously conflict with the Climate Action Plan.

B. Regional Plans and Policies

The guiding policy plans for the nine county Bay Area include: the Bay Area 2010 Clean Air Plan produced by the BAAQMD, the Water Quality Control Plan for the San Francisco Bay Basin produced by the RWQCB, and Plan Bay Area, and the integrated long range transportation and land use/housing plan produced jointly by MTC and ABAG.

The BAAQMD's Bay Area 2010 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 in a single integrated plan. It also requires the review of progress in improving air quality in recent years, and identification of emission control measures to be adopted or implemented during the 2010-2012 timeframe. The Proposed Project would generally be consistent with the Bay Area 2010 Clean Air Plan. Physical impacts of the Proposed Project related to air quality and compliance with these plans are addressed in the CPE Checklist under Topic 6, Air Quality, (see Appendix A).

Water quality control plans (basin plans) provide the basis for protecting water quality in California. Basin plans are mandated by both the Federal Clean Water Act and the State Porter-Cologne Water Quality Act. The goal of the San Francisco Bay Basin Plan is to provide a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in San Francisco Bay. The stormwater discharge, wastewater management, drainage plan, and water quality control systems for the Proposed Project would comply with, and generally be consistent with, the water quality regulations of the San Francisco Bay Basin Plan. The physical impacts of implementing these systems, and the permitting requirements of the RWQCB, are discussed in the CPE Checklist, Topic 14, Hydrology and Water Quality.

MTC and ABAG's Plan Bay Area is a long range integrated transportation and land use/housing strategy through 2040 for the San Francisco Bay Area, which functions as the Sustainable Communities Strategy mandated by Senate Bill 375. The Proposed Project would generally be consistent with the MTC and ABAG's Plan Bay Area. The physical impacts of the Proposed Project relating to population and housing are discussed in the CPE Checklist, Topic 2, Population and Housing. Impacts of the Proposed Project relating to transportation are discussed in the CPE Checklist, Topic 4, Transportation and Circulation (see Appendix A).

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CHAPTER 4

Environmental Setting, Impacts, and Mitigation Measures

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A. Introduction

This chapter provides a project level impact analysis of the physical environmental effects of implementing the Proposed Project. The Community Plan Exemption Checklist (see Appendix A) determined that the only Project specific significant impacts that were not identified in the Programmatic Environmental Impact Report for the Eastern Neighborhoods Rezoning and Area Plans (Eastern Neighborhoods PEIR)[1] would relate to the topics of wind, shadow, and geology and soils. Impacts on other environmental resources were found to have been adequately covered under the Eastern Neighborhoods PEIR, and would have no Project specific impacts that were not already identified therein.

1. Format of the Environmental Analysis

Each environmental impact topic considered in this chapter contains the following subsections:

- Introduction. This subsection briefly introduces the environmental impact topic and identifies the background information used for the analysis.
- Setting. This subsection presents a description of the baseline physical environmental conditions in the vicinity of the project with respect to each resource topic, at an appropriate level of detail to allow the reader to understand the impact analysis.
- Regulatory Framework. This subsection describes the relevant laws and regulations that apply to each environmental impact topic in the Proposed Project area, and the governmental agencies responsible for enforcing those laws and regulations.
- Impacts and Mitigation Measures. This subsection evaluates the potential for the Proposed Project to adversely affect the physical environment described in the setting. Significance criteria for evaluating environmental impacts are defined at the beginning of each impact analysis section. Each impact analysis concludes by determining the significance of the respective impacts, as described further in Section 4.2, below. This subsection also identifies mitigation measures for all of the impacts considered significant or potentially significant, consistent with CEQA Guidelines (Section 15126.4[a][1]), which states that an EIR "shall describe feasible measures which could minimize significant adverse impacts…"

Impacts are numbered and shown in bold type, and the corresponding mitigation measures, where identified, are numbered and indented, and follow impact statements. Impacts and mitigation measures are numbered consecutively within each topic, and begin with an abbreviated reference to the impact section (e.g., TR). The following abbreviations are used for individual topics:

- WS: Wind and Shadow
- GE: Geology and Soil.

2. Significance Determinations

Under CEQA, a significant effect is defined as a substantial, or potentially substantial, adverse change in the physical 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 criteria used in this EIR are based on the

[1] San Francisco Planning Department, 2008. Eastern Neighborhoods Rezoning and Area Plans Programmatic Environmental Impact Report, Planning Department Case No. 2004.0160E, certified August 7, 2008.

Planning Department's Environmental Planning Division guidance regarding the thresholds of significance used to assess the severity of the environmental impacts of the Proposed Project. The specific significance criteria used to analyze wind, shadow, and geology and soils are presented before the discussion of impacts. The categories used to designate impact significance are:

- No Impact (NI). An impact is considered not applicable (no impact) if there is no potential for impacts, or if the environmental resource does not occur in the project area or the area of potential effect.
- Less than Significant Impact, No Mitigation Required (LS). This determination applies if there is a potential for a limited impact that does not exceed the defined significance criteria, or that 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 Impact with Mitigation (LSM). This determination applies if the project would result in an adverse effect that meets the significance criteria, but feasible mitigation is available that would reduce the impact to a less than significant level.
- Significant Impact (S). This determination applies if the project would result in a substantial, or potentially substantial, adverse change that meets the significance criteria, before mitigation.
- Significant and Unavoidable Impact for which Feasible Mitigation is Not Available (SU). This determination applies if the project would result in an adverse effect that meets the significance criteria, but for which there appears to be no feasible mitigation available to reduce the impact to a less than significant level. Therefore, the impact would be significant and unavoidable.
- Significant and Unavoidable Impact with Implementation of Feasible Mitigation (SUM). This determination applies if it is certain that the project would result in an adverse effect that meets the significance criteria, but the residual effect after implementation of the available mitigation measure to lessen the impact would remain significant. Therefore, the impact is significant and unavoidable with mitigation.

3. Approach to Analysis

The following sections describe the approaches to the Project level and cumulative impacts analyses.

a. Project Level Analysis

This focused EIR addresses the Proposed Project's impacts to wind, shadow, and geology and soils. These are the topic areas with site specific impacts, as identified in the Community Plan Exemption (CPE) Checklist. As described in Chapter 2, Project Description, the Proposed Project would result in the demolition of the two existing commercial buildings and surface parking lot on the site, and in the construction of an approximately 388,912 gross square foot (gsf) mixed use residential building ranging from 4 to 10 stories, with a maximum height of 105 feet, and up to 121 feet total height at the elevator penthouse. The Proposed Project would have approximately 331 residential units, approximately 34,198 gsf of ground floor commercial uses, off street ground level loading and basement parking, privately owned publicly accessible open space along the Northeast BART Plaza, and common and private usable open space, including balconies, roof terraces, and a portion of the interior podium courtyard.

At a programmatic level, the Eastern Neighborhoods PEIR identified potential environmental impacts associated with the implementation of the Mission Area Plan, which encompasses the project site. Therefore, impacts and mitigation measures identified in the Eastern Neighborhoods PEIR are applicable to development projects within the Mission Area Plan boundaries. The "Approach to Analysis" of each

respective impact topic under the Impacts and Mitigation Measures subsection identifies the mitigation measures in the Eastern Neighborhoods PEIR that would apply to the Proposed Project for that topic, and if needed, identifies additional project specific mitigation measures to address the Proposed Project's impacts.

b. Approach to Cumulative Analysis

CEQA defines cumulative impacts as "two or more individual effects, which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines requires that an EIR evaluate potential environmental impacts that may be individually limited but cumulatively significant. These impacts could result from the Proposed Project alone, or together with other projects. The CEQA Guidelines state: "The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects." Cumulative impacts could result from individually minor but collectively significant projects taking place over time.

For the evaluation of cumulative impacts, CEQA allows the use of either a list of past, present, or reasonably anticipated relevant projects, including projects outside the control of the lead agency; a summary of the projections in an adopted planning document; or a combined list-based and growth projections approach. For the Proposed Project, the cumulative analysis primarily relies on the cumulative growth projection assumptions found in the Eastern Neighborhoods PEIR, as described below.

Since the certification of the Eastern Neighborhoods PEIR in 2008, as evidenced by the volume of development applications submitted to the Planning Department since 2012, the pace of development activity has increased in the Eastern Neighborhoods Plan areas (Plan areas). The Eastern Neighborhoods PEIR projected that implementation of the Eastern Neighborhoods Rezoning and Area Plans could result in a substantial amount of growth in the Plan areas, resulting in an increase of approximately 7,400 to 9,900 net dwelling units, and 3,200,000 to 6,600,000 square feet of non-residential space (excluding production, distribution, and repair [PDR] loss) throughout the lifetime of the Eastern Neighborhoods Rezoning and Area Plans (year 2025).[2] The growth projected in the Eastern Neighborhoods PEIR was based on a soft site analysis (i.e., assumptions regarding the potential for a site to be developed through the year 2025), and not on the created capacity of the rezoning options (i.e., the total potential for development that would be created indefinitely).[3]

As of February 23, 2016, projects containing 9,749 dwelling units and 2,807,952 square feet of non-residential space (excluding PDR loss) have completed or are proposed to complete environmental review[4] in the Plan

[2] Tables 12 through 16 of the Eastern Neighborhoods Draft EIR and Table C&R-2 in the Comments and Responses show projected net growth based on proposed rezoning scenarios. A baseline for existing conditions in the year 2000 was included to provide context for the scenario figures for parcels affected by the rezoning, not projected growth totals from a baseline of the year 2000. Estimates of projected growth were based on parcels that were to be rezoned, and did not include parcels that were recently developed (i.e., parcels with projects completed between 2000 and March 2006) or have proposed projects in the pipeline (i.e., projects under construction, projects approved or entitled by the Planning Department, or projects under review by the Planning Department or Department of Building Inspection). Development pipeline figures for each Plan Area were presented separately in Tables 5, 7, 9, and 11 in the Draft EIR. Environmental impact assessments for these pipeline projects were considered separately from the Eastern Neighborhoods rezoning effort.

[3] San Francisco Planning Department, 2003. Community Planning in the Eastern Neighborhoods, Rezoning Options Workbook, Draft, February 2003. This document is available online at: http://www.sf-planning.org/index.aspx?page=1678.

[4] For this and the Land Use and Land Use Planning section, environmental review is defined as projects that have or are relying on the growth projections and analysis in the Eastern Neighborhoods PEIR for environmental review (i.e., Community Plan Exemptions or Focused Mitigated Negative Declarations and Focused Environmental Impact Reports with an attached Community Plan Exemption Checklist).

areas.[5] This level of development corresponds to an overall population increase of approximately 23,974 to 33,026 persons. Of the 9,749 dwelling units that are under or have completed environmental review, building permits have been issued[6] for 4,583 dwelling units, or approximately 47 percent of those units (information is not available regarding building permit non-residential square footage).

In the Mission plan area, the Eastern Neighborhoods PEIR projected that implementation of the Eastern Neighborhoods Plan could result in an increase of 800 to 2,100 net dwelling units and 700,000 to 3,500,000 square feet of non-residential space (excluding PDR loss) through the year 2025. This level of development corresponds to an overall population increase of approximately 4,719 to 12,207 persons. As of February 23, 2016, projects containing 2,451 dwelling units and 355,842 square feet of non-residential space (excluding PDR loss) have completed or are proposed to complete environmental review in the Mission plan area. This level of development corresponds to an overall population increase of 8,764 to 10,650 persons. Of the 2,451 dwelling units that have completed or are proposed to complete environmental review, building permits have been issued for 989 dwelling units, or approximately 40 percent of those units. Therefore, anticipated growth from the Eastern Neighborhoods Rezoning and Area Plans is within the Eastern Neighborhoods PEIR growth projections.

Growth that has occurred in the Plan areas since adoption of the Eastern Neighborhoods PEIR has been planned for, and the effects of that growth were anticipated and considered in the Eastern Neighborhoods PEIR. Although the number of housing units under review is approaching or exceeds the residential unit projections for the Mission and Showplace Square/Potrero Hill Area Plans of the Eastern Neighborhoods PEIR, the non-residential reasonably foreseeable growth is well below what was anticipated. Therefore, population growth associated with approved and reasonably foreseeable development is within the population that was projected for 2025. Furthermore, the number of constructed projects in the Eastern Neighborhoods is well below what was has been approved for all Plan areas.

The Eastern Neighborhoods PEIR used the growth projections to analyze the physical environmental impacts associated with that growth for the following environmental impact topics: Land Use; Population, Housing, Business Activity, and Employment; Transportation; Noise; Air Quality; Parks, Recreation, and Open Space; Utilities/Public Services; and Water. The analysis took into account the overall growth in the Eastern Neighborhoods and did not necessarily analyze in isolation the impacts of growth in one land use category, although each land use category may have differing severities of effects. The analysis of environmental topics covered in this checklist takes into account the differing severities of effects of the residential and employee population.

In summary, projects proposed in the Plan areas have not exceeded the overall population growth that was projected in the Eastern Neighborhoods PEIR; therefore, foreseeable growth in the Plan areas does not present substantial new information that was not known at the time of the PEIR, and would not result in new significant environmental impacts or substantially more severe adverse impacts than discussed in the PEIR.

The specific approach to the cumulative analysis is discussed in each environmental topic of this chapter. Cumulative projects known to the Planning Department that are in the immediate vicinity of the Proposed Project site that could combine with the Proposed Project to create a cumulatively considerable impact are listed in Table 4.A-1 below. These projects are reasonably foreseeable future projects in the vicinity of the Proposed Project that could cause wind, shadow, or geology and soils impacts that could combine with the impacts caused by the Proposed Project.

[5] These estimates include projects that have completed environmental review, and foreseeable projects (including the proposed project). Foreseeable projects are those projects for which environmental evaluation applications have been submitted to the San Francisco Planning Department.

[6] An issued building permit refers to buildings currently under construction or open for occupancy.

Table 4.A-1
List of Relevant Projects in the Cumulative Setting[7]

Project	Project Description
490 South Van Ness Avenue	Seven-story mixed use building up to 68 feet in height (with elevator penthouse, up to 77 feet), having a total of approximately 90,947 gsf; up to 72 dwelling units and 655 gsf of commercial/retail.
1450 15th Street	Five-story residential building up to 50 feet in height, having a total of 24,000 gsf, with 23 dwelling units.
1801 and 1863 Mission Street	Two new residential buildings in existing parking lots. Site 1: 17 dwelling units, 7 parking spaces, and 1,110 gsf of commercial/retail use in a seven-story, 68-foot-tall building; Site 2: 37 residential units, 17 parking spaces, and 22,610 gsf commercial/ retail use in a building that would be four stories and 38 feet tall along Minna Street and seven stories and 65 feet tall along Mission Street.
1900 Mission Street	Six-story mixed use building up to 68 feet in height, having a total of 13,387 gsf; 11 dwelling units, and 837 gsf of retail on the ground floor and mezzanine level.
49 Julian Avenue and 1850 Mission Street	Five-story residential building up to 50 feet in height, having a total of 10,583 gsf and eight dwelling units.
80 Julian Avenue	Four-story commercial building up to 44 feet in height, having a total of 16,000 gsf.
2100 Mission Street	Six-story over basement mixed use building up to 65 feet in height, having 29 dwelling units, 3,000 gsf of ground floor commercial space, and 14 parking spaces.
3249 17th Street	Four-story mixed use building up to 50 feet in height, having a total of 6,341 gsf; three dwelling units, and a 1,996 gsf ground floor restaurant.
600 South Van Ness Avenue	Five-story mixed use building up to 58 feet in height, having a total of 32,000 gsf, 27 dwelling units, and 2,540 gsf of ground floor retail.

Sources:

San Francisco Planning Department, 2014. Neighborhood Notice of Project Receiving Environmental Review 1900 Mission Street, Case No. 2013.1330E. February 11.

San Francisco Planning Department, 2015. CPE for 600 South Van Ness Avenue, Case No. 2013.0614U. April 9.

San Francisco Planning Department, 2014. CPE for 490 South Van Ness, Case No. 2010.0043E. June 6.

San Francisco Planning Department, 2015. Neighborhood Notice of Project Receiving Environmental Review 2100 Mission Street. Case No. 2009.0880E. June.

San Francisco Planning Department, 2010. Categorical Exclusion for 49 Julian Avenue and 1850 Mission Street. Case No. 2005.0233E. January 13.

San Francisco Planning Department, 2014. CPE for 1450 15th Street. Case No. 2013.0124E. August 20.

San Francisco Planning Department, 2015. CPE for 1801 and 1863 Mission Street. Case No. 2009.1011E. March 19.

San Francisco Planning Department, 2010. CPE for 80 Julian Avenue. Case No. 2009.1095E. June 23.

San Francisco Planning Department, 2013. Discretionary Review Action DRA-0321 3249 17th Street. Case No. 2005.1155E. May 22.

Note:

gsf = gross square feet

[7] As of February 24, 2016, an environmental evaluation application has been filed with the Planning Department for a proposal at 1950 Mission Street, Case No. 2016-001514ENV. This project has not been included in the cumulative analysis for this project, because baseline conditions for the cumulative analysis were set at the time the Notice of Preparation was issued for the proposed project on January 28, 2015.

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B. Wind and Shadow

Wind

1. Introduction

This section describes existing wind conditions in the vicinity of the project site, and evaluates the potential for the Proposed Project to alter wind in the project area in a manner that would affect public areas. Preliminary wind analysis found that the original massing for the Proposed Project would cause a hazardous wind impact. Therefore, the Proposed Project design was modified subsequent to publication of the CPE Checklist to eliminate the hazardous wind impact. The modification consisted of including a chamfered corner above the third floor at the southwestern corner of the Mission Street residential component. The analysis in this section is based on a wind study prepared by Rowan Williams Davies & Irwin Inc. (RWDI) for the Proposed Project design, as modified as described above.[1] Potential impacts are discussed and evaluated, and appropriate mitigation measures are identified where necessary. The impacts discussion also considers whether the Proposed Project, in combination with other reasonably foreseeable development projects, would contribute to cumulative environmental impacts related to wind.

2. Environmental Setting

In general, winds in San Francisco originate on the Pacific Ocean and blow through the City in an easterly direction. Average wind speeds in San Francisco are highest in the summer and lowest in winter, with the strongest peak winds occurring in winter. Throughout the year, the highest wind speeds occur in mid-afternoon, and the lowest in the early morning. Winds from the northwest, west-northwest, west, and west-southwest have the greatest frequency of occurrence, and make up the majority of the strong winds.

The exposure, massing, and orientation of a building can affect nearby ground level wind accelerations. Exposure is a measure of the degree to which a building extends above surrounding structures into the wind stream. A building surrounded by taller structures is unlikely to cause adverse wind accelerations at the ground level, while even a small building can cause wind acceleration if it is freestanding and exposed. Groups of structures tend to slow the winds near ground level due to the friction and drag of the structures. Buildings that are much taller than their surrounding buildings intercept and redirect winds down the vertical face of the building, where they create ground level wind and turbulence. These redirected winds can be relatively strong and also relatively turbulent, and can be incompatible with the intended use of nearby ground level spaces, depending on the level and type of pedestrian use.

Massing affects how much wind a building intercepts and whether wind accelerations would occur at ground level. Generally, slab shaped buildings oriented perpendicular to or with a wide axis perpendicular to the prevailing wind direction would have the greatest potential for wind acceleration. Buildings with setbacks or geometrically complex buildings are expected to generate less ground level wind acceleration. Building orientation also affects the amount of wind a structure intercepts and the corresponding extent of wind acceleration.

[1] RWDI (Rowan Williams Davies & Irwin Inc.), 2015. Pedestrian Wind Study, 1979 Mission Street. Prepared for Maximus Real Estate Partners. June 29.

The comfort of pedestrians varies under different conditions of sun exposure, temperature, and wind speed. Winds up to 4 miles per hour (mph) have no noticeable effect on pedestrian comfort. With velocities between 4 and 8 mph, wind is felt on the face. Winds between 8 and 13 mph will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. Winds between 13 and 19 mph will raise loose paper, dust, and dry soil, and will disarrange hair. Winds between 19 and 26 mph will cause the force of the wind to be felt on the body. At 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.

Existing wind speeds on the project site are generally acceptable, with wind speeds ranging from 7 to 18 mph and averaging 12 mph at grade level, as further discussed under Section 4.B.4.b, below.[2] The windiest location tested is the northeastern corner of the 16th and Capp Streets intersection.

3. Regulatory Framework

This subsection describes the applicable local laws and regulations that pertain to the identification and regulation of impacts related to wind. No federal or state regulations apply to the Proposed Project.

a. Local

San Francisco Planning Code (Planning Code) Section 148 outlines wind speed criteria for certain zoning districts: the Downtown (C-3) Districts, 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 South of Market neighborhood.[2]

The project site, located in the Mission Street Neighborhood Commercial Transit Zoning District, is not subject to Section 148. In addition, the comfort criteria do not apply to the Project for the purpose of analysis under CEQA. However, an analysis of the comfort criteria wind speeds defined in Section 148 is provided for the Proposed Project for informational purposes.

Planning Code 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 determine comfort wind speeds. The pedestrian comfort wind speed criteria are 7 mph for seating areas and 11 mph for areas of substantial pedestrian use. At 7 mph, wind is felt on the face. At 11 mph, winds will disturb hair, cause clothing to flap, and extend a light flag mounted on a pole. A hazardous wind condition is when the wind speed exceeds 26 mph for a single hour of the year and is the threshold for making a finding of significance with respect to wind impacts that would result from the Proposed Project under CEQA.

4. Impacts and Mitigation

a. Significance Thresholds

The thresholds for determining the significance of impacts in this analysis are consistent with the Planning Department's Initial Study checklist. For the purpose of this analysis, the applicable threshold used to determine whether the Project would result in a significant wind impact is whether the Proposed Project would alter the wind in a manner that substantially affects public areas.

[2] Ibid.

b. Approach to Analysis

Analysis of the comfort criteria wind speeds does not apply to projects under CEQA, and the Proposed Project is not subject to Planning Code Section 148. Analysis of the comfort criteria is presented for the Proposed Project for informational purposes only. However, the City uses the hazard criterion defined in Section 148 to determine significant wind impacts, and a new exceedance of the hazard criterion is considered a significant impact under CEQA.

Wind impacts are directly related to building design and articulation and the surrounding site conditions. The Eastern Neighborhoods PEIR determined that the area plans would not result in a significant wind impact because the proposed rezoning and community plans would not allow for structures tall enough to create significant impacts. For projects that are found, on initial examination, to result in potentially significant impacts on ground level winds, design modifications could typically be made to reduce these impacts to a less than significant level. The Planning Department, in its review of specific future projects, will continue to require analysis of wind impacts where deemed necessary, to ensure that project-level wind impacts would be reduced to a less than significant level.

Wind tunnel testing was conducted for the Proposed Project as part of the wind study prepared by RWDI. The wind tunnel test employed a 1:400 (1 inch = 33 feet) scale model that included the project site and relevant surrounding buildings, and topography within a 1,125 foot radius of the study site. The model was instrumented with 50 wind speed sensors at the locations shown on Figure 4.B-1 to measure mean and gust wind speeds at a full scale height of approximately 5 feet above local grade. The mean speed profile and turbulence of the natural wind approaching the modeled area were simulated in RWDI's boundary layer wind tunnel, and the 50 sensor locations were analyzed for both the comfort criteria and the hazard criteria under the following three scenarios:

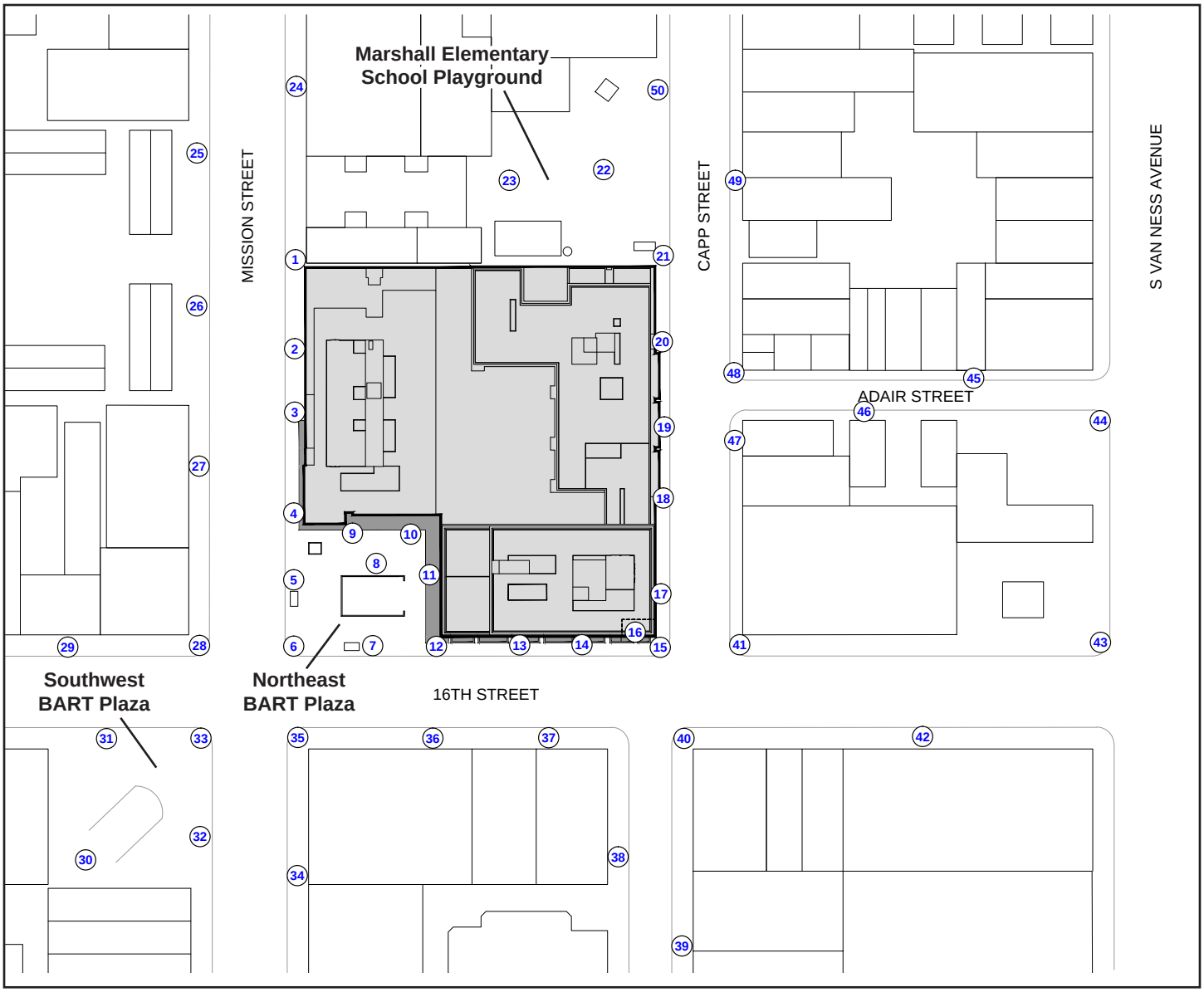
Existing conditions: Existing buildings on site and in the surroundings, including buildings already under construction;

Existing plus Project: The Proposed Project, as well as the surrounding existing buildings, buildings under construction, and approved projects; and

Project plus cumulative: The existing plus Proposed Project as defined above, and proposed projects pending before the City in the immediate project vicinity and listed in Table 4.A-1.

Two of these measurement locations on the project site (locations 11 and 16) were covered by the existing building in the existing conditions. Both of these locations would be accessible to pedestrians under the Existing plus Project condition, and have been presented for the Project plus cumulative condition (see Figure 4.B-1). Consistent with the City's pedestrian wind tunnel testing methodology, all measurements for locations shown on Figure 4B-1 were recorded and analyzed for the west-southwest, west, west-northwest, and northwest wind directions.

The comfort criteria are based on average wind speeds that are measured for 1 minute intervals. The hazard criterion is 26 mph, and is based on winds that are measured for 1 hour and averaged for a single full hour of the year. For consistency between the comfort level and hazardous wind criteria, the hazard criterion speed test result in the wind tunnel report for the Proposed Project in Table 4.B-2 is presented as a 1 minute average, which is equivalent to 36 mph.



Source: RWDI, 2015.

Project Site

36 Grade Level Sensor Location

0 50 100 FEET

LOCATION OF WIND GROUND-LEVEL TEST POINTS

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-1

c. Impact Evaluation

This section analyzes the Proposed Project's wind impacts.

Impact WS-1: The Proposed Project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site. *(Less than Significant)*

As described below, implementation of the Proposed Project would slightly alter wind patterns in the vicinity of the project site, but not in a way that would substantially diminish the use of public areas.

As noted above under Section 4.B.3.a, the analysis of the comfort criteria wind speeds for the Proposed Project is provided for informational purposes only. The wind tunnel test results for wind comfort conditions at the 50 sensor locations shown on Figure 4.B-1 are summarized in Table 4.B-1. In the vicinity of the project site, wind conditions are generally acceptable under existing conditions, with wind speeds averaging 12 mph for all measurement locations at grade level. Winds at 28 of the 50 locations currently exceed the 11 mph pedestrian comfort criterion established by Planning Code Section 148.

Under the existing plus Project condition, the Mission Street and 16th Street residential components would shelter areas to the east of the site from the prevailing westerly winds. Overall wind comfort conditions and wind speeds would continue to average 12 mph, similar to those under the existing conditions. The number of locations where wind speeds would exceed the 11 mph criterion would decrease from the existing 28 locations to 22 locations under existing plus Project conditions (see Table 4.B-1). Therefore, the Proposed Project would slightly improve wind comfort in the vicinity of the Project site in comparison to existing conditions.

Wind Hazard Analysis

The wind tunnel test results for wind hazard conditions at the 50 sensor locations are summarized in Table 4.B-2. Table 4.B-2 indicates that the wind speed at each sensor location exceeded 1 hour per year. Under the existing conditions, this averages 23 mph, which is below the hazard criterion of 36 mph. Under existing conditions, the only exceedance of the hazard criterion is at the northeastern corner of 16th and Capp Streets (location 41), where wind speeds would reach 38 mph for 2 hours per year.

Under the existing plus Project conditions, the hazardous wind condition at location 41 would be eliminated, and no other locations would exceed the hazard criterion. Winds would continue to average 23 mph under the existing plus Project conditions. Therefore, the Proposed Project would not result in significant impacts related to the wind hazard criterion, and the wind impacts would result in a less than significant impact related to winds. No mitigation measures are necessary.

d. Cumulative Impacts

Impact C-WS-1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects, would not alter wind in a manner that substantially affects public areas in the vicinity of the project site. *(Less than Significant)*

The geographic scope for cumulative wind impacts includes the area within an approximately two-block radius of the project site, because these buildings could affect the wind conditions in the project vicinity.

Other reasonably foreseeable development projects in the immediate project vicinity are listed in Table 4.A-1 and were included in the Project plus cumulative conditions analyzed in the wind tunnel test for both wind comfort and wind hazard criteria at the 50 sensor locations.

Table 4.B-1
Wind Comfort Results

Location Number	Existing			Existing Plus Project				Existing Plus Cumulative			
	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing (mph)	Exceeds
1	13	21	E	13	20	0	E	13	19	0	E
2	12	17	E	11	7	-2		11	10	-2	
3	15	25	E	11	10	-3		13	18	-2	E
4	16	29	E	18	38	2	E	16	31	1	E
5	13	20	E	18	37	5	E	17	34	4	E
6	13	19	E	16	28	3	E	15	26	2	E
7	11	10		16	28	5	E	15	27	5	E
8	10	6		11	10	1		11	10	1	
9	10	7		8	2	-2		7	0	-3	
10	11	10		11	10	-1		10	6	-1	
11*	n/a	n/a	n/a	14	20	n/a	E	14	21	n/a	E
12	15	26	E	19	42	4	E	20	45	5	E
13	12	15	E	11	10	-1		10	8	-2	
14	10	5		9	24	-1		8	2	-1	
15	10	7		9	04	-1		9	2	-2	
16*	n/a	n/a	n/a	5	0	n/a		5	0	n/a	
17	11	10		7	1	-4		7	1	-3	
18	10	7		8	2	-2		10	5	-1	
19	12	14	E	9	3	-3		9	2	-3	
20	12	12	E	9	4	-2		9	2	-3	
21	13	19	E	14	24	1	E	13	18	0	E
22	9	4		9	4	0		9	2	-1	
23	7	1		6	0	-1		6	0	-1	
24	15	27	E	15	27	0	E	15	24	0	E
25	10	6		13	19	3	E	14	20	4	E
26	9	3		14	23	5	E	14	21	5	E
27	8	2		13	19	5	E	12	16	4	E
28	11	10		12	12	0	E	11	10	0	
29	12	14	E	11	10	-1		11	10	-1	

Table 4.B-1
Wind Comfort Results (Continued)

Location Number	Existing			Existing Plus Project				Existing Plus Cumulative			
	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing (mph)	Exceeds	Wind Speed Exceeded 10% of Time (mph)	Percent of Time Wind Speed Exceeds 11 mph	Speed Change Relative to Existing (mph)	Exceeds
30	8	1		8	1	0		8	1	0	
31	13	21	E	13	20	0	E	13	19	-1	E
32	11	10		12	13	1	E	11	10	1	
33	11	10		11	10	0		11	10	0	
34	12	17	E	12	16	0	E	12	16	0	E
35	18	39	E	17	37	0	E	17	34	-1	E
36	11	10		13	20	2	E	13	20	2	E
37	14	23	E	18	38	4	E	18	39	5	E
38	11	10		9	5	-2		9	4	-2	
39	13	19	E	9	6	-4		11	10	-2	
40	12	13	E	12	12	0	E	13	17	1	E
41	17	34	E	10	5	-8		10	5	-8	
42	12	14	E	10	8	-1		11	10	-1	
43	14	21	E	11	10	-3		11	10	-3	
44	13	19	E	10	7	-2		14	20	1	E
45	13	20	E	11	10	-2		11	10	-2	
46	13	21	E	8	3	-5		7	1	-6	
47	12	13	E	9	4	-3		8	2	-4	
48	15	29	E	15	28	0	E	14	24	-1	E
49	12	15	E	13	17	1	E	13	16	1	E
50	11	10		10	7	0		10	5	-1	
Average mph, Average %, and Total Exceedances	12	15	28	12	14	0	22	12	14	0	22

Notes:

* Locations 11 and 16 are currently covered by the existing building on the project site.

mph = miles per hour
E= exceeds

Source: RWDI (Rowan Williams Davies & Irwin Inc.), 2015. Pedestrian Wind Study, 1979 Mission Street. Prepared for Maximus Real Estate Partners. June 29.

Table 4.B-2
Wind Hazard Results

Location Number	Existing			Existing Plus Project				Existing Plus Cumulative			
	Wind Speed Exceeded 1 hour/ year (mph)	Hours Per Year Wind Speeds Exceed Hazard Criteria	Exceeds	Wind Speed Exceeded 1 hour/ year (mph)	Hours Per Year Wind Speeds Exceed Hazard Criteria	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hour/ year (mph)	Hours Per Year Wind Speeds Exceed Hazard Criteria	Hours Change Relative to Existing	Exceeds
1	23	0		25	0	0		24	0	0	
2	23	0		19	0	0		19	0	0	
3	27	0		21	0	0		23	0	0	
4	31	0		35	0	0		32	0	0	
5	27	0		36	0	0		34	0	0	
6	23	0		32	0	0		29	0	0	
7	21	0		35	0	0		35	0	0	
8	20	0		19	0	0		19	0	0	
9	19	0		16	0	0		13	0	0	
10	23	0		22	0	0		19	0	0	
11*	n/a	n/a	n/a	28	0	n/a		27	0	n/a	
12	28	0		35	0	0		36	0	0	
13	21	0		24	0	0		22	0	0	
14	19	0		17	0	0		17	0	0	
15	21	0		20	0	0		18	0	0	
16*	n/a	n/a	n/a	12	0	n/a		12	0	n/a	
17	21	0		14	0	0		15	0	0	
18	21	0		15	0	0		18	0	0	
19	23	0		16	0	0		16	0	0	
20	22	0		16	0	0		15	0	0	
21	23	0		27	0	0		25	0	0	
22	18	0		17	0	0		15	0	0	
23	13	0		11	0	0		11	0	0	
24	26	0		28	0	0		26	0	0	
25	18	0		24	0	0		25	0	0	
26	17	0		28	0	0		25	0	0	
27	16	0		27	0	0		24	0	0	
28	21	0		25	0	0		22	0	0	
29	21	0		20	0	0		19	0	0	

Table 4.B-2
Wind Hazard Results (Continued)

Location Number	Existing			Existing Plus Project				Existing Plus Cumulative			
	Wind Speed Exceeded 1 hour/ year (mph)	Hours Per Year Wind Speeds Exceed Hazard Criteria	Exceeds	Wind Speed Exceeded 1 hour/ year (mph)	Hours Per Year Wind Speeds Exceed Hazard Criteria	Hours Change Relative to Existing	Exceeds	Wind Speed Exceeded 1 hour/ year (mph)	Hours Per Year Wind Speeds Exceed Hazard Criteria	Hours Change Relative to Existing	Exceeds
30	14	0		14	0	0		14	0	0	
31	24	0		23	0	0		23	0	0	
32	20	0		22	0	0		21	0	0	
33	20	0		20	0	0		20	0	0	
34	22	0		21	0	0		21	0	0	
35	31	0		30	0	0		28	0	0	
36	18	0		24	0	0		25	0	0	
37	25	0		36	0	0		35	0	0	
38	21	0		19	0	0		19	0	0	
39	23	0		21	0	0		25	0	0	
40	22	0		26	0	0		27	0	0	
41	38	2	E	19	0	-2		19	0	-2	
42	20	0		22	0	0		22	0	0	
43	28	0		21	0	0		21	0	0	
44	23	0		20	0	0		32	0	0	
45	24	0		22	0	0		22	0	0	
46	24	0		17	0	0		16	0	0	
47	24	0		18	0	0		17	0	0	
48	29	0		29	0	0		26	0	0	
49	25	0		25	0	0		25	0	0	
50	21	0		20	0	0		18	0	0	
Average mph, Total Hours, and Total Exceedances	23	2	1	23	0	-2	0	22	0	-2	0

Notes:

* Locations 11 and 16 are currently covered by the existing building on the project site.

mph = miles per hour
E= exceeds

Source: RWDI (Rowan Williams Davies & Irwin Inc.), 2015. Pedestrian Wind Study, 1979 Mission Street. Prepared for Maximus Real Estate Partners. June 29.

For wind comfort conditions, as shown in Table 4.B-1, average wind speeds would remain at 12 mph under the Project plus cumulative conditions, which is similar to existing and existing plus Project conditions. Wind speeds at 22 of the 50 sensor locations are shown to exceed the comfort criterion under the Project plus cumulative conditions, similar to the existing plus Project condition. For wind hazard conditions, Table 4.B-2 shows the average wind speed to be 22 mph under the Project plus cumulative conditions, which is similar to existing and existing plus Project conditions. As is the case under the Existing plus Proposed Project conditions, the existing hazardous wind condition at sensor location number 41, located at the northeastern corner of 16th and Capp Streets, would be eliminated under Cumulative plus Proposed Project conditions. The wind speed test results at all locations under the Project plus cumulative condition would be below the hazard criterion. Therefore, the Proposed Project, combined with other foreseeable development in the immediate vicinity, would result in less than significant cumulative wind impacts. No mitigation measures are necessary.

Shadow

5. Introduction

This section describes the existing shadow conditions at the project site and its vicinity, and evaluates the potential for the Proposed Project to have shadow impacts on the surrounding outdoor recreation facilities and other public open spaces. The analysis in this section is based on the shadow study prepared for the Proposed Project by CADP.[3] Potential impacts are discussed and evaluated, and appropriate mitigation measures are identified where necessary. The impact discussion also considers whether the Proposed Project, in combination with other reasonably foreseeable development projects, would contribute to cumulative impacts related to shadow.

6. Environmental Setting

Shadow conditions are described with reference to the Theoretical Available Annual Sunlight (TAAS), which is the amount of sunlight that would be available in a park or open space in the course of a year if there were no shadows from structures, trees, or other objects. TAAS is calculated in square foot hours (sfh), which is the expression of shadow, based on 15-minute sample times over the course of an hour, by multiplying the area in square feet of the park/open space by 3,721.4 (the maximum number of hours of sunlight available on an annual basis in San Francisco). Existing and new shadows cast by the Proposed Project are measured by the annual amount of shadow, expressed in sfh as a percent of TAAS.

There are several outdoor recreation facilities and other public open spaces in the project site vicinity that are potentially within reach of the Proposed Project's shadow. These facilities and open spaces are: Marshall Elementary School, including the Playground and the outdoor learning area, which is a San Francisco Unified School District (SFUSD) property; and the Northeast and Southwest 16th Street Mission BART Plazas (Northeast and Southwest BART Plazas, respectively), which are BART properties (see Figure 4.B-2).

None of the outdoor recreation facilities or other public open spaces in the project vicinity that are potentially within reach of the Proposed Project's shadow are under the jurisdiction of the San Francisco Recreation and Park Commission.

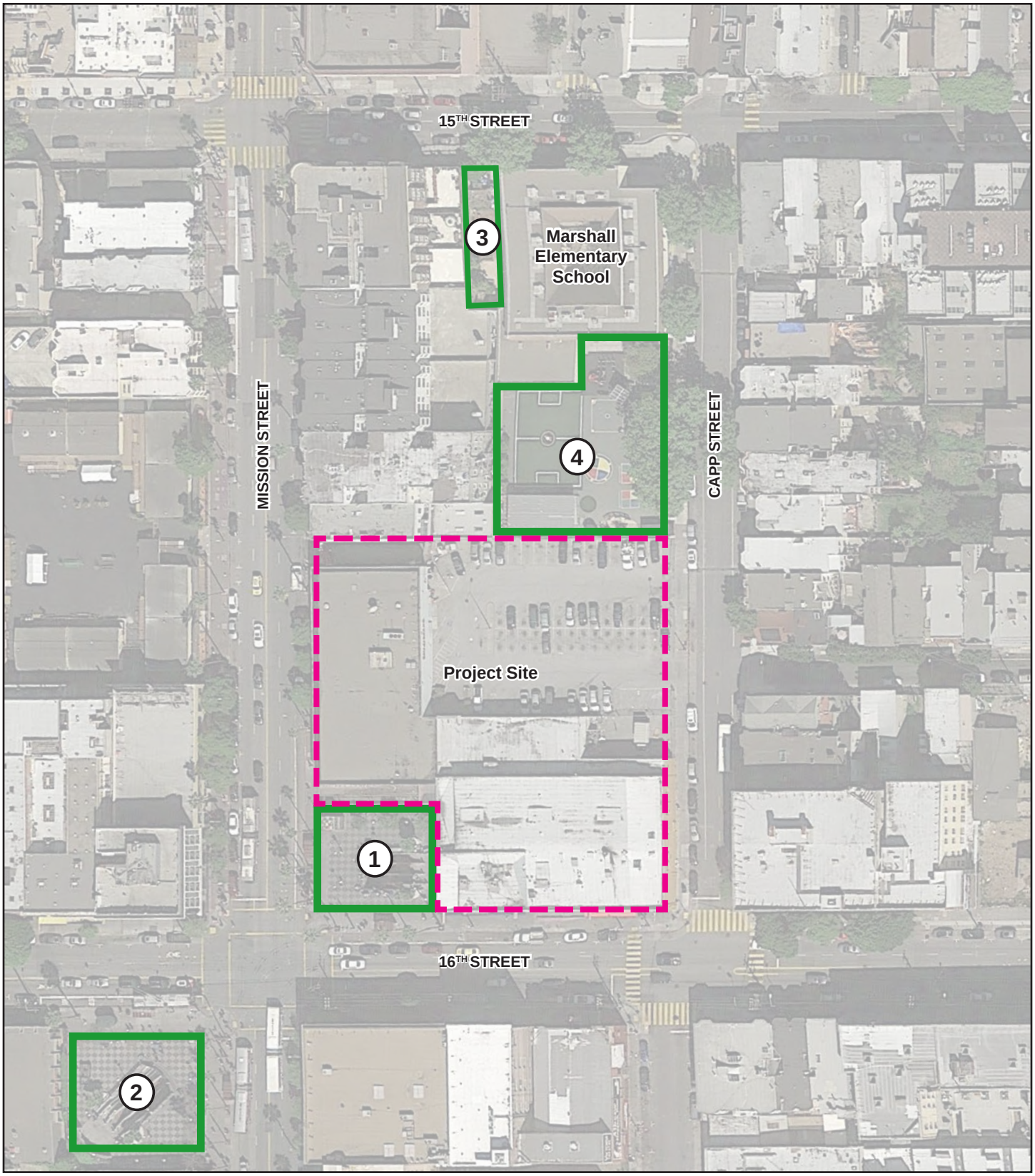
Schools are not clearly "public open space." However, because the school serves an open space function in a neighborhood with limited public play areas, an assessment of shadow on the playground was considered an impact on the environment for the purposes of this EIR.

a. Marshall Elementary School

Marshall Elementary School is located on the corner of 15th and Capp Streets adjacent to the project site. Marshall Elementary School is part of the SFUSD, with kindergarten through 5th grade students, and also provides a Spanish/English Two Way Immersion Program. Total enrollment for school year 2013/2014 was 256 students.[4] The annual school year is typically from mid-August through mid-June. The school facilities, including the Playground, are used on Monday through Friday from 8:15 a.m. through 6:00 p.m.

[3] CADP, 2015. 1979 Mission Street Shadow Analysis. Prepared for Maximus Real Estate Partners. November.

[4] San Francisco Unified School District, 2015. School Accountability Report Card, School Year 2013-2014. Marshall Elementary School. Available online at: http://www.sfusd.edu/en/schools/school-information/marshall.html. Accessed November 1, 2015.



Project Site

1 Northeast BART Plaza

2 Southwest BART Plaza

3 Marshall Elementary School Outdoor Learning Area

4 Marshall Elementary School Playground

0 50 100 FEET

OUTDOOR RECREATION FACILITIES AND PUBLIC AREAS WITHIN REACH OF THE PROPOSED PROJECT'S SHADOW

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-2

The school day ends at 2:40 p.m., and the After School Program begins at 2:40 p.m. and ends at 6:00 p.m.[5] The Playground is used for recess and lunch times between 10:15 a.m. and 1:00 p.m., and for physical education classes during the rest of the time.

In past years, a Summer Program was held at the school during the summer break, which included activities in the Marshall Elementary School Playground (Playground) from 8:15 a.m. to 3:15 p.m. SFUSD has consolidated the number of school sites at which the Summer Program is offered, and there currently is no summer program at Marshall Elementary School.[6]

The Playground, located on the southern portion of the school site along Capp Street between the Marshall Elementary School building and the project site (designated as #4 on Figure 4.B-2), is approximately 14,676 square feet in size and relatively flat. The Playground consists of a paved play area with a designated kickball diamond, foursquare game area, basketball hoop, jungle gym, and a turf field. A temporary trailer used as a library is situated at the southwestern corner of the Playground (see Figure 4.B-3).[7]

An approximately 2,577 square foot outdoor learning area that provides a garden and classroom space is west of the main school building (designated as #3 on Figure 4.B-2) and is typically in use from 9:00 a.m. through 5:00 p.m., Monday through Friday.[8]

Marshall Elementary School Playground – Existing Shadows

The TAAS for the Playground is approximately 54,615,706 sfh, which is the amount of sunlight that would be available on the Playground in the course of a year if there were no shadows from existing structures, trees, or other objects. Existing buildings around the Playground, including the two buildings at the project site, shade the Playground approximately 22 percent of the time with an existing shadow load of approximately 12,061,131 sfh. The existing shadow is caused primarily by the existing one to four story buildings to the east across Capp Street, and the existing two to three story buildings west of the Playground.

During the winter, the Playground is completely shaded by existing buildings at 8:00 a.m. More than 80 percent of the Playground, including approximately 80 percent of the turf field, all of the athletic courts, and the jungle gym areas, is in sunlight between approximately 9:00 a.m. and 1:00 p.m. After 1:00 p.m., the Playground is covered by shadows from existing buildings to the west of the Playground and from the existing trailer at the southwestern corner of the Playground. Half of the Playground is shaded by 3:00 p.m., and is almost entirely shaded by 4:00 p.m. (see Figures 4.B-4 and 4.B-5, pages 4.B-22 and 4.B-23 in Section 4.B.8.c, Impact Evaluation).[9] As the season transitions from winter to summer, the Playground experiences less shadow from existing buildings throughout the day.

During the summer, the Playground is largely shaded at 6:00 a.m., is more than 90 percent sunny by 8:00 a.m., and remains sunny until approximately 4:00 p.m. (see Figures 4.B-6 and 4.B-7, pages 4.B-25 and 4.B-26 in Section 4.B.8.c, Impact Evaluation). Between 4:00 p.m. and 6:00 p.m., the shadows from existing buildings to

[5] Avila, Peter, 2014. Telephone record of communication between Debra Dwyer, Planning Department staff, and Peter Avila, Principal, Marshall Elementary School. November 20.

[6] Ibid.

[7] Avila, Peter, 2014. Telephone record of communication between Debra Dwyer, Planning Department staff, and Peter Avila, Principal, Marshall Elementary School. November 20.

[8] Ibid.

[9] Figures in this section of the EIR show shadows at 9:00 a.m., 11:00 a.m., 1:00 p.m., and 3:00 p.m., which generally covers the range of times corresponding with peak day use of the outdoor facilities and open space. For a complete set of figures and hours analyzed, please refer to the shadow study prepared for the Project:
CADP, 2015. 1979 Mission Street Shadow Analysis. Prepared for Maximus Real Estate Partners. November.

the west and from the temporary trailer on the Playground begin to shade the Playground. By 7:00 p.m., the Playground is predominantly shaded. As the season transitions from summer to autumn, the Playground experiences more morning shadow from the existing buildings to the east, and from 2:00 p.m. until sunset, the shadow on the Playground increases in size from the existing buildings to the west.

During the autumn and spring, the Playground is mostly shaded at 8:00 a.m. It becomes largely sunny by approximately 9:00 a.m. The Playground remains sunny until approximately 3:00 p.m., when the shadows from the existing buildings to the west and from the temporary trailer on the Playground start to shade the Playground (see Figures 4.B-8 and 4.B-9, pages 4.B-27 and 4.B-28 in Section 4.B.8.c, Impact Evaluation). By 6:00 p.m., the Playground is almost entirely shaded by the existing buildings to the west. As the season transitions from autumn to winter, the shadows from existing buildings shade an increasingly larger area of the Playground throughout the day.

Marshall Elementary School Outdoor Learning Area – Existing Shadows

The Marshall Elementary School Outdoor Learning Area provides a garden and classroom space, and is typically in use from 9:00 a.m. through 5:00 p.m., 5 days per week (Monday through Friday).[10] The TAAS for the Marshall Elementary School outdoor learning area is approximately 9,592,307 sfh, which is the amount of sunlight that would be available on the outdoor learning area in the course of a year if there were no shadows from existing structures, trees, or other facilities. Under existing conditions, the outdoor learning area is shaded approximately 63 percent of the time, and has an existing shadow load of approximately 6,022,990 sfh. The existing shadow on the outdoor learning area is caused by the school building, as well as the existing four to five story buildings to the west of the outdoor learning area.

During the winter, the outdoor learning area is completely shaded until after 10:00 a.m. It becomes completely sunny by 11:00 a.m., and remains so until after 1:00 p.m., when the existing buildings to the west begin to cast a shadow on the outdoor learning area. The area is completely shaded by 2:00 p.m. (see Figures 4.B-4 and 4.B-5, pages 4.B-22 and 4.B-23 in Section 4.B.8.c, Impact Evaluation). As the season transitions from winter to summer, the outdoor learning area experiences decreasing amounts of shadow from existing buildings throughout the day.

During the summer, the outdoor learning area is completely shaded until 10:00 a.m. The shadow recedes, and the outdoor learning area is largely sunny by 11:00 a.m. After 3:00 p.m., the existing buildings to the west start to cast a shadow on the outdoor learning area (see Figures 4.B-6 and 4.B-7, pages 4.B-25 and 4.B-26 in Section 4.B.8.c, Impact Evaluation). By 5:00 p.m., the outdoor learning area is fully in the shade. As the season transitions from summer to autumn, the outdoor learning area experiences increasing morning shadow due to the existing school building.

During autumn and spring, the outdoor learning area is completely shaded in the morning until after 10:00 a.m., when the shadow begins to recede. By 12:00 p.m., the outdoor learning area is almost entirely sunny. The existing buildings to the west start to cast a shadow on the outdoor learning area around 3:00 p.m. and the outdoor learning area is fully shadowed by 4:00 p.m. (see Figures 4.B-8 and 4.B-9, pages 4.B-27 and 4.B-28 in Section 4.B.8.c, Impact Evaluation). As the season transitions from autumn to winter, the outdoor learning area becomes sunny slightly earlier in the morning, although it also becomes shaded earlier in the afternoon.

[10] Avila, Peter, 2014. Telephone record of communication between Debra Dwyer, Planning Department staff, and Peter Avila, Principal, Marshall Elementary School. November 20.

b. 16th Street Mission BART Station Plazas

The project site forms the northern and eastern boundaries of the street level plaza of and northeastern entrance to the 16th Street Mission BART Station (see Figure 4.B-2), which is one of two BART stations in the Mission neighborhood and has an average weekday ridership of about 12,989 persons.[11] The two plazas of the 16th Street Mission BART Station, set diagonally opposite each other at the intersection of 16th and Mission Streets, provide access to the BART station. The plazas also serve as passive open space for the community.

The Northeast BART Plaza (designated as #1 on Figure 4.B-2) is approximately 5,821 square feet in size, and the Southwest BART Plaza (designated as #2 on Figure 4.B-2) is approximately 8,678 square feet in size. The plazas were renovated in 2006 and 2003, respectively, and incorporate artwork into both the functional elements (such as fencing) and the sculptural elements (such as work atop the elevator). Both plazas also include seats and benches, trash collection receptacles, and palm and magnolia trees.

The Northeast BART Plaza is bordered by single story commercial uses on the project site to the north and east, 16th Street to the south, and Mission Street to the west. The escalators and stairs in the southeastern portion of the plaza and a BART elevator in the northwestern portion of the plaza provide access to the BART trains. Bus stops are adjacent to the plaza on both Mission and 16th Streets. There are seats and benches to the west and south of the BART escalator railing, and trees along areas of the periphery of the plaza.

The Southwest BART Plaza is bordered by single story commercial uses to the south, with two and three story buildings beyond, buildings ranging from one to four stories to the west, 16th Street to the north, and Mission Street to the east. The plaza provides access to the BART station escalators and stairs in the southwestern portion of the plaza, and there is a public restroom near the northwestern corner of the plaza along the sidewalk. There are bus stops adjacent to the plaza on Mission and 16th Streets. There are seats and benches along the northern and eastern periphery of the plaza, with the steps around the BART escalator railing used as additional seating. Several trees are located along the periphery of the plaza.

There are two bus stops along each of the BART Plazas. At each plaza, there is a stop along 16th Street and a stop along Mission Street. The 16th Street bus stops serve the 22 Fillmore, the 55 16th Street, and the 33 Stanyan bus routes. The Mission Street bus stops serve the 14 Mission, the 14R Mission Rapid (formerly the 14L Mission Limited), and the 49 Van Ness-Mission bus routes. For the 33 Stanyan route, the inbound stop is on Mission Street adjacent to the Southwest BART Plaza, but the outbound stop is on 16th Street, across the street from the Northeast BART Plaza.

The Planning Department surveyed the use of the BART Plazas as part of the Mission Public Life Plan.[12] The surveys assessed how people use the public open space in each plaza, as well as at the bus stop on 16th Street and the bus stop on Mission Street. Based on the survey, the majority of the use of the BART Plazas occurs in the open plaza areas, rather than at the bus stops. During weekdays, the plazas are used mostly during the late morning/early afternoon (11:00 a.m. through 2:00 p.m.), then in late afternoon (4:00 p.m. through 5:00 p.m.). During weekends, the use of the Northeast BART Plaza generally increases throughout the afternoon, and peaks in the late afternoon (4:00 p.m. through 5:00 p.m.), while use of the

[11] BART (Bay Area Rapid Transit), 2015. BART Fiscal Year Weekday Average Exits By Station. Available online at: bart.gov/about/reports/ridership. Accessed October 22, 2015.

[12] The surveys were conducted as part of the Planning Department's community based planning effort to develop the Mission Public Life Plan. The Mission Public Life Plan looks at how Mission Street is used between its intersections with Van Ness Avenue and Randall Street, and explores ideas that can express the needs and identity of its users. More information regarding the Mission Public Life Plan can be found at the Planning Department web page for the plan, available online at: http://www.sf-planning.org/ftp/files/Citywide/mission_street_public_life_plan/Mission_PLP_final_web.pdf.

Southwest BART Plaza remains relatively constant throughout the day. The bus stops adjacent to the BART Plazas generally experience peak use during weekday morning hours (8:00 a.m. through 12:00 p.m.). The use of the Mission Street bus stops also increases during weekday late afternoons (4:00 p.m. through 5:00 p.m.). Peak use of bus stops on weekends is generally mid-day from 11:00 a.m. through 2:00 p.m., and also in the late afternoon (3:00 p.m. through 5:00 p.m.).[13]

Northeast BART Plaza – Existing Shadows

The TAAS for the Northeast BART Plaza is approximately 21,663,099 sfh, which is the amount of sunlight that would be available on the plaza in the course of a year if there were no shadows from existing structures, trees, or other objects. The Northeast BART Plaza is shaded approximately 24 percent of the time and has an existing shadow load of 5,229,783 sfh under existing conditions. The existing shadow on the Northeast BART Plaza is caused by the existing three to five story buildings to the south of the plaza, across 16th Street, and by the existing one story building east of the Northeast BART Plaza, on the project site.

In the winter, the Northeast BART Plaza is fully shaded until approximately 9:00 a.m. by the existing buildings to the south, across 16th Street, and the buildings at the corner of Capp and 16th Streets. After 9:00 a.m., the existing shadow begins to recede. The majority of the Northeast BART Plaza is in the sun by 11:00 a.m., and remains sunny until 4:00 p.m. By 4:00 p.m., shadows from the existing buildings across Mission Street to the southwest begin to shade the plaza (see Figures 4.B-4 and 4.B-5, pages 4.B-22 and 4.B-23 in Section 4.B.8.c, Impact Evaluation). As the season transitions from winter to summer, the Northeast BART Plaza experiences decreasing amounts of shadow from existing buildings throughout the day.

During the summer, the Northeast BART Plaza is fully shaded by existing buildings to the east of the project site at 7:00 a.m. The existing shadow decreases throughout the morning; the plaza becomes predominantly sunny by 10:00 a.m. and is entirely sunny by 1:00 p.m. Shadows from buildings across Mission Street to the west begin to shade the Northeast BART Plaza around 6:00 p.m., and most of the plaza is in shade by 8:00 p.m. (see Figures 4.B-6 and 4.B-7, pages 4.B-25 and 4.B-26 in Section 4.B.8.c, Impact Evaluation). As the season transitions from summer to autumn, the Northeast BART Plaza experiences more shadow from existing buildings throughout the day.

During the autumn and spring, the majority of the plaza is shaded by existing buildings on the project site at 8:00 a.m., and the shadow decreases throughout the morning. The majority of the plaza is in the sun by noon. Shadows from existing buildings to the west, across Mission Street, start to shade the plaza around 5:00 p.m. Most of the plaza is in the shade by 6:00 p.m. (see Figures 4.B-8 and 4.B-9, pages 4.B-27 and 4.B-28 in Section 4.B.8.c, Impact Evaluation). As the season transitions from autumn to winter, the Northeast BART Plaza experiences increasing amounts of shadow from existing buildings throughout the day.

Southwest BART Plaza – Existing Shadows

The TAAS for the Southwest BART Plaza is 32,295,798 sfh, which is the amount of sunlight that would be available on the plaza in the course of a year if there were no shadows from existing structures, trees, or other objects. Under existing conditions, the Southwest BART Plaza is shaded approximately 32 percent of the time, and has an existing shadow load of 10,330,082 sfh. The existing shadow on the Southwest BART Plaza is caused by the existing buildings east across Mission Street, and the buildings immediately to the south and west of the plaza.

[13] BART Plaza use data from Mission Public Life Survey. Microsoft Excel file. October 19, 2015. Provided in email from Debra Dwyer, Planning Department staff, to Julian Bobilev, AECOM.

During the winter, the entire plaza is shaded by existing buildings at 8:00 a.m. The existing shadow decreases throughout the morning until around 3:00 p.m., but the southern half of the plaza remains largely shaded by existing buildings to the south and west. After 3:00 p.m., the majority of the plaza is shaded again (see Figures 4.B-4 and 4.B-5 on pages 4.B-22 and 4.B-23, Section 4.B.8.c, Impact Evaluation). As the season transitions from winter to summer, the Southwest BART Plaza experiences decreasing amounts of shadow from existing buildings throughout the day.

During the summer, the Southwest BART Plaza is partially shaded by existing buildings to the east from 6:00 a.m. to approximately 9:00 a.m. The shadows decrease until the entire plaza is in the sun by 9:00 a.m. Minimal shadows from buildings to the west begin to shade the plaza around 3:00 p.m., and the shadow continues to increase throughout the afternoon. By 7:00 p.m., the majority of the western portion of the plaza is shaded, and it is almost entirely shaded by existing buildings by 8:00 p.m. (see Figures 4.B-6 and 4.B-7, pages 4.B-25 and 4.B-26 in Section 4.B.8.c, Impact Evaluation). As the season transitions from summer to autumn, the Southwest BART Plaza experiences increasing amounts of shadow from existing buildings throughout the day.

During the autumn and spring, the entire plaza is shaded by existing buildings at 8:00 a.m. The shadows decrease until 10:00 a.m., when the plaza is almost entirely sunny except for a small portion of the southern end of the plaza shaded by existing buildings to the south. Shadows from the buildings to the west start to shade the plaza around 2:00 p.m. The plaza is approximately half shaded by 5:00 p.m., and is fully shaded by 6:00 p.m. (see Figures 4.B-8 and 4.B-9, pages 4.B-27 and 4.B-28 in Section 4.B.8.c, Impact Evaluation). As the season transitions from autumn to winter, the Southwest BART Plaza experiences increased shadows from existing buildings throughout the day.

7. Regulatory Framework

This section describes the applicable local laws and regulations that pertain to the identification and regulation of impacts related to shadow. No federal or state regulations apply to the Proposed Project with regard to shadow.

a. Local

Planning Code Section 295

Planning Code Section 295, also known as Proposition K – the Sunlight Ordinance, mandates that the Planning Commission may only approve new structures that would cast shadows on properties under the jurisdiction of, or designated to be acquired by, the San Francisco Recreation and Park Commission (RPC) if such shadows are insignificant or will not adversely affect the use of the park. Section 295 does not apply to structures that do not exceed 40 feet in height; to public open space not under the jurisdiction of RPC; or to structures that cast a shadow on RPC property or property designated for acquisition by RPC, only during the first hour after sunrise and/or the last hour before sunset.

Because there are no properties under the jurisdiction of RPC, or designated to be acquired by RPC within the potential area of shading by the Proposed Project, as shown by the shadow fan prepared for the Proposed Project,[14] the Proposed project does not require approvals pursuant to Section 295.

[14] San Francisco Planning Department, 2014. 1979 Mission Street Shadow Fan Analysis. May 21.

8. Impacts and Mitigation Measures

a. Significance Thresholds

The thresholds for determining the significance of impacts in this analysis are consistent with the Planning Department's Initial Study checklist. The applicable threshold used to determine whether the Proposed Project would result in a significant shadow impact is whether implementing the Proposed Project would create new shadow in a manner that substantially affects outdoor recreation facilities or other public areas.

b. Approach to Analysis

The voters of San Francisco adopted Proposition K in 1984, mandating that all future development projects in the City that are more than 40 feet in height would be subject to the review process codified as Planning Code Section 295. The Eastern Neighborhoods PEIR determined that implementation of the Eastern Neighborhood Rezoning and Area Plans could result in new shadow on plan area parks; possibly in substantial amounts, depending on the specifics of the future individual proposals. The feasibility of mitigating potential new shadow impacts of all future development proposals to less than significant levels could not be determined at the time of publication of the Eastern Neighborhoods PEIR. Therefore, no mitigation measures were identified and the Eastern Neighborhoods PEIR identified a significant and unavoidable shadow impact. None of the outdoor recreation facilities or public open spaces affected by the Proposed Project was specifically analyzed in the Eastern Neighborhoods PEIR.

Because the Proposed Project includes structures that exceed 40 feet in height, the Planning Department prepared a "shadow fan" analysis to determine whether the Proposed Project would cast any shade or shadow on any property under the jurisdiction of, or designated for acquisition by, the RPC. It was found that the Proposed Project would not shade any properties under the jurisdiction of the RPC, and therefore is not subject to the provisions of Planning Code Section 295. However, further quantitative shadow analysis was determined to be required because the Proposed Project has the potential to shade public plazas and other public open spaces.

The significance threshold for environmental review for open space considers usage; time of day and/or time of year; physical layout and facilities affected; the intensity of use; the size and location of the shadow; and the percentage of the open space affected. If the Planning Department determines, based on these factors, that the use and enjoyment of the outdoor recreation facilities or open space would be substantially and adversely affected, then the impact is considered "significant" pursuant to CEQA.

The outdoor recreation facilities and public areas that could be affected by the Proposed Project include the Marshall Elementary School Playground and outdoor learning area and the two public plazas at the 16th Street Mission BART Station. A shadow analysis was prepared to quantify the amount of new shadow that would be cast by the Proposed Project on these areas consistent with the Planning Department's shadow analysis procedures.[15] Quantitatively, new shadows cast by a Proposed Project are measured by the net new annual amount of shadow (i.e., shadow load) expressed in sfh. The analysis was conducted based on a solar year (June 21 through December 20) to provide a sample of

[15] San Francisco Planning Department, 2014. Shadow Analysis Procedures and Scope Requirements Memorandum. July.

representative sun angles throughout the entire calendar year. The sun angles during December 21 through June 20 mirror the solar year sun angles, and an analysis of the other portions of the calendar year was not conducted. December 20, June 21, and September 20 were examined in the analysis, representing the winter, summer, and autumn/spring seasons, respectively.

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, new shadow from a proposed development project, and the remaining sunlight on the subject open space. A series of shadow diagrams from the same day demonstrates how the shadow moves across the space over a specific period of time. Shadow diagrams are presented in this section, and serve as the basis for the qualitative discussion of shadow impacts. Fog, rain, and shadows from trees either existing or proposed are not taken into account in the shadow analysis.

Figures 4.B-4 through 4.B-9 show shadows at 9:00 a.m., 11:00 a.m., 1:00 p.m., and 3:00 p.m., which includes the time period of peak use of the Playground and the 16th Mission Street BART Plazas in the project vicinity. A complete set of figures and data for the time snapshots analyzed is provided in the shadow study prepared for the Project.[16]

c. Impact Evaluation

This section analyzes the Proposed Project's impacts related to shadow.

Impact WS-2: The Proposed Project would create new shadow in a manner that could substantially affect the Marshall Elementary School outdoor recreation facilities and open space. *(Significant and Unavoidable)*

The Proposed Project's shadow impacts on the Marshall Elementary School Playground are discussed first, followed by the outdoor learning area.

Marshall Elementary School Playground – New Shadow

The Marshall Elementary School Playground includes a paved play area with drawn kickball diamond and foursquare game area, a basketball hoop, a jungle gym, and a turf field. The Playground is generally used throughout the day, from 8:15 a.m. through 6:00 p.m. In addition to being used for recess and lunch/recess periods, the playground is used during the school day for physical education classes. After 2:40 p.m., the Playground is used for the After School Program.[17]

Since filing its initial applications, the design of the Proposed Project has been refined to set back the fifth floor of the Capp Street residential component 13 feet from the northern property line and the Mission Street residential component above 65 feet approximately 17.5 to 30 feet from the northern property line to allow additional sunlight access to the Playground (see Chapter 2, Project Description).

[16] CADP, 2015. 1979 Mission Street Shadow Analysis. Prepared for Maximus Real Estate Partners. November.

[17] Avila, Peter, 2014. Telephone record of communication between Debra Dwyer, Planning Department staff, and Peter Avila, Principal, Marshall Elementary School. November 20.

As shown in Table 4.B-3, the Proposed Project would reduce the annual available sunlight on the Playground by approximately 22 percent, resulting in approximately 44 percent of the Playground being shaded annually (compared with 22 percent under existing conditions). The Proposed Project would increase the shadow load on the Playground by 11,785,129 sfh, resulting in a total shadow load of 23,846,259 sfh. As described in detail below, a substantial portion of the Playground would be shaded by the Proposed Project (new shadow) during the morning through afternoon hours in the winter, with lesser shading in the autumn and spring, and minor shading in the summer.

Table 4.B-3
Shadow Load on Marshall Elementary School

	Available Sunlight	Existing Shadow Load	New Shadow Load from Proposed Project	Total Shadow Load with Proposed Project
Playground				
Square foot hours	54,615,706	12,061,131	11,785,129	23,846,259
Percentage of TAAS	100	22.08	21.57	43.66
Outdoor Learning Area				
Square foot hours	9,592,307	6,022,990	17,286	6,040,276
Percentage of TAAS	100	62.79	0.18	62.97

Note:
TAAS= Theoretical Available Annual Sunlight
Square foot hours rounded to the nearest whole number.

During the winter, the Proposed Project would begin to cast new shadow on the southwestern portion of the Playground by approximately 8:30 a.m. Under existing conditions, some existing shadow from the trailer in the Playground already occurs at that time. Otherwise, the Playground is sunny from just after 9:00 a.m. until just after 1:00 p.m. The Proposed Project's new shadow would increase shadow on the Playground throughout the morning, moving west to east toward Capp Street; most of the Playground would be shaded by the Proposed Project by 2:00 p.m., except for a small area on the northeastern corner. The new shadow created by the Proposed Project would start to diminish in the afternoon as it is replaced by existing shadows from the buildings to the west. By approximately 3:00 p.m., the Playground would be half shaded by new shadow from the Proposed Project, and half by the existing buildings. On December 20, the largest shadow cast by the Proposed Project on the Playground, covering approximately 74 percent of the overall Playground surface area (approximately 10,826 square feet) (see Figures 4.B-4 and 4.B-5), would occur at 2:15 p.m. At that time, the remaining 26 percent of the Playground surface area would already be shaded by existing buildings. Under existing conditions, the maximum shadow on December 20, covering approximately 74 percent of the Playground, occurs at 3:54 p.m. As the season transitions from winter to summer, the Proposed Project would cast less and less shadow on the Playground. By summer, the shadow cast on the Playground by the Proposed Project would be minimal, and would occur along the property line between the project site and the Playground.

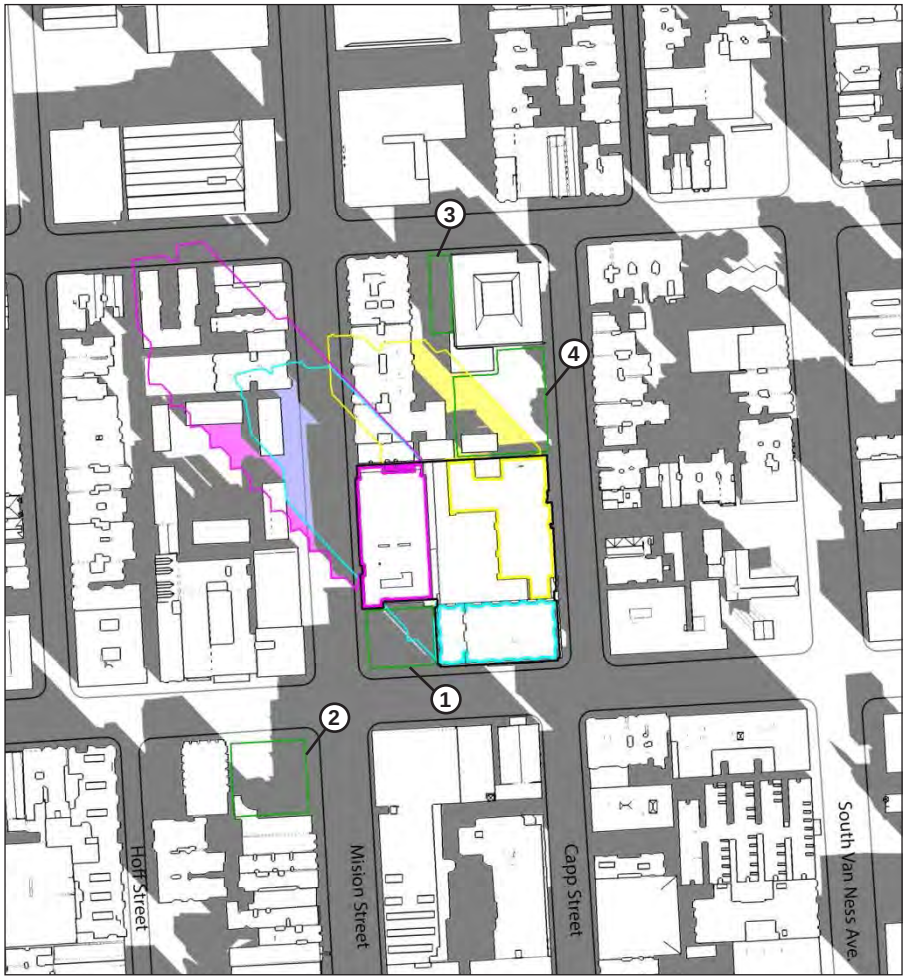
Source: CADP, 2015

Not to Scale

DETAIL OF MARSHALL ELEMENTARY SCHOOL PLAYGROUND LAYOUT

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-3



9:00am

11:00am

① Northeast BART Plaza
② Southwest BART Plaza
③ Marshall Elementary School Outdoor Learning Area
④ Marshall Elementary School Playground

Not to Scale

Source: CADP, 2015.

- Mission Street Building
- Mission Street Building New Shadows
- Sixteenth Street Building
- Sixteenth Street Building New Shadows
- Capp Street Building
- Capp Street Building New Shadows
- Mission and Capp Street Buildings New Combined Shadows
- Capp and Sixteenth Street Buildings New Combined Shadows
- Sixteenth and Mission Street Buildings New Combined Shadows
- Mission, Capp, and Sixteenth Street Buildings New Combined Shadows
- Existing Shadows

PROJECT SHADOW AT 9:00 AM AND 11:00 AM ON DECEMBER 20 (WINTER)

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-4

1:00pm

3:00pm

Not to Scale

① Northeast BART Plaza
② Southwest BART Plaza
③ Marshall Elementary School Outdoor Learning Area
④ Marshall Elementary School Playground

Source: CADP, 2015.

- Mission Street Building
- Mission Street Building New Shadows
- Sixteenth Street Building
- Sixteenth Street Building New Shadows
- Capp Street Building
- Capp Street Building New Shadows
- Mission and Capp Street Buildings New Combined Shadows
- Capp and Sixteenth Street Buildings New Combined Shadows
- Sixteenth and Mission Street Buildings New Combined Shadows
- Mission, Capp, and Sixteenth Street Buildings New Combined Shadows
- Existing Shadows

PROJECT SHADOW AT 1:00 PM AND 3:00 PM ON DECEMBER 20 (WINTER)

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-5

During the summer, the Proposed Project would not cast any shadow on the Playground from sunrise until approximately 10:00 a.m., and would cast minimal new shadow on the Playground's southern boundary in the morning, including a small southern section of the turf field. The Proposed project would continue to cast minimal amounts of new shadow along the southern boundary through the day, while the rest of the Playground would be largely sunny throughout this time. By 5:00 p.m., the Proposed Project would not cast any new shadow on the Playground. However, shadows from existing buildings to the west would begin to encroach on and would completely shade the Playground just after 7:00 p.m. On June 21, the Proposed Project would cast the largest shadow, covering approximately 7 percent (approximately 1,095 square feet) of the Playground surface area, at 1:15 p.m., when approximately 2 percent of the Playground surface area would already be shaded by existing buildings[18] (see Figures 4.B-6 and 4.B-7). Under existing conditions, the maximum shadow on June 21 covers approximately 16 percent of the Playground and occurs at 4:15 p.m. As the season transitions from summer to autumn, the Playground would experience increasing amounts of new shadow from the Proposed Project throughout the day.

During the autumn and spring, the Playground would experience a small amount of new shadow from the Proposed Project along its southern portion, in the southern area of the turf field, and in portions of the foursquare game area. Starting at 8:00 a.m., the Proposed Project would cast a small amount of shadow on the Playground. The new shadow caused by the Proposed Project would increase slowly throughout the day along the southern portion of the Playground. On September 20 and on March 22, the shadow would peak at approximately 4:15 p.m., when the Proposed Project would cast shadow on approximately 31 percent of the Playground surface area (approximately 4,524 square feet), and when approximately 34 percent of the Playground surface area would already be shaded by existing buildings.

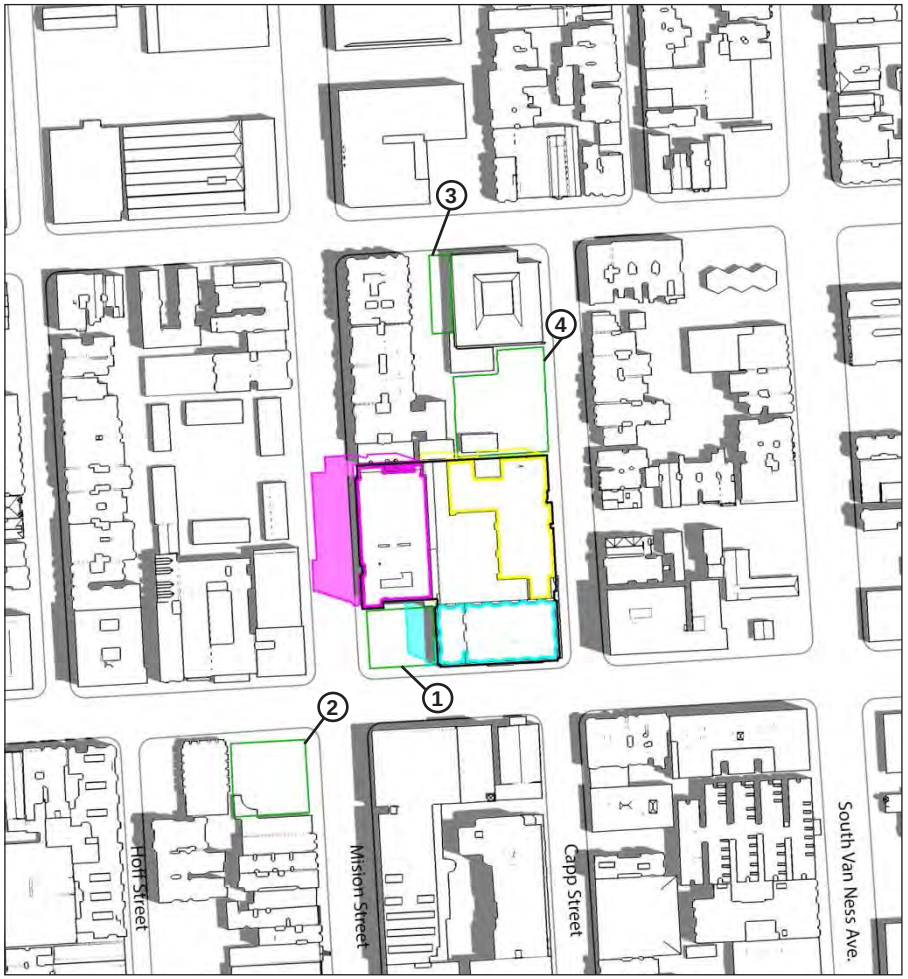
After 4:15 p.m., the new shadow cast by the Proposed Project would begin to diminish, while the Playground would increasingly be shaded by the existing buildings to the west. The Playground would be entirely shaded at just after 6:00 p.m., by the existing buildings to the west. As the season transitions from autumn to winter, the Playground would experience increasing amounts of new shadow from the Proposed Project throughout the day (see Figures 4.B-8 and 4.B-9).

Summary. The shadow analysis shows that shadow cast by the Proposed Project would have the greatest impact on the Playground in the winter, and would cast substantial shadow throughout the day. Only the northeastern corner of the Playground would remain sunny until 2:00 p.m. The maximum new shadow cast by the Proposed Project would cover approximately 74 percent of the Playground surface area on December 20 at 2:15 p.m., when the remaining 26 percent of the Playground surface area would already be shaded by existing buildings. Under existing conditions, the maximum shadow on December 20 covers approximately 74 percent of the Playground and occurs at 3:54 p.m.

Following construction of the Proposed Project, during the winter the Playground would be mostly shaded from sunrise until approximately 2:30 p.m., when it would be fully shaded until sunset. Under existing conditions, in the winter the Playground would be mostly sunny from 9:00 a.m. until just after 1:00 p.m., approximately half shaded by 3:00 p.m., and mostly shaded by 4:00 p.m. until sunset. Therefore, with the Proposed Project, the Playground would be largely shaded throughout the day, compared with the approximately 5 to 6 hours of sunlight it receives under existing conditions.

[18] Ibid.

9:00am



11:00am

① Northeast BART Plaza
② Southwest BART Plaza
③ Marshall Elementary School Outdoor Learning Area
④ Marshall Elementary School Playground

Not to Scale

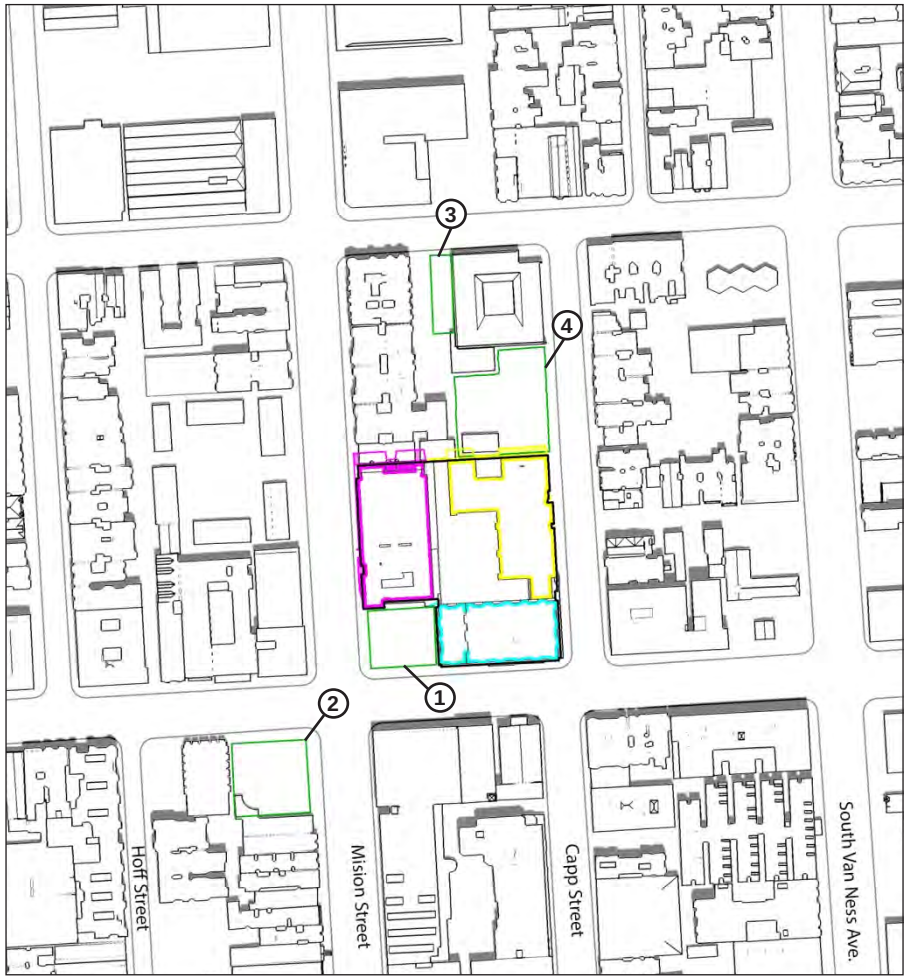
Source: CADP, 2015.

- Mission Street Building
- Mission Street Building New Shadows
- Sixteenth Street Building
- Sixteenth Street Building New Shadows
- Capp Street Building
- Capp Street Building New Shadows
- Mission and Capp Street Buildings New Combined Shadows
- Capp and Sixteenth Street Buildings New Combined Shadows
- Sixteenth and Mission Street Buildings New Combined Shadows
- Mission, Capp, and Sixteenth Street Buildings New Combined Shadows
- Existing Shadows

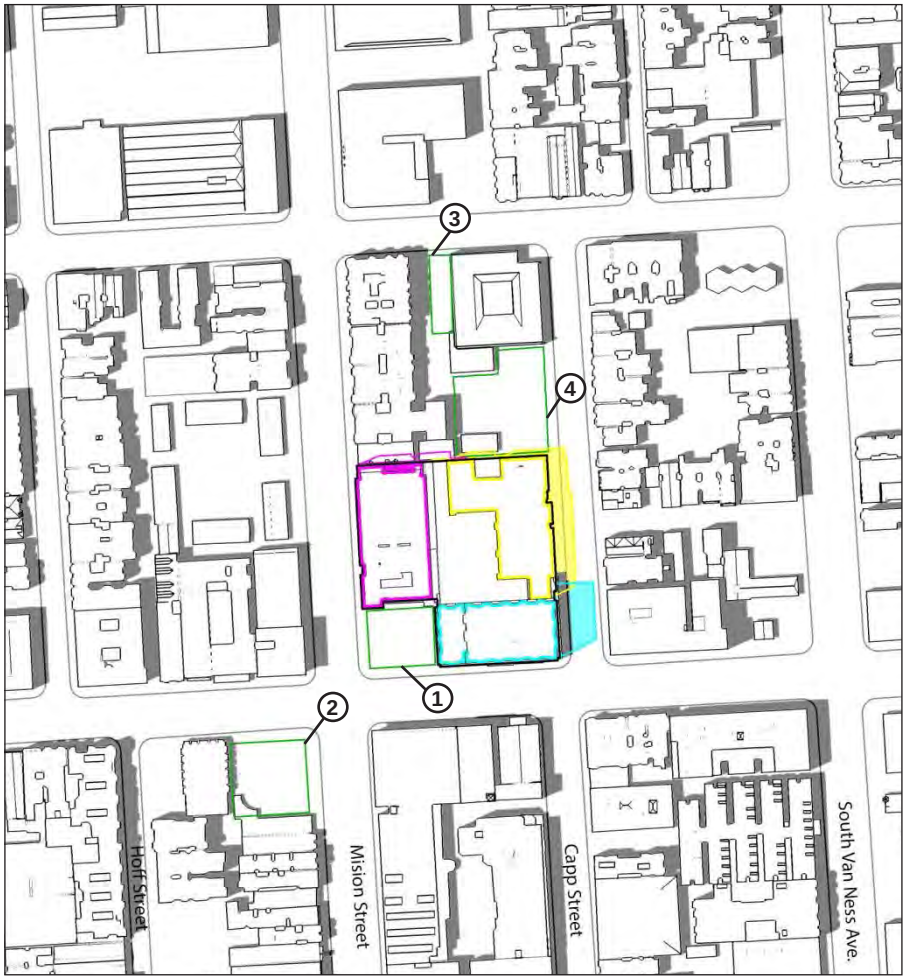
PROJECT SHADOW AT 9:00 AM AND 11:00 AM ON JUNE 21 (SUMMER)

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-6



1:00pm



3:00pm

Not to Scale

① Northeast BART Plaza
② Southwest BART Plaza
③ Marshall Elementary School Outdoor Learning Area
④ Marshall Elementary School Playground

Source: CADP, 2015.

- Mission Street Building
- Mission Street Building New Shadows
- Sixteenth Street Building
- Sixteenth Street Building New Shadows
- Capp Street Building
- Capp Street Building New Shadows
- Mission and Capp Street Buildings New Combined Shadows
- Capp and Sixteenth Street Buildings New Combined Shadows
- Sixteenth and Mission Street Buildings New Combined Shadows
- Mission, Capp, and Sixteenth Street Buildings New Combined Shadows
- Existing Shadows

PROJECT SHADOW AT 1:00 PM AND 3:00 PM ON JUNE 21 (SUMMER)

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-7

9:00am

11:00am

① Northeast BART Plaza
② Southwest BART Plaza
③ Marshall Elementary School Outdoor Learning Area
④ Marshall Elementary School Playground

Not to Scale

Source: CADP, 2015.

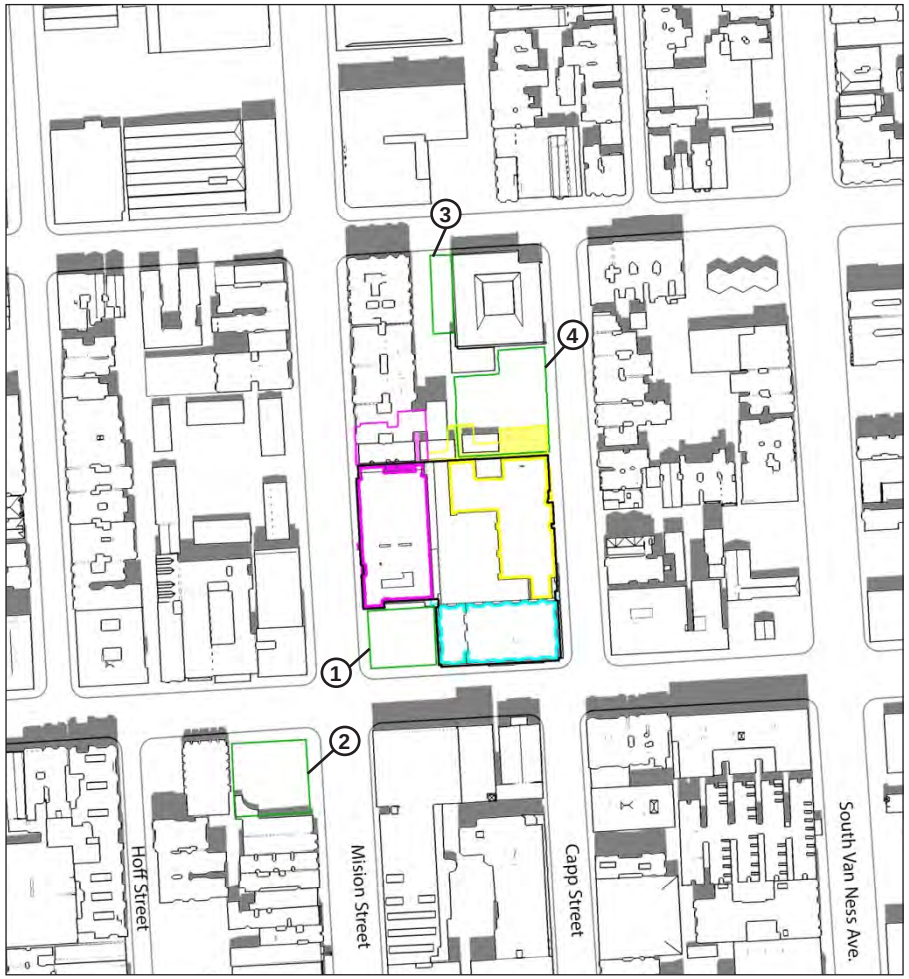
- Mission Street Building
- Mission Street Building New Shadows
- Sixteenth Street Building
- Sixteenth Street Building New Shadows
- Capp Street Building
- Capp Street Building New Shadows
- Mission and Capp Street Buildings New Combined Shadows
- Capp and Sixteenth Street Buildings New Combined Shadows
- Sixteenth and Mission Street Buildings New Combined Shadows
- Mission, Capp, and Sixteenth Street Buildings New Combined Shadows
- Existing Shadows

Note: March 22 Similar (Spring)

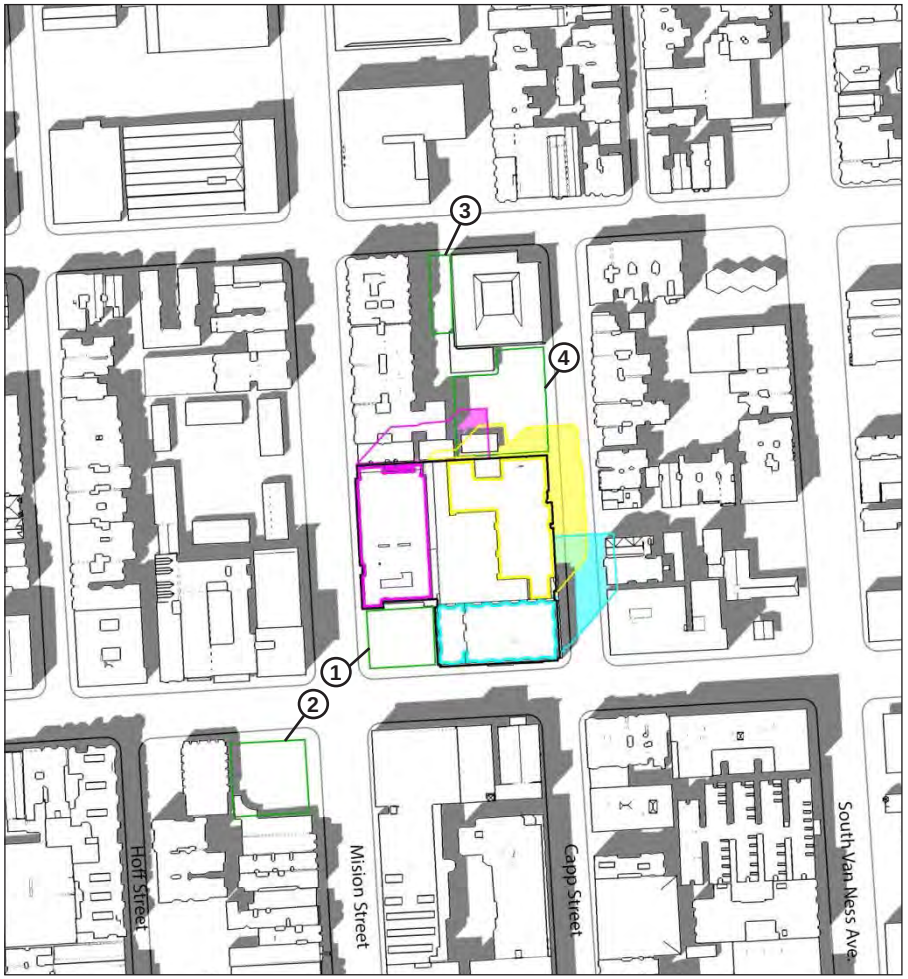
PROJECT SHADOW AT 9:00 AM AND 11:00 AM ON SEPTEMBER 20 (AUTUMN)

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-8



1:00pm



3:00pm

Not to Scale

① Northeast BART Plaza
② Southwest BART Plaza
③ Marshall Elementary School Outdoor Learning Area
④ Marshall Elementary School Playground

Source: CADP, 2015.

- Mission Street Building
- Mission Street Building New Shadows
- Sixteenth Street Building
- Sixteenth Street Building New Shadows
- Capp Street Building
- Capp Street Building New Shadows
- Mission and Capp Street Buildings New Combined Shadows
- Capp and Sixteenth Street Buildings New Combined Shadows
- Sixteenth and Mission Street Buildings New Combined Shadows
- Mission, Capp, and Sixteenth Street Buildings New Combined Shadows
- Existing Shadows

Note: March 22 Similar (Spring)

PROJECT SHADOW AT 1:00 PM AND 3:00 PM ON SEPTEMBER 20 (AUTUMN)

1979 Mission Street Project
San Francisco, California

FIGURE 4.B-9

During the summer, under the Proposed Project, the Playground would experience minor shadow throughout the day along its southern boundary. However, similar to existing conditions, most of the Playground would remain sunny throughout the day under the Proposed Project. On June 21, the maximum new shadow cast by the Proposed Project would cover approximately 7 percent of the overall Playground surface area at 1:15 p.m. Under existing conditions, the maximum shadow covers approximately 16 percent of the Playground and occurs at 4:15 p.m. along its western boundary. Following construction of the Proposed Project, the Playground would be largely sunny for approximately 10 hours a day, similar to existing conditions.

During the spring and autumn, the Playground would experience increasing shadow cast by the Proposed Project throughout the day. On September 20 (and March 22), the maximum new shadow cast by the Proposed Project would cover the southern portion at approximately 31 percent of the overall Playground surface area at 4:15 p.m. Under existing conditions, the maximum shadow covers approximately 94 percent of the Playground, and occurs at 6:09 p.m. Following construction of the Proposed Project, the Playground would be largely sunny for approximately 6 hours a day, compared with approximately 7 hours a day under existing conditions.

The Playground is used throughout the day for physical education classes, recess, and lunch periods. During these periods of time, students and teachers are using the Playground for extended periods of time. Therefore, the sunlight access to the Playground is one of the characteristics that partially determine the comfort level of students and teachers at these times. Under the Proposed Project, the Playground would be mostly or fully shaded during the entire range of school activities in the winter and partially shaded in the autumn and spring. For the above reasons, the Proposed Project's new shadow would adversely affect the Playground, and would be significant.

The shadow study shows that the Proposed Project would create new shadow that would substantially shade the Playground, which would adversely affect school activities.

There is no feasible available mitigation measure for the Proposed Project's impact on the Playground. Any potential mitigation measure would fundamentally alter the Project's basic design. Therefore, shadow impacts on the Playground would be significant and unavoidable.

Marshall Elementary School Outdoor Learning Area – New Shadow

The Marshall Elementary School Outdoor Learning Areas provides a garden and classroom space, and is typically in use from 9:00 a.m. through 5:00 p.m., 5 days per week (Monday through Friday). As shown in Table 4.B-3, the Proposed Project would reduce the annual available sunlight on the Marshall Elementary School outdoor learning area by approximately 0.18 percent, resulting in approximately 63 percent of the outdoor learning area being shaded annually. This represents a minor incremental increase in the shadow experienced by the outdoor learning area annually. Under existing conditions, the outdoor learning area is shaded in the mornings and afternoons, and sunny around mid-day throughout the year. The Proposed Project would increase the new shadow load on the outdoor learning area by 17,286 sfh, resulting in a total shadow load of 6,040,276 sfh on a portion of the outdoor learning area during the early to mid-afternoon from late autumn to early winter, with no new shadow cast during the rest of the year.

During the winter, the Proposed Project would cast new shadow on the outdoor learning area from approximately 12:15 p.m. through 2:00 p.m. On December 20, the largest new shadow cast by the Proposed Project on the outdoor learning area would occur at 12:45 p.m., covering approximately 18 percent (459 square feet) of the outdoor learning area (see Figures 4.B-4 and 4.B-5). As the season

transitions from winter to summer, the outdoor learning area would no longer experience new shadow from the Proposed Project (see Figures 4.B-6 and 4.B-7).

Summary. Impacts from the Proposed Project's new shadow on the outdoor learning area would be relatively minor. Although portions of the area would be shadowed by the Proposed Project in the early afternoon during the winter, the area that would be shaded by the Proposed Project would be minor and of short duration. Uses in the outdoor learning area as a garden and classroom space would not be substantially affected.

For the above reasons, the Proposed Project would not create new shadow in a manner that would substantially affect the outdoor learning area. Therefore, the Proposed Project's impacts on the Marshall Elementary School outdoor learning area would be less than significant, and no mitigation measures are necessary.

Impact WS-3: The Proposed Project would not create new shadow in a manner that would substantially affect the 16th Street Mission BART Station plazas. *(Less than Significant)*

The Proposed Project's shadow impacts on the BART Plazas are described below for each plaza.

Northeast BART Plaza – New Shadow

As shown in Table 4.B-4, the Proposed Project would reduce the annual available sunlight on the Northeast BART Plaza by approximately 8 percent, resulting in approximately a total of 32 percent of the plaza being shaded annually (compared with 24 percent under existing conditions), which is a low to moderate increase of the shadow. The Proposed Project would increase the shadow load on the plaza by 1,685,083 sfh, resulting in a total shadow load of 6,914,865 sfh. The Proposed Project would cast new shadow on a portion of the plaza generally during part of the morning throughout the year, with the greatest shadow in the summer, and minor shadow in the winter.

Table 4.B-4
Shadow Load on 16th Street BART Station – Northeast Plaza

	Available Sunlight	Existing Shadow Load	New Shadow Load from Proposed Project	Total Shadow Load with Proposed Project
Square foot hours	21,663,099	5,229,783	1,685,083	6,914,865
Percentage of TAAS	100	24.14	7.78	31.92
Note: TAAS= Total Annual Available Sunlight Square foot hours rounded to the nearest whole number.				

During the winter, the Northeast BART Plaza would experience only a small area of new shadow from the Proposed Project from 9:45 a.m. through 12:00 p.m. The largest shadow cast by the Proposed Project on December 20 would occur at 11:30 a.m., covering approximately 2 percent or approximately 135 square feet of the plaza area. After 12:00 p.m., the Proposed Project would not cast any new shadow on the Northeast BART Plaza (see Figures 4.B-4 and 4.B-5). As the season transitions from winter to summer, the Northeast BART Plaza would experience more new shadow over time from the Proposed Project starting in the late morning, and lasting until the early afternoon. In addition, a minor amount of

new shadow would begin to be cast on the plaza by the Proposed Project in the evening as the season transitions to summer.

During the summer, the greatest amount of shading from the Proposed Project would occur. From 7:30 a.m. to 9:00 a.m., the plaza is partially shaded by the existing building directly east of the plaza; the Proposed Project would cast new shadow on the unshaded western portion of the plaza, causing the plaza to be fully shaded during this time. On June 21, the largest shadow cast by the Proposed Project would occur at 9:15 a.m., covering approximately 64 percent of the Northeast BART Plaza (approximately 3,726 square feet). The Project's shadow would start to recede eastward, and the plaza would be in sunlight at 1:00 p.m. By 1:00 p.m., all new shadows from the Project would be gone, and the entire Northeast BART Plaza would be sunny until approximately 6:00 p.m. After 6:00 p.m., a minor amount of shadow would be cast on the plaza by the Proposed Project (see Figures 4.B-6 and 4.B-7). As the season transitions from summer to autumn, new Project shadow on the Northeast BART Plaza would decrease over time in the early morning, but would be similar to existing conditions in the late morning. The very minor amount of shadow cast on the plaza by the Proposed Project in the evening would disappear by late summer.

During the autumn (and spring), starting around 9:00 a.m., new shadows from the Proposed Project would fall on the northwestern portion of the Northeast BART Plaza, and move to the northeastern portion of the plaza by 11:00 a.m. On September 20, the largest shadow cast by the Proposed Project on the Northeast BART Plaza would occur at 9:45 a.m., covering approximately 29 percent of the plaza (approximately 1,677 square feet). After 9:45 a.m., new shadow from the Proposed Project would begin to diminish. By 12:45 p.m., no further new shadow would occur during the day due to the Proposed Project (see Figures 4.B-8 and 4.B-9). As autumn transitions to winter, the Northeast BART Plaza would experience decreasing new shadow from the Proposed Project in the morning. No new shadows would be cast by the Proposed Project on the Northeast BART Plaza by approximately mid-day in either autumn or winter.

Summary. As described above, in winter, Project shadow would be limited to the morning. On December 20, the Project shadow would cover approximately 2 percent of the Northeast BART Plaza area at its maximum. The plaza would be largely sunny for approximately 5 hours a day, generally similar to existing conditions. During the summer, the Proposed Project would cast shadow on the plaza from approximately 7:30 a.m. to 1:00 p.m., with a minor amount of shadow cast after 6:00 p.m. On June 21, it would shade approximately 68 percent of the plaza at its maximum. The plaza would be largely sunny for approximately 9 hours a day, compared with approximately 10 hours under existing conditions. During the spring and autumn, the Project would cast shadow from approximately 8:00 a.m. to 1:00 p.m. On September 20 (and March 22), it would shade approximately 29 percent of the plaza at its maximum. The plaza would be largely sunny for approximately 6 hours a day in the autumn (and spring), similar to existing conditions.

Shadow cast by the Proposed Project would primarily impact the Northeast BART Plaza in the mornings from late spring until early autumn. During weekdays, the Northeast BART Plaza experiences peak use from about 11:00 a.m. to 1:00 p.m., and portions of the plaza, including some of the seating areas, would be shaded by the Proposed Project during this time. However, users congregate in the Northeast BART Plaza to access the BART trains through the BART escalators, stairs, and elevator, and wait for the transit buses and shuttle services that pass nearby. Additional shadow resulting from the Proposed Project would not substantially impact the uses of the Northeast BART Plaza.

For the above reasons, the Proposed Project would not create new shadow that would adversely affect the use of the Northeast BART Plaza. Therefore, the Proposed Project's shadow impacts on the Northeast BART Plaza would be less than significant, and no mitigation measures are necessary.

Southwest BART Plaza – New Shadow

As shown in Table 4.B-5, the Proposed Project would reduce the annual available sunlight on the Southwest BART Plaza by approximately 0.19 percent, resulting in approximately 32 percent of the plaza being shaded annually. This would result in a largely imperceptible change in shading of the plaza annually. The Proposed Project would increase the shadow load on the plaza by 62,330 sfh, resulting in a total shadow load of 10,392,412 sfh. A portion of the plaza would be shaded by the Proposed Project (new shadow) during the early morning from late spring through late summer, with no new shadow cast during the rest of the year.

Table 4.B-5
Shadow on 16th Street BART Station – Southwest Plaza

	Available Sunlight	Existing Shadow Load	New Shadow Load from Project	Total Shadow Load with Project
Square foot hours	32,295,798	10,330,082	62,330	10,392,412
Percentage of TAAS	100	31.99	0.19	32.18
Note: TAAS= Total Annual Available Sunlight Square foot hours rounded to the nearest whole number.				

The Proposed Project would not cast new shadow on the Southwest BART Plaza during the winter (see Figures 4.B-4 and 4.B-5). As the season transitions from winter to summer, the Southwest BART Plaza would begin to experience new shadow from the Proposed Project for a brief time period early in the morning before 7:00 a.m.

During the summer, the Southwest BART Plaza would experience shadows from the Proposed Project in the early morning. Between approximately 6:00 a.m. and 7:00 a.m., the Proposed Project would shadow the northern portion of the plaza. By 7:15 a.m., there would be no new shadow from the Project on the Southwest BART Plaza. On June 21, the largest shadow cast by the Proposed Project on the Southwest BART Plaza would occur at 6:46 a.m., covering approximately 44 percent (3,810 square feet) of the overall Southwest BART Plaza area (see Figures 4.B-6 and 4.B-7). As the season transitions from summer to autumn, the Southwest BART Plaza would no longer experience new shadow from the Proposed Project in the early morning. In autumn, the Proposed Project would not cast new shadow on the plaza (see Figures 4.B-8 and 4.B-9).

Summary. Shadow cast by the Proposed Project would impact the Southwest BART Plaza in the early mornings from late spring until late summer. During the summer, the Proposed Project would cast shadow on the plaza from approximately 6:00 a.m. to 7:00 a.m., shading approximately 44 percent of the plaza at its maximum. The plaza would be largely sunny for approximately 10 hours during the summer, slightly less than under existing conditions. The Proposed Project would not cast any new shadow on the Southwest BART Plaza in the autumn, winter, or early spring.

Impacts from the Proposed Project's new shadow on the plaza would be minor. Although portions of the plaza, including some of the seating areas, could be shadowed by the Proposed Project in the early morning, the Southwest BART Plaza is mostly used to access the BART station escalators, stairs, and the public restroom, and to wait for the transit buses and shuttle services that pass nearby. The peak use of the plaza does not occur during the early morning hours. Therefore, the small amount of additional shadow that would result from the Proposed Project would not substantially affect this usage. For the above reasons, the Proposed Project would not create new shadow that would substantially affect the Southwest BART Plaza. Therefore, the Proposed Project's impacts on the Southwest BART Plaza would be less than significant, and no mitigation measures are necessary.

d. Cumulative Impacts

Impact C-WS-2: The Proposed Project would have a cumulatively considerable contribution to significant cumulative shadow impacts, substantially affecting outdoor recreation facilities and open space. *(Significant and Unavoidable)*

The geographic scope for cumulative shadow impacts includes the area within an approximately 2 block radius of the project site, because buildings in this area could affect the shadows in the project vicinity.

Other reasonably foreseeable development projects in the immediate project vicinity are listed in Table 4.A-1 under Approach to Cumulative Analysis. However, none of these projects would cast a shadow on the open space areas affected by the Proposed Project (i.e., the 16th Street Mission BART Station plazas or the Playground or outdoor learning area). Existing buildings cast shadow on the open space affected by the Proposed Project. Existing buildings shade 22.08 percent of the Playground and 62.79 percent of the outdoor learning area. The Northeast and Southwest BART Plazas are shaded by existing buildings by 24.14 percent and 31.99 percent, respectively. As described above under Impact WS-2, the Proposed Project would result in a significant and unavoidable impact to the Playground. Cumulative shadow impacts from past and present projects and the Proposed Project are assumed to be significant.

As described above under Impact WS-2, the greatest amount of Playground shading would occur during the winter, when implementation of the Proposed Project would cause the Playground to be largely shaded throughout the day, in comparison with the approximately 6 hours of sunlight it receives under existing conditions. In addition, during the spring and autumn, the Playground would receive approximately 1 hour less of sunlight (total 6 hours a day), in comparison with 7 hours a day under existing conditions. The Playground would be shaded by the Proposed Project during peak use times, including during recess and lunch, which would substantially affect the use of the Playground. On an annual basis, the Proposed Project would result in 21.57 percent new shadow at the Playground. The Proposed Project's contribution to the cumulative shadow impacts at the Playground would be cumulatively considerable, and cumulative impacts would be significant. There are no feasible mitigation measures, resulting in a cumulatively significant and unavoidable impact.

The Proposed Project, in combination with other past and present projects, would result in approximately 63 percent of the outdoor learning area being shaded annually. This would be a cumulatively significant impact. However, the Proposed Project would add only 0.18 percent new shadow at the outdoor learning area. As described above under Impact WS-2, this contribution would be minor, and this small addition of shadow would not be cumulatively considerable. Therefore, the Proposed project's contribution to cumulative shadow impacts at the outdoor learning area would be less than significant.

The Proposed Project, in combination with other past and present projects, would result in approximately 32 percent of the Northeast Plaza being shaded annually, and a similar percentage of the Southwest Plaza being shaded annually. The BART Plazas are mostly used to access the BART station escalators and elevator and the public restroom, and to wait for the transit buses and shuttle services that pass nearby. Cumulative shadow impacts would not alter the uses of the BART Plazas and would not be significant. The Proposed Project's contribution to cumulative shadow impacts would be 7.78 percent at the Northeast Plaza and 0.19 percent shadow at the Southwest BART Plaza. As described above under Impact WS-3, the Proposed Project would not create new shadow in a manner that would substantially affect either of the 16th Street Mission BART Plazas. Therefore, cumulative shadow impacts of the Proposed Project at the BART Plazas would be less than significant.

C. Geology and Soils

1. Introduction

This section describes the geologic and seismic conditions of the project site and its vicinity, and evaluates the potential for the Proposed Project to result in significant impacts related to exposing people or structures to significant, adverse geologic hazards, soils, and/or seismic conditions. The analysis in this section is based on the geotechnical investigation prepared for the Proposed Project by Treadwell & Rollo.[1] Potential impacts are described and evaluated, and appropriate mitigation measures are identified, where necessary. The impacts discussion also considers whether the Proposed Project, in combination with additional reasonably foreseeable development, would contribute to cumulative environmental impacts related to geology and soils.

2. Environmental Setting

a. Regional Geology

The project site is on the San Francisco Peninsula in the Coast Ranges geomorphic province, which extends northward from the Transverse Ranges in Santa Barbara County to beyond the Oregon border. This geologic region consists of northwest trending mountain ranges and parallel elongated valleys. Most of the valleys are associated with folds or differential erosion along faults that are generally parallel to the San Andreas Fault. In the Coast Ranges, older, consolidated rocks are characteristically exposed in the mountains and are buried beneath younger, unconsolidated alluvial sediments in the valleys. In the coastal lowlands adjacent to San Francisco Bay, the younger sediments commonly interfinger[2] with marine deposits. The major geographic features in the vicinity include San Francisco Bay and the Diablo Range to the east and north, the Santa Cruz Mountains to the south and west, and the Santa Clara Valley to the south and east.

The principal basement rock on the San Francisco Peninsula is the Franciscan Complex, which commonly consists of greenstone, sandstone, serpentinite, chert, and mélange (a mixture of lithologies typically in a sheared, clay rich matrix). On the San Francisco Peninsula, the Franciscan Complex is locally overlain by Tertiary, Quaternary, and Holocene marine and non-marine sedimentary deposits of variable degrees of cementation or consolidation. In this area, these are assigned to the Santa Clara Formation and the Merced Formation. Unconsolidated geological materials encountered in the area include artificial fill, colluvium, alluvium, and alluvial fans.

The project site is located in a seismically active geologic region near the boundary between two major tectonic plates: the Pacific Plate to the southwest, and the North American Plate to the northeast. In California, this plate boundary begins north of the Gulf of California near the Mexican border, and traverses much of the state before terminating off the coast of Humboldt County.

[1] Treadwell & Rollo, 2013. Geotechnical Investigation, 1979 Mission Street. Prepared for Maximus Real Estate Partners. January 30.

[2] Interfinger, as related to sedimentary rocks, means to change laterally from one type of rock to another in a zone where the two types form interpenetrating wedges.

The major active faults in the San Francisco Bay area comprise a complex system of right lateral, strike slip faults known as the San Andreas Fault system. The principal active fault in the immediate project vicinity is the San Andreas Fault. Other substantial faults in the San Andreas Fault system in the San Francisco Bay area are the San Gregorio, Hayward, and Calaveras faults. Other more distant active faults in the region include the Concord-Green Valley and Greenville faults. Earthquakes occurring along these and other faults are capable of generating strong ground shaking. Figure 4.C-1 shows the regional faults in the vicinity of the project site, and Table 4.C-1 lists the active faults in the San Francisco Bay Area.

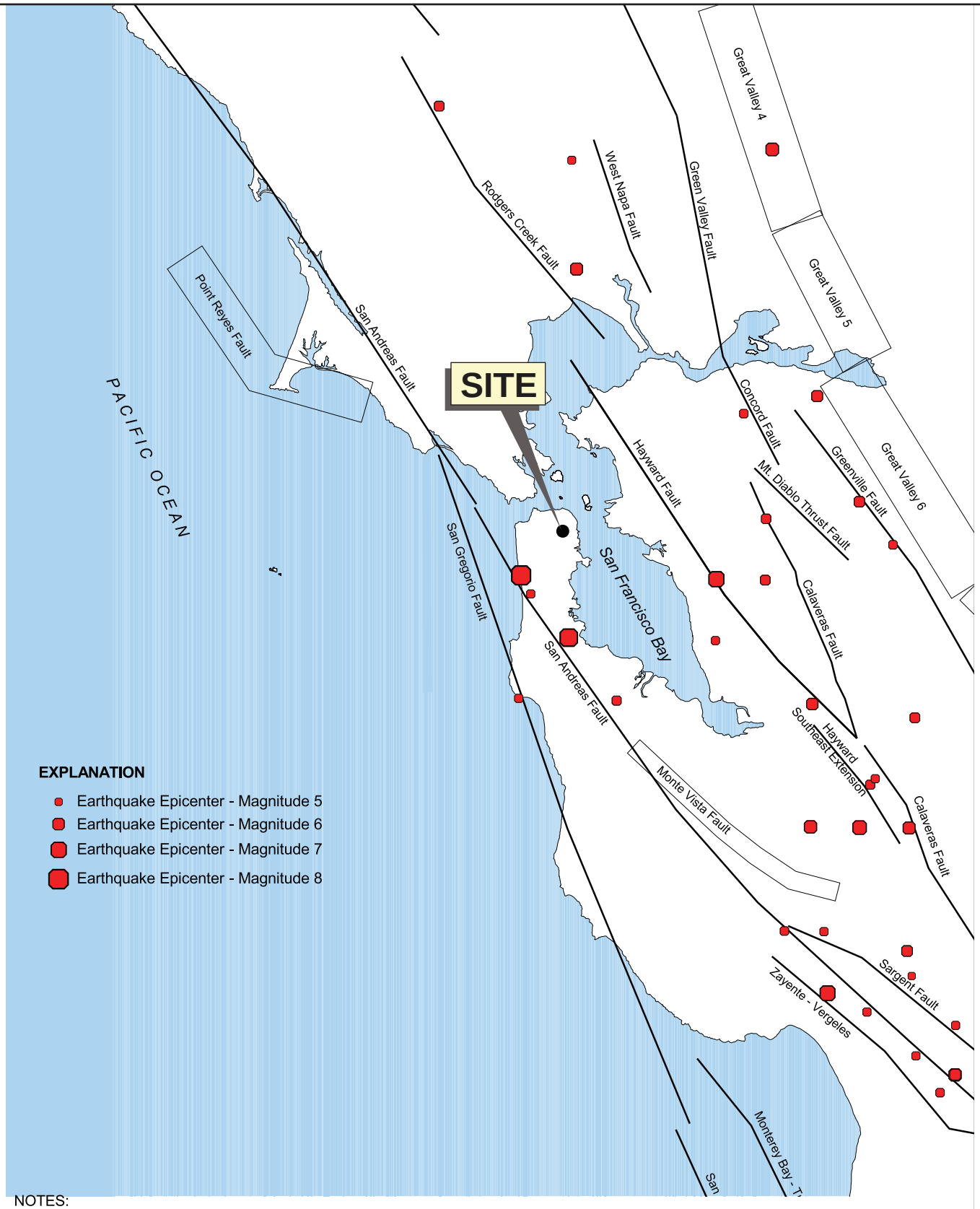
Table 4.C-1
Regional Faults and Seismicity

Regional Faults and Seismicity Fault Name	Distance (kilometers)	Direction from Site	Mean Characteristic Maximum Moment Magnitude
San Andreas – 1906 Rupture	10	West	7.9
San Andreas – Peninsula	10	West	7.2
San Andreas – North Coast South	14	West	7.5
Northern San Gregorio	16	West	7.2
Total San Gregorio	16	West	7.4
North Hayward	19	Northeast	6.5
Total Hayward	19	Northeast	6.9
Total Hayward-Rodgers Creek	19	Northeast	7.3
South Hayward	19	East	6.7
Rodgers Creek	36	North	7.0
Mt. Diablo	36	East	6.7
Total Calaveras	37	East	6.9
Monte Vista-Shannon	39	Southeast	6.8
Concord/Green Valley	40	East	6.7

Source: Treadwell & Rollo, 2013. Geotechnical Investigation, 1979 Mission Street. Prepared for Maximus Real Estate Partners. January 30.

b. Site Geology

The southern and western sides of the project site are occupied by two retail/commercial buildings: one currently occupied by Walgreens, and the other occupied by smaller commercial uses such as a Burger King restaurant and a vacant retail space. The commercial buildings are one-story-plus-mezzanine and have a partial basement. The surface parking lot elevations range from elevation +17 to +20 feet (City and County of San Francisco datum). Test borings from the Walgreens parking lot indicate that the site is underlain by 2 to 4 feet of sandy fill that contains debris, including bricks and wood. Below the fill to a depth of about 33 feet below ground surface (bgs) are interbedded layers of alluvial deposits, consisting of loose to dense sand, stiff silt, and medium stiff to stiff clay. Below a depth of about 33 feet, very dense sand is present. Estimated groundwater depth at the project site ranges from approximately 8 to 10 feet bgs, depending on the time of year.



NOTES:
Digitized data for fault coordinates and earthquake catalog was developed by the California Department of Conservation Division of Mines and Geology. The historic earthquake catalog includes events from January 1800 to December 2000.

Source: Treadwell and Rollo, 2013.

0 25 KILOMETERS

REGIONAL FAULT MAP

1979 Mission Street Project
San Francisco, California

FIGURE 4.C-1

c. Seismicity and Geologic Hazards

Ground shaking is the product of a specific earthquake as manifested at a particular location with specific geologic conditions. The intensity of the ground shaking (also referred to as strong ground motion) during an earthquake is dependent on the distance between a site and the epicenter of the earthquake, the magnitude of the earthquake, and the geologic conditions underlying and surrounding the site. Other conditions being equal, earthquakes with closer epicenters or higher magnitudes produce more intense ground shaking. Geologic conditions have a substantial impact on the intensity of local ground shaking.

Areas that are underlain by bedrock tend to experience less ground shaking than those underlain by unconsolidated sediments such as artificial fill or alluvium. The composition of underlying soils in areas relatively distant from earthquake epicenters can intensify ground shaking from specific earthquakes. For instance, locations in the San Francisco Bay Area that experienced the worst structural damage during the 1989 Loma Prieta earthquake were not those closest to the epicenter. Instead, the greatest damage was on Bay Muds and artificial fill, because those soils magnified the effects of ground shaking.

d. Surface Fault Rupture

The project site is not in an earthquake fault zone as defined by the Alquist-Priolo Earthquake Fault Zoning Act, and no mapped active faults are known to pass through the immediate vicinity of the project site. Therefore, the risk of ground rupture at the site is very low.

e. Ground Shaking

During a major earthquake on one of the active faults in the region, the project site would experience strong ground shaking similar to other areas of the seismically active San Francisco Bay Region. The intensity of the earthquake ground motion at the site would, as stated above, depend on the characteristics of the generating fault, distance to the earthquake epicenter, magnitude and duration of the earthquake, and specific site geologic conditions. Historically, the site has been subjected to strong ground shaking from moderate to large earthquakes on the San Andreas, Hayward, Calaveras, and San Gregorio faults, and future strong ground shaking should be expected.

f. Seismically Induced Ground Deformations

Ground deformations include liquefaction, lateral spreading, and cyclic densification. Liquefaction is a transformation of soil from a solid to a liquefied state, during which saturated soil temporarily loses strength when subjected to a buildup of excess pore water pressure, especially during earthquake induced cyclic loading. Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low plasticity silt, and some low plasticity clay deposits. Lateral spreading refers to the finite, lateral displacement of sloping ground toward a free face (such as an open excavation or stream bank) as a result of pore pressure build-up or liquefaction during an earthquake. Differential compaction (cyclic densification) refers to compaction of non-saturated granular materials (sand and gravel above the groundwater table) caused by earthquake vibrations. The sandy fill and the native sand above the groundwater level are susceptible to differential compaction during a major earthquake on a nearby fault.

The project site is in an area "where historic occurrence of liquefaction, or local geological, geotechnical, or groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693 (c) would be required." The test borings drilled on the site

indicate that interbedded layers of alluvial deposits, consisting of loose to dense sand, stiff silt, and medium stiff to stiff clay are below the fill to a depth of about 33 feet bgs. Below a depth of about 33 feet bgs, very dense sand is present to the end of the borings, at about 90 feet bgs. The geotechnical investigation indicated that these sand layers could liquefy during a strong earthquake. Should liquefaction occur, it would be localized in or adjacent to the project, because the sand layers are relatively thin and discontinuous.[3] Because the risk of extensive liquefaction at the site is low, the risk of lateral spreading at the site during a strong earthquake is also low.

g. Landslides

As shown on the official State of California Seismic Hazards Zone Map for San Francisco, prepared under the Seismic Hazards Mapping Act of 1990, the project site is not in an area subject to landslides.[4]

3. Regulatory Framework

This subsection describes the pertinent state and local laws and regulations that are applicable to the Proposed Project.

a. Federal

There are no federal regulations governing geologic and seismic hazards that are applicable to the Proposed Project.

b. State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (California Public Resources Code Section 2621 et seq.), originally enacted in 1972 as the Alquist-Priolo Special Studies Zones Act, and renamed in 1994, is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults, and strictly regulates construction in the corridors along active faults (earthquake fault zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones.

Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are "sufficiently active" and "well defined." A fault is considered sufficiently active if one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the Alquist-Priolo Act as referring to approximately the last 11,000 years). A fault is considered well defined if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment.

[3] Treadwell & Rollo, 2013. Geotechnical Investigation, 1979 Mission Street. Prepared for Maximus Real Estate Partners. January 30.

[4] California Department of Conservation, 2000. City and County of San Francisco Seismic Hazard Zones Official Map. November 17. Available online at: http://gmw.consrv.ca.gov/shmp/download/quad/SAN_FRANCISCO_NORTH/maps/ozn_sf.pdf. Accessed November 9, 2015.

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690-2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development in mapped Seismic Hazard Zones.

Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites in Seismic Hazard Zones until appropriate site specific geologic and/or geotechnical investigations have been carried out, and measures to reduce potential damage have been incorporated into the development plans. The San Francisco Department of Building Inspection (DBI) is the local agency empowered by the City to enforce the regulatory requirements of the Seismic Hazards Mapping Act.

California Building Code

The California Building Code (CBC), which is codified in Title 24 of the California Code of Regulations, Part 2, was promulgated to safeguard the public health, safety, and general welfare by establishing minimum standards related to structural strength, egress facilities, and general building stability. The purpose of the CBC is to regulate and control the design, construction, quality of materials, use/occupancy, location, and maintenance of all buildings and structures within its jurisdiction. Title 24 is administered by the California Building Standards Commission, which by law is responsible for coordinating all building standards. Under state law, all building standards must be centralized in Title 24 or they are not enforceable. Local building codes may not include standards less stringent than those in the CBC.

The 2010 CBC is based on the 2009 International Building Code. In addition, the CBC contains necessary California amendments that are based on the American Society of Civil Engineers Minimum Design Standards 7-05. American Society of Civil Engineers 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (flood, snow, wind, etc.) for inclusion in building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, all of which are used to determine a Seismic Design Category (SDC) for a project. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site, and ranges from SDC A (very small seismic vulnerability) to SDC E/F (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC.

c. Local

San Francisco Building Code

The applicable San Francisco Building Code for the Proposed Project is the 2010 San Francisco Building Code, which was in effect at the time the site or building permit was submitted. The San Francisco

Building Code consists of the 2010 CBC, the 2010 San Francisco Building Code Amendments to the 2010 CBC, the 2010 California Green Building Standards Code, and the 2010 California Residential Code. The San Francisco Building Code is implemented by DBI and is mandatory for all developments in the City. Sections of the San Francisco Building Code address geology and soils, seismic safety, foundations, soil investigations, safety of excavations, slopes on construction sites, and erosion control.

San Francisco General Plan

The goals of the Community Safety Element of the General Plan include reducing the structural and non-structural hazards to life safety and minimizing property damage resulting from future disasters. The following policies are from the Community Safety Element of the General Plan:

- Policy 1.3: Assure that new construction meets current structural and life safety standards.
- Policy 1.6: Consider site soils conditions when reviewing projects in areas subject to liquefaction or slope instability.
- Policy 1.7: Consider information about geologic hazards whenever City decisions that will influence land use, building density, building configurations, or infrastructure are made.

The Community Safety Element includes maps of potential hazard areas, including liquefaction and potential liquefaction areas.

The San Francisco Planning Code, Section 101.1(b), lists the Priority Policies for the City's General Plan. The following Priority Policy is from the City's General Plan:

(6) That the City achieve the greatest possible preparedness to protect against injury and loss of life in an earthquake.

Bay Area Rapid Transit District

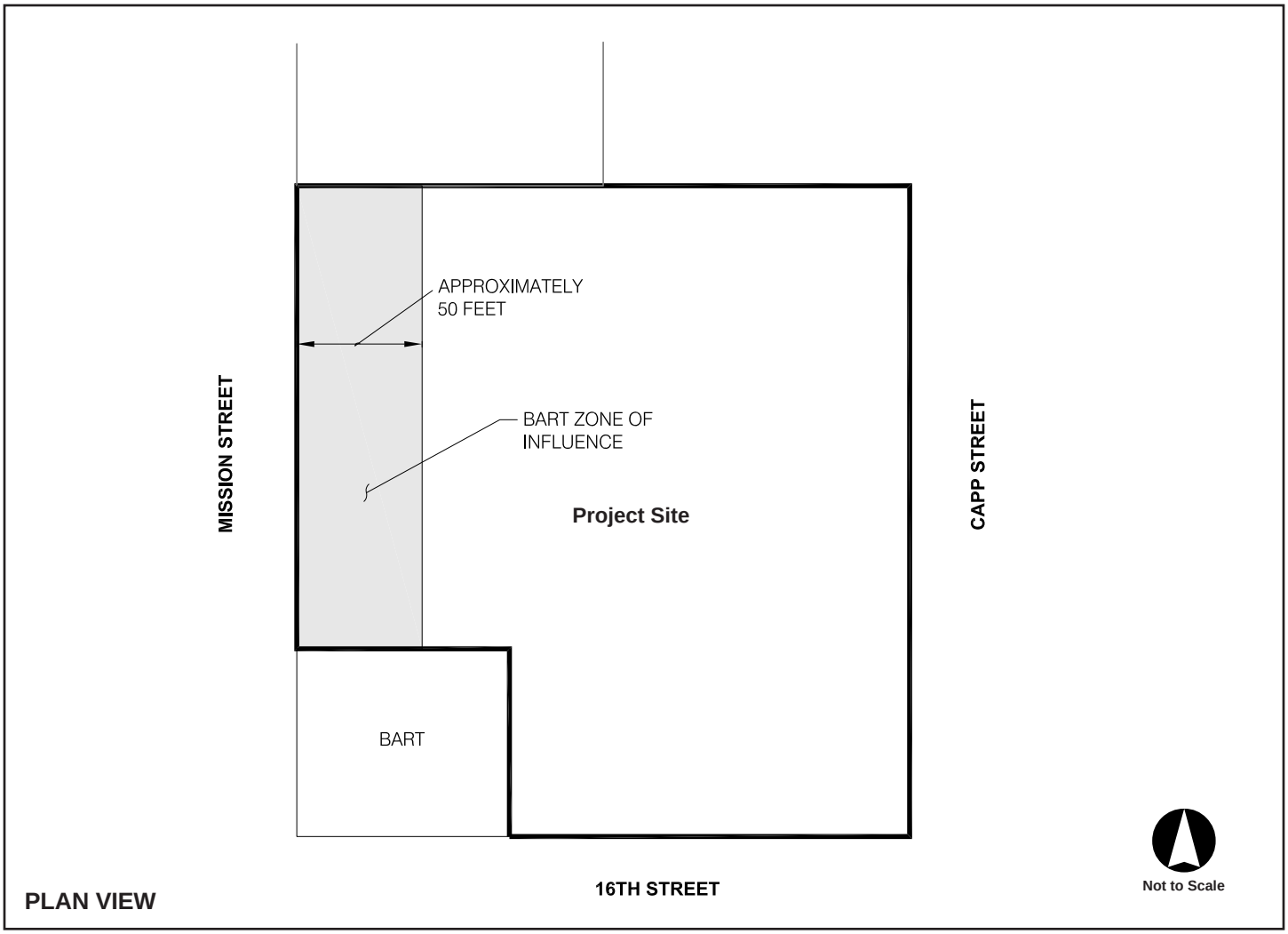
BART design and engineering requirements must be complied with where new construction is planned over or adjacent to BART's structures, in BART's zone of influence (ZOI).[5,6] The ZOI is defined as the zone above an imaginary line drawn from the bottom the BART's substructure at a slope of 1.5 horizontal to 1 vertical toward the ground surface. BART requires that building loads in the BART ZOI do not impose surcharge pressure on the BART tunnel or the station walls.

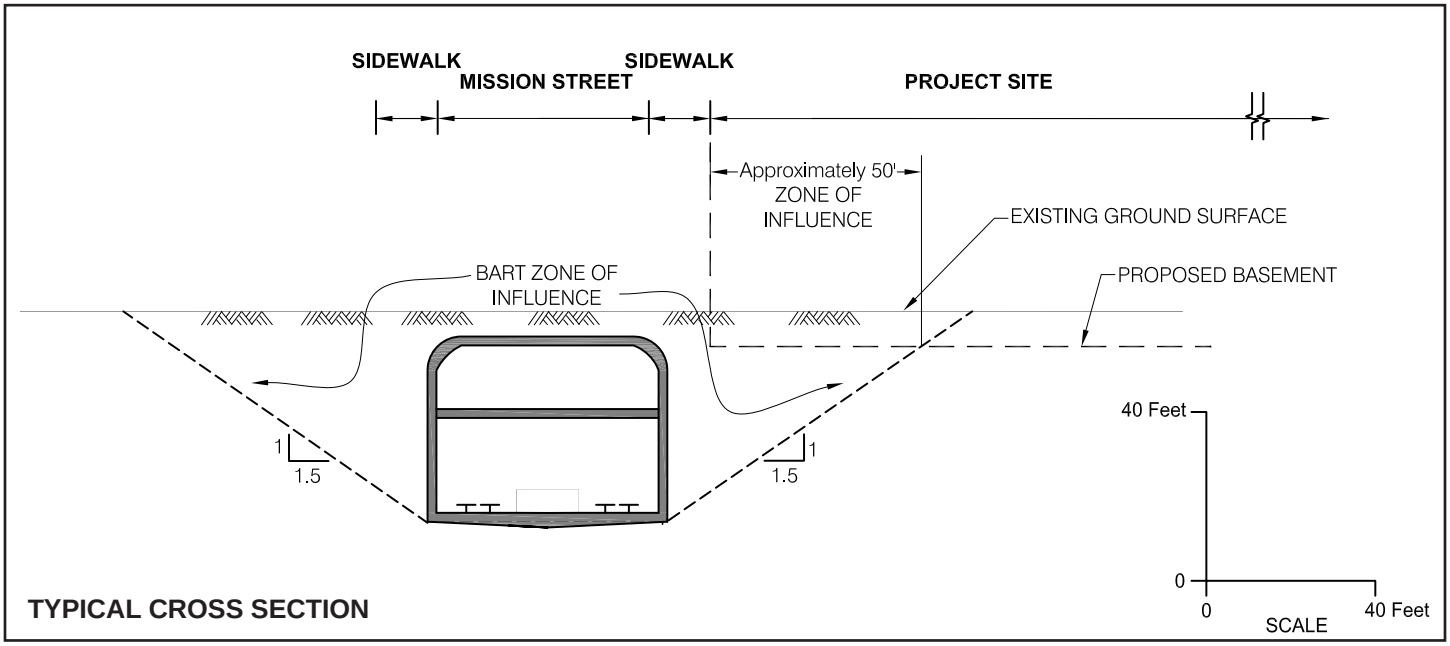
BART's General Guidelines for Design and Construction over or adjacent to BART's Subway Structures address the allowable loads (i.e., surcharges) on the BART subway structures; shoring requirements for work near these structures; construction, including excavation, dewatering, pile driving; and monitoring for groundwater levels and vibration. Project sponsors are required to submit design and construction documents to BART for review and approval.

As described in Chapter 2, Project Description, the first approximately 50 horizontal feet of the project site parallel to Mission Street would be in the BART ZOI, as shown on Figure 4.C-2, and therefore would be subject to BART design and engineering requirements.

[5] BART (Bay Area Rapid Transit District), 2012. Procedures for Permit and Plan Review. June. Available online at: bart.gov/sites/default/files/docs/Permits_and_Plan_Review_062012.pdf.

[6] BART (Bay Area Rapid Transit District), 2003. General Guidelines for Design and Construction Over or Adjacent to BART's Subway Structures. July. Available online at: bart.gov/sites/default/files/docs/Gen_Guide_Subway_062012.pdf.





Source: Treadwell and Rollo, 2013.

BART ZONE OF INFLUENCE IN VICINITY OF PROJECT SITE

1979 Mission Street Project
San Francisco, California

FIGURE 4.C-2

4. Impacts and Mitigation

a. Significance Thresholds

Thresholds for determining the significance of impacts in this analysis are based on the environmental checklist in Appendix G of the CEQA Guidelines, which has been adopted and modified by the Planning Department. For the purpose of this analysis, the following applicable thresholds were used to determine whether implementation of the Proposed Project would result in a significant geology and soils impact. Implementation of the Proposed Project would have a significant effect on geology and soils resources if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map 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);
  - Strong seismic ground shaking;
  - Seismically related ground failure, including liquefaction; or
  - Landslides;
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in an on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property;
- 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;
- 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.

b. Approach to Analysis

The Initial Study prepared for the Eastern Neighborhoods PEIR found that implementation of the Area Plans would not result in significant impacts with regard to geology, and no mitigation measures were identified. This issue was therefore not discussed in the Eastern Neighborhoods PEIR.

For the purposes of this analysis and due to the nature of the Proposed Project, there would be no Project impacts related to the following significance criteria. Therefore, an impact analysis is not provided for the reasons described below.

- Result in substantial soil erosion or the loss of topsoil. The project site is flat and fully developed. Soils are not currently exposed. During construction, soil would be exposed for a short time during demolition of existing structures and excavation for the building foundation and basement level. The Proposed Project would be required to comply with the City requirements for protection of exposed soils from erosion and runoff during project construction. As required by the Dust Control Ordinance and described under Topic 6, Air Quality, on pages 49 through 53 of the CPE Checklist (see Appendix A, attached), the Project Sponsor would submit a Dust Control Plan to ensure that Project construction dust impacts would not be significant. Therefore, the significance criterion related to soils erosion in the project area is not applicable to construction or operation of the Proposed Project, and is not analyzed further.

- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property. The project site is underlain by several clay layers, which could experience expansion. The Proposed Project would comply with the City Building Code and its requirements that the foundation of the building be designed and installed to protect against expansive soil. Therefore, the significance criterion related to expansive soils in the project area is not applicable to construction or operation of the Proposed Project, and is not analyzed further.

- Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. The Proposed Project would connect to the City's sewer and stormwater collection and treatment system and would not use a septic waste disposal system. Therefore, the significance criterion related to the capacity of soils in the project area to support septic tanks or alternative wastewater disposal systems is not applicable to construction or operation of the Proposed Project, and is not analyzed further.

- Substantially change the topography or any unique geologic or physical features of the site. The Proposed Project would entail excavation activities during construction for the foundation and basement level. Because there are no unique geologic or physical features on the site and the project site has previously been modified from its natural state, the Project would not result in substantial changes to topography or unique features. Therefore, the significance criterion related to substantial changes in topography or unique geologic or physical features of the site is not applicable to construction or operation of the Proposed Project, and is not analyzed further.

- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. This topic was addressed in the CPE Checklist under Topic 3, Cultural and Paleontological Resources, starting on page 35 of the CPE Checklist, which determined that no significant impacts not previously identified in Eastern Neighborhoods PEIR would occur as a result of the construction or operation of the Proposed Project.

c. Impact Evaluation

This section analyzes the Proposed Project's impacts related to geology and soils.

Impact GE-1: The Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture, ground shaking, liquefaction, or landslides. (*Less than Significant*)

There are no earthquake faults on or less than 1 mile from the project site, and the project site is not in an Alquist-Priolo Earthquake Fault Zone. Therefore, no fault rupture at the Project would be expected to occur. However, the project site has a 63 percent chance of experiencing at least one major earthquake (magnitude 6.7 or higher) within the next 30 years.[7] The intensity of such an event at the project site would depend on the distance to the causative fault and the earthquake epicenter, the depth of the rupture bgs, the moment magnitude, and the related duration of shaking. A strong seismic event in the Bay Area could potentially produce considerable ground accelerations at the project site.

During construction, the site would be excavated up to approximately 22 feet below grade. Approximately 34,523 cubic yards of soil would be excavated at the site. All excavated soil would be removed from the site and disposed of at an appropriate facility, except for a small amount to be used under the vehicle ramp in the parking garage. Due to the estimated groundwater depth of 8 to 10 feet bgs, and depending on the time of year, dewatering during construction and operations may be required. During excavation, the shoring system could yield and deform laterally if not properly designed. Such deformation could cause surrounding improvements to settle and move laterally. A pre-drilled soldier pile and lagging system[8] with internal bracing would be used for stabilizing the area of excavation adjacent to Mission Street and the Northeast BART Plaza. The shoring system would be designed and installed in compliance with BART requirements, as described under Impact GE-3, below. Tiebacks[9] would be used where the excavation abuts existing buildings on the northern side of the project site and the public right of way.

The Proposed Project is required to comply with the seismic safety standards set forth in the San Francisco Building Code. DBI is the City agency responsible for reviewing the Proposed Project's building permit application, structural drawings and calculations, and geotechnical report, and ensuring that the proposed project complies with the seismic safety standards and other applicable requirements of the Building Code. Project compliance with the Building Code would ensure that the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides would be low. This impact would be less than significant, and no mitigation measures are necessary.

Impact GE-2: The Proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project. *(Less than Significant)*

Strong shaking during an earthquake can result in ground failure such as that associated with soil liquefaction, cyclic densification, and lateral spreading. The analyses in the geotechnical investigation prepared for the Proposed Project indicates that the sand layers underlying the site could liquefy during a strong earthquake. It is anticipated that if liquefaction occurs it would be localized. Furthermore,

[7] USGS Working Group on Earthquake Probabilities, 2008. Forecasting California's Earthquake – What Can We Expect in the Next 30 Years? – USGS Fact Sheet 2008-3027, page 1. Available online at: http://pubs.usgs.gov/fs/2008/3027/. Accessed November 9, 2015.

[8] A soldier pile and lagging system is a construction technique for retaining soil during excavation using vertical piles (i.e., column elements) with horizontal lagging (i.e., panel elements).

[9] A tieback is a horizontal rod or wire used to reinforce retaining walls for stability; typically, one end of the tieback is secured to the wall that needs to be secured and the other end is anchored into a stable structure.

available geologic reports and maps pertaining to ground failures in San Francisco caused by previous earthquakes indicate that the site did not experience ground failures during the 1906 earthquake.[10] The risk of extensive liquefaction at the site is low, because there are no unsupported steep slopes nearby toward which a destabilized soil mass could translate. Therefore, the risk of lateral spreading at the site during a strong earthquake is considered to be very low.[11] Depending on the thickness of loose fill, the geotechnical investigation estimated that up to ½ inch of earthquake induced settlement could occur at the ground surface outside the building, which could possibly lead to small displacements. Within the building footprint, the loose sand would be removed during basement excavation; therefore, differential compaction would not occur beneath the building.

The potential impacts related to a geologic unit or soil that is unstable, or that would become unstable as a result of the project, would be less than significant. No mitigation measures are necessary.

Impact GE-3: The Proposed Project could impose lateral surcharge pressures on the BART subway. *(Less than Significant with Mitigation)*

The first approximately 50 horizontal feet of the project site parallel to Mission Street is in the BART ZOI, and Project construction could result in temporary or permanent adverse impacts on the BART subway, such as placing loads or causing vibrations that exceed the allowable thresholds for BART subway structures.

BART has stringent requirements regarding construction adjacent to their facilities, including disallowing additional loads on the subway structures beyond the design thresholds established for the structures, requiring recharge if groundwater is lowered by more than 2 feet, and limiting vibrations from construction activities, as described above under Regulatory Framework.

The geotechnical investigation prepared for the Proposed Project recommended that a mat foundation be used to support the Proposed Project, as described in Chapter 2, Project Description. In the BART ZOI, the mat foundation would be supported on drilled piers that would transfer the building load to the soil below the ZOI. During construction adjacent to the BART station, the basement excavation would be shored and a soldier pile with lagging with internal bracing would be used. Elsewhere, a tied back soldier pile and lagging system with tiebacks would be used. The foundations of the two-story buildings north of the site would be underpinned using hand excavated piers. Basement walls would be designed to resist lateral at rest pressures imposed by the adjacent soil and any surcharge loads.

Construction in the BART ZOI and placement of additional loads in the ZOI could cause adverse effects on the BART subway during construction or operation of the Proposed Project if it is not properly designed and constructed, resulting in a potentially significant impact. The Proposed Project would comply with BART Guidelines for Design and Construction Over or Adjacent to BART's Subway Structures, and Procedures for Permit and Plan Review. The information required for this review would be included in the structural plan addendum to the site permit. Once these documents have been prepared by the project sponsor in consultation with the structural engineer, they would be submitted for review by BART. Such compliance would reduce potential impacts to the BART subway to less than significant. However, the geotechnical report prepared for the Proposed Project also made specific

[10] Treadwell & Rollo, 2013. Geotechnical Investigation, 1979 Mission Street. Prepared for Maximus Real Estate Partners. January 30.

[11] Ibid.

recommendations for construction monitoring for this Project described in Mitigation Measure M-GE-3. These measures are imposed on the Proposed Project in addition to any requirements identified by BART through its review of the permit, and would reduce impacts related to the Project's lateral surcharge pressures on the BART subway to *less than significant with mitigation*.

Mitigation Measure M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure described below would require compliance with BART's design and construction guidelines, development of construction related plans as required by BART, and construction monitoring for groundwater levels, vibration, and shoring movement or movement of adjacent structures. Impacts related to the project's lateral surcharge pressures on the BART subway would be *less than significant with mitigation*.

M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure

Prior to submission of structural plan addendum to the site permit for the Proposed Project to DBI, the Project Sponsor shall submit such plans to BART for its review and approval to ensure that the plans comply with BART guidelines for the construction activity in the BART ZOI, including the General Guidelines for Design and Construction Over or Adjacent to BART's Subway Structures, and Procedures for Permit and Plan Review.[12]

The Project Sponsor and their structural engineer shall coordinate with BART to determine which of the following guidelines must be included in the plans to be submitted to BART for review:

- Geologic Hazards Evaluation and Geotechnical Investigation reports, which shall include an engineering geology map, a site plan showing the location of subway structures and BART easement, a soil reworking plan, and the geological conclusion and recommendations;
- Dewatering monitoring and recharging plans;
- A vibration monitoring plan and/or movement and deformation monitoring plans for steel lined tunnels. These plans shall include locations and details of instruments in subways;
- A foundation plan showing the anticipated total foundation loads;
- An excavation plan for area in the ZOI, showing excavation slope or shoring system; and
- A description of the procedures and control of the soil compaction operation.

The Project Sponsor and their consultant shall monitor the groundwater level in the BART ZOI, and piezometers shall be installed on the Mission Street sidewalk adjacent to the site if requested by BART.

The following guidelines would apply to the adjacent property owners within 50 feet of the project site:

[12] BART (Bay Area Rapid Transit District), 2012. Procedures for Permit and Plan Review. June. Available online at: bart.gov/sites/default/files/docs/Permits_and_Plan_Review_062012.pdf.
BART (Bay Area Rapid Transit District), 2003. General Guidelines for Design and Construction over or Adjacent to BART's Subway Structures. July. Available online at: bart.gov/sites/default/files/docs/Gen_Guide_Subway_062012.pdf.

Prior to start of construction, the Project Sponsor shall engage the service of a licensed land surveyor to prepare a pre-construction survey of the adjacent permanent structures within 50 feet of the project site by a licensed surveyor. The scope of the pre-construction survey shall include, but shall not be limited to, the following tasks.

- Establish survey measurements of the exterior elevations of adjacent properties to monitor any movement or settlement of adjacent permanent structures during excavation.
- Photograph and/or video the exterior and interior of the adjacent permanent structures which shall provide a complete documentation of existing conditions prior to commencement of the Work. The photographic and video survey shall be adequate in scope to provide a legally binding "before and after" comparison of the conditions of the adjacent permanent structures. The Project Sponsor shall provide copies of the survey report, photographs and video and all other documents disclosing the results of the pre-construction inspection to the adjacent property owners within 5 working days of receipt from the surveyor.
- Provide the adjacent property owners with the business addresses, telephone numbers, and names of (i) the shoring and underpinning engineer for the Project; and (ii) the contact persons for the general contractor and the subcontractor(s) responsible for completing the work at least 5 working days prior to commencement of the work.
- Install inclinometers and piezometers if necessary to monitor movement of the shoring system and to monitor groundwater levels, respectively, during excavation and construction.
- Notify the adjacent property owners of any change order affecting the scope of the work or the plans within 3 calendar days of such changes being proposed.

Upon start of construction, the Project Sponsor's licensed land surveyor shall perform the following tasks.

- Monitor the adjacent permanent structures within 50 feet of the project site. Monitoring shall be performed weekly until shoring and underpinning work has been completed; thereafter, monitoring shall be performed monthly during construction of foundation and retaining walls.
- In the event that there is more than one half inch of lateral movement, or one quarter inch of vertical movement, the Project Sponsor's surveyor shall immediately notify the adjacent property owner, the Project Sponsor's general contractor, the shoring and excavation sub-contractor, and DBI, and the Project Sponsor shall instruct his contractor and subcontractor to stop work until such time that appropriate remedial steps have been approved by DBI.

d. Cumulative Impacts

Impact C-GE-1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects in the vicinity, would not result in a significant cumulative impact related to geology and soils. *(Less than Significant)*

The geographic scope for cumulative geology and soils impacts includes the project site and immediate vicinity, because these impacts are generally site-specific and depend on the local geology and soil conditions.

The Proposed Project, combined with other reasonably foreseeable development in the immediate project vicinity, and listed in Section 4.A.3 under Approach to Cumulative Analysis, would increase the population and development in an area subject to seismic risks and hazards. However, the Proposed Project and all other foreseeable projects in the immediate vicinity would be required to implement appropriate geotechnical design requirements similar to those discussed in this section, and to adhere to all state and local building codes, including fire, seismic, structural, and policies pertaining to building safety and construction permitting. Therefore, the Proposed Project, combined with other foreseeable development in the immediate vicinity, would result in a less than significant cumulative impact related to geology or soils. No mitigation measures are necessary.

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CHAPTER 5

Other CEQA Issues

This chapter addresses growth inducement impacts, significant environmental impacts that cannot be avoided, significant irreversible environmental changes, and areas of controversy and issues to be resolved if the Proposed Project is implemented.

A. Growth Inducing Impacts

This section analyzes the growth inducement potential of the Proposed Project, as required by CEQA Guidelines Section 15126.2(d). A project is considered growth inducing if it would directly or indirectly foster substantial economic or population growth, or the construction of substantial amounts of additional housing. Examples of projects likely to result in significant adverse growth inducement include extensions or expansions of infrastructure systems beyond what is needed to serve project specific demand, and development of new residential subdivisions in areas that are sparsely developed or undeveloped. The environmental effects of project induced growth are considered secondary or indirect impacts of the project. Growth can result in a variety of indirect environmental impacts, including increased demand on community services and public service infrastructure, increased traffic and noise, and degradation of air and water quality.

Assessing the growth inducement potential of the Proposed Project involves determining whether construction of the Proposed Project would remove an obstacle to population growth, and therefore directly or indirectly support more economic or population growth or residential construction in the surrounding environment. The project site is located on an infill site and is surrounded on all sides by urban uses. The Proposed Project would increase population density in the project area, replacing 50,915 square feet of retail/restaurant/entertainment uses and a 24,210 square foot surface parking lot with a new 388,912 gsf, mixed use residential and retail project, including 331 residential units. The Proposed Project would provide high density residential growth that would not require expansion to existing infrastructure, public services, community facilities, or public utilities. Although this growth might have otherwise occurred at other Bay Area locations, the Proposed Project would focus growth on an underused infill site that is adjacent to local and regional public transit, employment areas, and public amenities.

The Eastern Neighborhoods PEIR found that an increase of approximately 7,400 to 9,900 dwelling units throughout the lifetime of the Eastern Neighborhoods Rezoning and Area Plans (year 2025) would be expected to occur as a secondary effect of implementation of the Eastern Neighborhoods Rezoning and Area Plans.

As of February 23, 2016, projects containing 9,749 dwelling units and 2,807,952 square feet of nonresidential space have completed or plan to complete environmental review in the Eastern

Neighborhood Plan areas. This level of development corresponds to an overall population increase of approximately 23,758 to 25,332 persons. In the Eastern Neighborhoods PEIR, approximately 782 to 2,054 of these dwelling units were anticipated in the Mission Area Plan subarea, and 700,000 to 3,500,000 square feet of nonresidential space (excluding production, distribution, and repair loss) through the year 2025. This level of development corresponds to an overall population increase of approximately 4,719 to 12,207 persons; and as of February 23, 2016, approximately 2,451 dwelling units and 355,842 square feet of nonresidential space have completed or are planned to complete environmental review in this subarea, including the Proposed Project.[1] This level of development corresponds to an overall population increase of 8,764 to 10,650 persons. Of the 2,451 dwelling units that are under review or have completed environmental review, building permits have been issued for 989 dwelling units, or approximately 40 percent of those units.

The Eastern Neighborhoods PEIR also determined that the Eastern Neighborhoods Rezoning and Area Plans would serve to advance some key City policy objectives, including provision of housing, especially permanently affordable housing, conversion of underused industrial lands to housing, and new opportunities for housing near downtown. In addition, the Eastern Neighborhoods PEIR found that the Eastern Neighborhoods Rezoning and Area Plans would not create a substantial demand for additional housing in San Francisco. However, the Eastern Neighborhoods PEIR determined that the entire Eastern Neighborhoods Rezoning and Area Plans are themselves potentially growth inducing, because they would remove barriers to housing and population growth throughout the plan area, and would result in secondary and cumulative effects due to that growth. These indirect and cumulative effects are fully analyzed in the Eastern Neighborhoods PEIR. The Proposed Project is within the development projected to occur under the Eastern Neighborhoods Rezoning and Area Plans, and there would be no additional impacts related to any growth inducing effects beyond those analyzed in the Eastern Neighborhoods PEIR.

Therefore, implementation of the Proposed Project would increase population growth only to the extent already envisioned in existing regional, local, and area plans, and would not have a direct or indirect growth inducing impact.

B. Significant Unavoidable Impacts

In accordance with Section 21067 of CEQA, and CEQA Guidelines Sections 15126(b) and 15126.2(b), the purpose of this section is to identify Project related environmental impacts that could not be eliminated or reduced to a less than significant level with the implementation of all identified mitigation measures. The findings in this chapter are subject to final determination by the Planning Commission as part of its certification of this EIR.

Previously, the Eastern Neighborhoods PEIR determined that adoption of the Eastern Neighborhoods Rezoning and Area Plans could result in new shadow on project area parks, possibly in substantial amounts, depending on the specifics of the future individual proposals. As stated in the Eastern Neighborhoods PEIR, the feasibility of complete mitigation for potential new shadow impacts of

[1] For this and the Land Use and Land Use Planning section, environmental review is defined as projects that have or are relying on the growth projections and analysis in the Eastern Neighborhoods PEIR for environmental review (i.e., Community Plan Exemptions or Focused Mitigated Negative Declarations and Focused EIRs with an attached Community Plan Exemption Checklist).

unknown development proposals could not be determined at that time. Therefore, no mitigation measures were identified, and the Eastern Neighborhoods PEIR identified a significant and unavoidable impact to shadow. This impact was addressed in a Statement of Overriding Considerations with CEQA Findings, and adopted as part of the Eastern Neighborhoods Rezoning and Area Plans approval in December 2008.

Subsequently, this EIR has identified Project related impacts that would remain potentially significant or significant, even with the implementation of all identified mitigation measures. Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, describes the potential environmental impacts of the Proposed Project, and identifies mitigation measures to reduce those impacts. With the exception of the significant and unavoidable impacts described below, all other significant impacts would be eliminated, or reduced to less than significant levels by the identified mitigation measures.

As evaluated in Section 4.B, Wind and Shadow, the Proposed Project would result in the following significant and unavoidable project specific and cumulative impacts related to shadows:

- Impact WS-2: The Proposed Project would create new shadow in a manner that would substantially affect the Marshall Elementary School outdoor recreation facilities and open space.
- Impact C-WS-2: The Proposed Project would have a cumulatively considerable contribution to significant cumulative shadow impacts, substantially affecting outdoor recreation facilities and open space.

C. Significant Irreversible Environmental Changes

In accordance with Section 21100(b)(2)(B) of CEQA and CEQA Guidelines Sections 15126(c) and 15126.2(c), the purpose of this section is to identify significant irreversible environmental changes that would be caused by implementation of the Proposed Project. Uses of nonrenewable resources during the initial and continued phases of a project may be irreversible, because a large commitment of such resources makes removal or non-use thereafter unlikely. Primary impacts, and particularly secondary impacts (such as a highway improvement that provides access to a previously inaccessible area), generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with a project.

Construction of the Proposed Project would result in a minor irreversible and irretrievable commitment of natural resources through the use of fossil fuels and construction materials. Additionally, Proposed Project operation would involve a minor, incremental use of nonrenewable resources, such as electricity, because the project site is an infill site surrounded by urban uses and located at a transit hub, thereby limiting the irretrievable commitment of resources required to support the Proposed Project. Furthermore, the Project Sponsor would implement applicable Green Building requirements, including those for construction, recycling, construction materials including low emitting materials, energy and water consumption, parking, and stormwater, thereby further reducing the commitment of natural resources to the Proposed Project.

D. Areas of Known Controversy and Issues to be Resolved

The Notice of Preparation (NOP) and Community Plan Exemption (CPE) Checklist for this Project was published on January 28, 2015, beginning a public review and comment period that ended on March 2,

2015. Individuals and agencies receiving these notices included owners of properties within 300 feet of the project site, potentially interested parties, and local, regional and state agencies. In addition, the notice was provided to neighborhood organizations who requested Planning Department notification of projects in the Mission District. During the review and comment period, approximately 282 emails, letters, and comment cards were submitted to the Planning Department by interested parties. The emails, letters, and comment cards received in response to the NOP and CPE Checklist are available for review as part of Case File No. 2013.1543E. The Planning Department has considered the comments made by the public in preparation of the Draft EIR for the Proposed Project.

Comments on the NOP and CPE Checklist pertain to environmental issues as well as to project merits, including the size and design of the Proposed Project, and socioeconomic issues. Comments pertaining to project merits are provided for consideration by decisionmakers in their review of the approval actions for the Proposed Project. Comments are grouped below by environmental topic, and summarized. The location where the topic is addressed in the NOP and CPE Checklist, or in this EIR, is noted. Comments not related to environmental issues are summarized separately.

Project Description

Several comments assert that the Proposed Project would not be an environmentally friendly, transit oriented development, because it would include a 163 car parking garage. Comments suggest that the Project would cater to higher income residents who are more likely to drive, thereby increasing carbon emissions. One of the comments recommended that the parking garage be replaced by community space and bicycle parking. Another comment suggested that the potential elevated playground at Marshall Elementary School (not proposed as part of this Project) be connected to the existing playground area via a ramp. One of the comments stated that the open space provided on the second floor of the Proposed Project would be private and not publicly accessible, and therefore would not constitute a community benefit. To the extent these comments regard the merits of the Proposed Project, they are provided to the decisionmakers for consideration during their review of project approvals.

Conclusions regarding transportation and circulation impacts are addressed in the CPE Checklist attached as Appendix A to this EIR. In addition, 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*[2] (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 in a vehicle.

OPR's proposed transportation impact guidelines provide 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 level of service (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 does not protect environmental quality.

[2] This document is available online at: https://www.opr.ca.gov/s_sb743.php.

- 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.

The Proposed Project meets the new screening level VMT threshold.[3]

The components of the Proposed Project, including open space and parking spaces, are described in Chapter 2, Project Description, of this EIR (pages 2-7 through 2-34).

Environmental Review Process

One comment requested an extension of the public comment period following the publication of the NOP and CPE Checklist to submit comments. Chapter 1, Introduction, describes the EIR scoping period (pages 1-3 through 1-5). The NOP, published on January 28, 2015, initiated a 30-day review through March 2, 2015. The Planning Department continued to accept comments after the end of the public comment period. Comments considered in this EIR were received through March 11, 2015.

Comments on Adequacy of Eastern Neighborhoods PEIR

Several comments suggested that the Eastern Neighborhoods PEIR should not be relied on for environmental review of the Proposed Project, because there are project specific environmental effects, and substantial new information has become available since the release of the Eastern Neighborhoods PEIR. These comments state that the increase in housing prices in the Mission District should be considered substantial new information, and that project specific environmental effects would result from the Proposed Project's location next to Marshall Elementary School. These comments suggest that the EIR should analyze other impact topics in addition to wind, shadow, and geology and soils. Other comments expressed that there was no need for an EIR, because the project was already addressed in the Eastern Neighborhoods PEIR. Section 4.A, Introduction to Environmental Setting, Impacts, and Mitigation Measures, addresses the adequacy of the Eastern Neighborhoods PEIR (pages 4.A-2 through 4.A-5). In addition, other environmental topics, aside from wind, shadow, and geology and soils, are addressed in the CPE Checklist (Appendix A of this EIR). As identified in the CPE Checklist, mitigation measures from the Eastern Neighborhoods EIR were applied to the Proposed Project, as well as other improvement measures for transportation and construction emissions.

Land Use

One comment stated that the Proposed Project would divide an existing community by causing gentrification of the neighborhood and displacement. This issue is addressed under Topic 1, Land Use and Land Use Planning, on pages 33 and 34, of the CPE Checklist (Appendix A of this EIR).

[3] Planning Department, 2016. Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis for 1979 Mission Street. March 18.

As described in Chapter 2, Project Description, the Proposed Project must comply with the requirements of the City's Inclusionary Affordable Housing program. Topic 2, Population and Housing, on page 35 of the CPE Checklist, addresses this topic. Environmental analysis under CEQA is required to focus on the direct and indirect physical changes to the environment that could reasonably result from a proposed project. Accordingly, the displacement issue addressed under CEQA, and as stated in the CPE Checklist, refers specifically to the direct loss of housing units that would result from proposed demolition of existing housing. The Proposed Project would not remove existing housing. Therefore, there would be no direct physical displacement effects as a result of the proposed project. In addition, the possibility that the Proposed Project would cause gentrification of the neighborhood and displacement is speculative, and is not a physical environmental effect subject to analysis under CEQA.

Transportation and Circulation

One comment stated that the Proposed Project would cause significant impacts on transit, traffic, and parking in the immediate vicinity, as well as the broader area. Another comment stated that widening the sidewalk on Capp Street would increase congestion, because cars would no longer be able to go around other cars that are dropping off or picking up children at Marshall Elementary School. Impacts associated with the proposed streetscape improvements, including sidewalk widening, were analyzed in the Transportation Impact Study (TIS) prepared for the Project.[4] As noted in the TIS, the proposed streetscape improvements would not impede or modify existing vehicular access to the student drop off/ pick up zone along the western side of Capp Street, nor would these improvements impede access to the school by other modes of transportation. As described under Topic 4, Transportation and Circulation, on pages 38 through 46 of the CPE Checklist, the Proposed Project would not result in significant traffic impacts under Existing Plus Project conditions, and would not contribute considerably to 2025 cumulative LOS delay conditions.

Another comment stated that as the lead agency, the City is responsible for all project mitigation, including any needed improvements to state highways, and requested that the Transportation Impact Fees associated with the Project be identified. In addition, the comment requested that pedestrian, bicycling, and transit impacts be identified, and stated that an encroachment permit would be needed for any work or traffic control that encroaches onto the state right of way. A detailed analysis of transportation impacts is contained in the TIS prepared for the Project.[5]

Multiple comments expressed concerns that the new parking garage would exit on Capp Street, which is used by parents and children to access the school, potentially resulting in pedestrian safety issues and increased traffic congestion. These issues are addressed on pages 42 and 43 of the CPE Checklist (Appendix A of this EIR). A complete TIS was prepared for the Project, and is available for review at the Planning Department as part of Case File No. 2013.1543E. The Proposed project would be subject to Area Plan Impact Fees as well as the Transportation Sustainability Fee. As stated above under Project Description, LOS is no longer the metric for measuring traffic impacts. The Proposed project meets the screening criteria for VMT, and would not result in a substantial VMT impact.

[4] CHS Consulting Group, 2014. 1979 Mission Street Mixed-Use Residential Project Transportation Impact Study. December 15.

[5] Ibid.

Noise

Multiple comments expressed concerns about construction noise levels that would be generated by the Project in the vicinity of Marshall Elementary School. This issue is addressed under Topic 5, Noise, pages 46 through 49 of the CPE Checklist (Appendix A of this EIR). This is mitigated in the Eastern Neighborhoods EIR, and the applicable construction noise mitigation measure has been applied to this project.

Air Quality

Many comments expressed concerns about construction dust affecting the children attending Marshall Elementary School. This issue is addressed under Topic 6, Air Quality, on page 50 of the CPE Checklist (Appendix A of this EIR). In particular, the Proposed Project is required by the City's Dust Control Ordinance to prepare a Dust Control Plan for review by the Department of Public Health, and to implement measures to minimize dust at the construction site.

Wind and Shadow

Several comments noted that the Proposed Project would have the potential to create wind and shadow impacts, particularly shadows cast on Marshall Elementary School. Wind and shadow are analyzed in the EIR in Chapter 4.B, Wind and Shadow (pages 4.B-1 through 4.B-34). One of the comments specifically noted that shadows would be cast on the Redstone Building at 2940 16th Street, which is designed for passive (sunlight) heating. The Redstone Building is not an outdoor recreation facility or other public open space. Therefore, shadow impacts on this building are not evaluated under CEQA.

Utilities and Service Systems

One comment stated that the Project would use substantial amounts of water for both construction and operation. The comment recommends that the building include water storage and capacity tanks, as well as larger roof rain collection systems to meet water rationing needs. Water use is addressed under Topic 10, Utilities and Service Systems, on page 55 of the CPE Checklist (Appendix A of this EIR).

Hazards and Hazardous Materials

One comment stated that dust from construction of the Proposed Project, particularly the demolition of the existing buildings which are known to contain lead and asbestos, would cause significant health risks. Hazardous materials and hazardous wastes were addressed under Topic 15, Hazards and Hazardous Materials, on pages 59 through 61 of the CPE Checklist (Appendix A of this EIR). This is mitigated in the Eastern Neighborhoods EIR, and the applicable hazards mitigation measure has been applied to this project.

Public Services

One comment stated that public services are already at capacity with longer than normal wait times, and the Project would negatively affect the public infrastructure and services. This issue is addressed under Topic 11, Public Services, on page 55 of the CPE Checklist (Appendix A of this EIR).

Geology and Soils

One comment expressed concern that the Project may have a significant impact on transit systems in the event of an earthquake due to its proximity to the BART tunnel, stating that the size and weight of the

Project design would impact the soils and geological conditions at the site over the course of construction. Geology and Soils, including the BART tunnel, are addressed in Section 4.C of this EIR (pages 4.C-1 through 4.C-15).

Project Merit

The following comments are not related to environmental issues addressed in this EIR, and are provided for consideration by decisionmakers in their review of the approval actions for the Proposed Project.

The majority of the comments received on the NOP/CPE Checklist relate to the impact of the Proposed Project on the housing supply in San Francisco. A number of comments expressed support for the Project because it would increase the housing supply at a time of increasing demand and currently rising housing prices. Other comments expressed a preference for a greater number of units than proposed. A few of the comments also noted that the Project was ideally located in a transit rich location.

Many other comments expressed opposition to the Proposed Project, stating that the Project would not provide enough affordable housing and that the units developed under the Proposed Project would mainly be affordable to wealthy residents. Some comments said that the Proposed Project would increase property values, resulting in increased development pressures, displacement, and evictions in the neighborhood. One comment mentioned that a "luxury development" would be more suitable in other neighborhoods in San Francisco rather than in the Mission District.

Several comments expressed support for the proposed improvements to the streetscape and the Northeast BART Plaza. Comments also stated that the improvements would increase the Northeast BART Plaza's safety.

A comment speculated that the newly added Northeast BART Plaza open space would be used primarily for sales oriented purposes rather than passive recreation, thereby detracting from the public nature of the plaza.

One comment recommended that the Project construct a publicly accessible urban garden on the roof deck or communal areas of the site.

One comment stated that the Project Sponsor has negatively affected a large rental apartment community in San Francisco (Park Merced).

A comment suggested that a study be prepared on the connection between housing development pressures and gentrification.

Another comment suggested that the Project Sponsor create an endowment dedicated to Marshall Elementary School.

Summary

The comments received on the NOP/CPE Checklist have been addressed and analyzed throughout this EIR and the CPE Checklist, as noted above.

This Draft EIR has been circulated for public review and comment, as described in Chapter 1, Introduction. During this public review period, written comments concerning the accuracy and adequacy of the Draft EIR will be accepted, and a public hearing will be held before the Planning Commission to receive oral comments. After the close of the public comment period, written responses

will be prepared to address substantive comments received on the environmental analysis, and any revisions to the Draft EIR will be identified.

Comments expressing support for the Proposed Project or opposition to it will be considered independently of the environmental review process by City decisionmakers, as part of their decision to approve, modify, or disapprove the Proposed Project.

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CHAPTER 6

Alternatives

State CEQA Guidelines Section 15126.6(a) requires that an EIR evaluate "a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic project objectives but would avoid or substantially lessen any of the significant effects, and evaluate the comparative merits of the alternatives." An EIR need not consider every conceivable alternative to a proposed project. Rather, a range of potentially feasible alternatives, governed by the "rule of reason," must be considered. This is intended to foster informed decision making and public participation (State CEQA Guidelines Section 15126.6[f]).

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 taken into consideration when assessing the feasibility of alternatives: 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]).

CEQA also requires that a No Project Alternative be evaluated (CEQA Guidelines Section 15126.6[e]). The analysis of the No Project Alternative is based on the assumption that the Project would not be approved. In addition, an environmentally superior alternative must be identified among the alternatives considered. The environmentally superior alternative is generally defined as the alternative that would result in the least adverse environmental impacts to the project site and affected environment. If the No Project Alternative is found to be the environmentally superior alternative, the EIR must identify an environmentally superior alternative among the other alternatives.

The analysis of alternatives is of benefit to decisionmakers because it provides more complete information about the potential impacts of land use decisions. Consequently, there is a better understanding of the interrelationship among all of the environmental topics under evaluation. Decisionmakers must consider approval of an alternative if it would substantially lessen or avoid significant environmental impacts identified for the proposed project, and if the alternative is determined to be feasible.

This chapter identifies alternatives to the Proposed Project, and discusses environmental impacts associated with each alternative. Alternatives were selected that would reduce identified impacts of the Proposed Project. The Proposed Project would result in significant unavoidable impacts related to shadow. Specifically, the Proposed Project would result in significant unavoidable shadow impacts on the Marshall Elementary School Playground (the Playground).

In addition, the Proposed Project, combined with past, present, and reasonably foreseeable future projects, would result in a considerable contribution to significant cumulative shadow impacts on the Playground.

A. Summary of Project Alternatives

This chapter compares six alternatives, summarized below and in Table 6-1:

- Alternative A: No Project Alternative, under which the project site would not be redeveloped, and would remain in its existing condition and uses.

- Alternative B: Bulk Code Compliant Alternative, under which the project site would be redeveloped with a building massing that would comply with the bulk district requirements for the project site. Similar to the Proposed Project, under this alternative the project site would be developed as a mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

- Alternative C: Raised Playground Alternative, under which the project site would be redeveloped in the same way as the Proposed Project, but the existing Playground would be replaced with a one story structure with a Playground on its roof (referred to as the Raised Playground). In particular, the one story multi use room of the existing school at the northwestern corner of the Playground and the temporary modular building at the southeastern corner of the Playground would be removed. Then a new 15-foot-high structure would be constructed at the location of the existing Playground, the roof of which would be the new Raised Playground. The structure would include a new multi-purpose room, a music room, a library, a classroom, storage space, an area for trash, recycling, and compost bins, and parking for up to eight cars below the new Raised Playground. Similar to the Proposed Project, under this alternative, the project site would be developed as mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

- Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side), under which the Mission Street and 16th Street residential components would be identical to the Proposed Project. However, the northeastern corner of the Capp Street residential component would be reduced from five stories to three and four stories. Similar to the Proposed Project, under this alternative, the project site would be developed as a mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

- Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component, under which the Mission Street and 16th Street residential components would be identical to the Proposed Project. However, the northern end of the Capp Street residential component would be further reduced in height through a series of setbacks from the northern property line, ranging between 35 and 55 feet. Similar to the Proposed Project, under this alternative the project site would be developed as mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

- Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components, under which the 16th Street residential component would be identical to the Proposed Project. However, the northern end of the Capp Street residential component would be set back 70 feet from the northern property line above the podium, and the height of the Mission Street residential component would be reduced from 105 to 65 feet. Similar to the Proposed Project, under this alternative the project site would be developed as a mixed use residential building with ground floor retail uses, off street ground level loading and basement parking, and privately owned, publicly accessible open space along the Northeast BART Plaza.

Table 6-1
Summary of Project Alternatives and Proposed Project

Description	Proposed Project	Alternative A – No Project	Alternative B – Bulk Code Compliant Alternative	Alternative C – Raised Playground Alternative	Alternative D – Reduced Shadow Alternative 1	Alternative E – Reduced Shadow Alternative 2	Alternative F – Reduced Shadow Alternative 3
Ability to Meet Project Sponsor's Objectives	Would meet all Project Sponsor's objectives.	Would not meet any of the Project Sponsor's objectives.	Would meet all Project Sponsor's objectives but to a lesser extent than the Proposed Project.	Would meet all Project Sponsor's objectives.	Would meet all Project Sponsor's objectives but to a lesser extent than the Proposed Project.	Would meet some of the Project's Sponsor's objectives but would have less opportunities to provide affordable and high density housing adjacent to a local and regional public transit hub compared to the Proposed Project.	Would meet some of the Project's Sponsor's objectives but would have less opportunities to provide affordable and high density housing adjacent to a local and regional public transit hub compared to the Proposed Project.
Building Height/Stories	55 to 105 feet (121 feet with elevator penthouse)/6 to 10 stories	Approximately 23 to 30 feet, 1 story	Same as Proposed Project	Same as Proposed Project	35 to 105 feet (121 feet with elevator penthouse)/3 to 10 stories	15 to 105 feet (121 feet with elevator penthouse)/1 to 10 stories	15 to 105 feet (121 feet with elevator penthouse)/1 to 10 stories
Residential Units	331	None	331	331	327	310	243
Parking							
Vehicle	163 spaces (136 residential, 22 commercial, 4 car share, and 1 ADA van space), and 3 freight loading spaces	54 spaces	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Bike	192 spaces (162 secured Class I spaces in basement and 30 Class II spaces on street)	None	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project

Table 6-1
Summary of Project Alternatives and Proposed Project Development (Continued)

Description	Proposed Project	Alternative A – No Project	Alternative B – Bulk Code Compliant Alternative	Alternative C – Raised Playground Alternative	Alternative D – Reduced Shadow Alternative 1	Alternative E – Reduced Shadow Alternative 2	Alternative F – Reduced Shadow Alternative 3
Building Characteristics							
Mission Street component[6]	6 to 10 stories/65 to 105 feet in height/121 feet inclusive of the elevator penthouse	NA	6 to 10 stories/ 121 feet in height inclusive of the elevator penthouse	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	6 stories/65 feet in height/81 feet inclusive of the elevator penthouse
16th Street component[6]	7 to 10 stories/75 feet to 105 feet in height/121 feet inclusive of the elevator penthouse	NA	6 to 10 stories/ 121 feet inclusive of the elevator penthouse	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Capp Street component[6]	5 stories/55 feet in height/ 71 feet inclusive of the elevator penthouse	NA	Same as Proposed Project	Same as Proposed Project	3 to 5 stories/71 feet in height inclusive of the elevator penthouse	1 to 5 stories/15 to 55 feet in height/ 71 feet in height inclusive of the elevator penthouse and set back 35 feet from the north property line above the first floor with additional setback on the fourth and fifth floors	1 to 5 stories/15 to 55 feet in height/ 71 feet in height inclusive of the elevator penthouse and set back 70 feet from the north property line above the first floor

Table 6-1
Summary of Project Alternatives and Proposed Project Development (Continued)

Description	Proposed Project	Alternative A – No Project	Alternative B – Bulk Code Compliant Alternative	Alternative C – Raised Playground Alternative	Alternative D – Reduced Shadow Alternative 1	Alternative E – Reduced Shadow Alternative 2	Alternative F – Reduced Shadow Alternative 3
Ground floor	Retail: 34,198 gsf; Residential: 3 residential lobbies; 3 residential units on Capp Street; Garage: 3 freight/spaces; 1 ADA accessible van parking space; building services; and 4 Class I bicycle parking spaces for commercial tenants.	Retail: 50,915 square feet with mezzanine and partial basements and a 54 car surface parking lot	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Basement	162 vehicle parking spaces (22 retail parking spaces; 4 car share spaces; and 136 residential parking spaces); 158 Class I bicycle parking spaces; Building services, including emergency generator.	Partial basement under both buildings	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project	Same as Proposed Project
Open Space							
Publicly accessible open space (square feet)	2,175	None	2,175	2,175	2,175	2,175	2,175
Common (square feet)	28,741	None	25,596	28,741	28,053	25,508	31,508
Number of units with private decks	29	None		29			

1. Overview of Proposed Project's Impacts

As described above, the intent of the alternatives analysis is to consider designs and a development program that could avoid or lessen significant and unavoidable impacts resulting from the Proposed Project. As evaluated in Section 4.B, Wind and Shadow, the Proposed Project would result in the following significant and unavoidable project specific and cumulative impacts related to Wind and Shadow:

- Impact WS-2: The Proposed Project would create new shadow in a manner that could substantially affect the Marshall Elementary School outdoor recreation facilities and open space.
- Impact C-WS-2: The Proposed Project would have a cumulatively considerable contribution to significant cumulative shadow impacts, substantially affecting outdoor recreation facilities and open space.

The shadow analysis prepared for the Proposed Project and described in Chapter 4.B, Wind and Shadow, Section 8c., identified significant and unavoidable shadow impacts on the Playground. The Proposed Project's shadow impacts on the BART Plazas were determined to be less than significant based on the amount, size, and duration of the new shadow, and the affected uses in the shaded areas of the plazas.

The Proposed Project would result in minimal shadow impacts (0.16 percent reduction of the Theoretical Available Annual Sunlight [TAAS][1] at the Marshall Elementary School outdoor learning area, which is further north of the project site on 15th Street). The Playground, bordered by Capp Street to the east, the project site to the south, other existing buildings to the west, and the school building to the north, would experience a 22 percent reduction of TAAS. As described in Chapter 4.B, (Wind and Shadow), Section 8c., the Proposed Project's shadow would substantially affect the Playground, and this shadow impact would be significant and unavoidable. Therefore, alternatives that would reduce the shadow impact on the Playground were developed and analyzed.

The three residential components of the Proposed Project would create varying degrees of new shadow on the Playground. The Capp Street residential component, up to 55 feet tall, would be located adjacent to the southern boundary of the Playground and would replace an existing surface parking lot that currently casts no shadow on the Playground. As shown in Exhibit C of the shadow study prepared for the Project,[2] the Capp Street residential component would account for the majority of the new shadow impact on the Playground in the morning and early afternoon. Therefore, alternatives that would reduce the height of the Capp Street residential component of the Proposed Project would achieve the most substantial reduction in the total new shadow load on the Playground.

The 105 foot tall 16th Street residential component would be south of and adjacent to the Capp Street residential component. The 16th Street residential component would add minimal new shadow on the Playground and would minimally overlap the shadow on those parts of the Playground already shaded by the Capp Street residential component. Reducing the height of the 16th Street component would not substantially reduce the new shadow at the Playground as a result of the Proposed Project.

[1] The TAAS is the amount of sunlight that would be available in a park or open space in the course of a year if there were no shadows from structures, trees, or other facilities.

[2] CADP, 2015. 1979 Mission Street Shadow Analysis. Prepared for Maximus Real Estate Partners. November.

The 105 foot tall Mission Street residential component would be located southwest of the Playground and west of the 16th Street and Capp Street residential components. Due to its location, it would not shade the Playground until the late afternoon when project shadows would occur to the northeast. In addition, some of the shadow impacts that would result from the Mission Street residential component would overlap with shadows from the Capp Street residential component. Therefore, reducing the height of the Mission Street residential component without also reducing the height of the Capp Street residential component would achieve minor reductions in shadow impacts on the Playground. These reductions would occur in the afternoon beginning after 2:00 p.m. in the autumn and after 1:00 p.m. in the winter.

2. Development of Alternatives

As stated above, the alternatives were developed to address the Proposed Project's significant shadow impact on the Playground. The annual school year, including a summer program, is typically from mid-August through mid-July. In past years, there has been a summer program during the summer break, which includes activities in the Playground from 8:15 a.m. to 3:15 p.m. San Francisco Unified School District (SFUSD) has consolidated the number of school sites at which the Summer Program is offered, and currently there is no summer program at Marshall Elementary School.[3] The daily schedule for the school is from 8:15 a.m. through 6:00 p.m. Recess and lunch times occur between 10:15 a.m. and 1:00 p.m., and the school day ends at 2:40 p.m. The Playground is generally used throughout the day, from 8:15 a.m. through 6:00 p.m. In addition to being used for recess and lunch/recess periods, the Playground is used for physical education classes; after 2:40 p.m. it is used for the After School Program.[4]

Although the Playground is used throughout the day between 8:15 a.m. and 6:00 p.m., it is more intensively used during the recess and lunch periods between 10:00 a.m. and 1:00 p.m. Under existing conditions, the Playground is largely sunny during this time period throughout the year. Therefore, alternatives to the Proposed Project were designed principally to reduce the Proposed Project's shadow in this time period.

a. Characterization of the Shadow at the Playground

The Playground is directly north of the project site. It includes a paved play area, with a drawn kickball diamond and foursquare game area, a basketball hoop, a jungle gym, and a turf field (see Figure 6-1).

During the winter[5] in the early morning (at about 8:20 a.m.), the Playground is fully shaded by existing buildings to the east and by the Proposed Project to the west and south. Shadows from existing buildings move off the Playground to the northeast. By 10:00 a.m., the Playground would be shaded by the Proposed Project, covering the turf field, the foursquare game area, and the kickball diamond (see Exhibit C in Appendix B). The Playground would continue to be shaded by the Proposed Project until 2:00 p.m. During this period, shadow on the Playground would move from southwest to northeast. The largest shadow cast by the Proposed Project on the Playground in the winter would occur at 2:15 p.m., covering approximately 10,826 square feet. By 1:00 p.m., shadow from existing structures starts shading the Playground from the west and moves to the east. By 3:55 p.m., shadow on the Playground is mostly due to existing buildings. Sunset occurs at about 4:55 p.m. on this day (December 20).

[3] Ibid.

[4] Avila, Peter, 2014. Telephone record of communication between Debra Dwyer, Planning Department staff, and Peter Avila, Principal, Marshall Elementary School. November 20.

[5] Winter is represented by conditions on December 20, which is the day with the greatest amount of Proposed Project's shadow.

Source: CADP, 2015

Not to Scale

DETAIL OF MARSHALL ELEMENTARY SCHOOL PLAYGROUND LAYOUT

1979 Mission Street Project
San Francisco, California

FIGURE 6-1

In the spring and autumn, the Playground is completely shaded by existing buildings at 7:57 a.m. By 9:00 a.m., shadow from existing buildings starts to move off the Playground to the northeast. During that time, a small area in the southern part of the Playground would start to be shaded by the Proposed Project. This shadow would increase throughout the day, reaching its greatest extent at 4:15 p.m., with a shaded area of 4,524 square feet. By late afternoon at 6:00 p.m., a small portion of the Playground along the southern boundary would be shadowed by new shadow from the Proposed Project. The rest of the Playground would be shadowed due to existing buildings to the west.

In summer, the Proposed Project would not cast any shadow on the Playground from sunrise until approximately 10:00 a.m. Starting at 10:00 a.m., the Proposed Project would cast minimal new shadow on the Playground's southern boundary in the morning, including a very small southern section of the turf field, but not the court areas. The minimal new shadow would continue along the southern boundary throughout the day. The largest shadow cast by the Proposed Project on the Playground during the summer would occur at 1:15 p.m. and would cover approximately 1,095 square feet. By 5:00 p.m., the Proposed Project would not cast any new shadow on the Playground. Shadow cast by existing buildings starts at approximately 4:00 p.m. along the western boundary of the Playground. Shadows cast on the Playground after 5:00 p.m. would be due entirely to existing buildings.

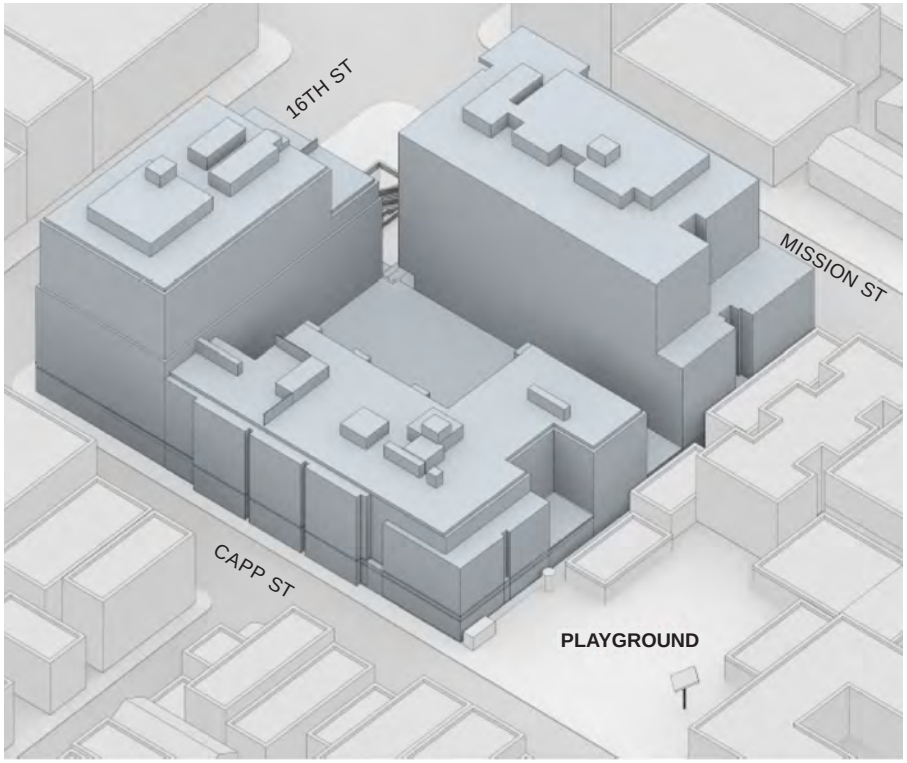
b. No New Shadow Alternative

As part of developing alternatives that would reduce or avoid the Proposed Project's shadow impact, a No New Shadow Alternative (shown on Figure 6-2) was prepared to determine the height of development that could be built on the project site that would not result in new shadow on the Playground. The resulting No New Shadow Alternative would have 105 residential units, about 226 units fewer than the project design under the Proposed Project. The height of the Mission Street residential component and the height of the Capp Street residential component would be substantially reduced, as shown on Figure 6-2. Under this alternative, the Mission Street component would only have a 15 foot high ground floor retail space with no residential units (163 fewer residential units than those under the Proposed Project). The ground floor of the Capp Street residential component would be set back 75 feet from the northern property line. The second setback would be 92 feet from the north property line at the second floor. The third setback would be 127 feet from the north property line at 35 feet height. The Capp Street residential component would have 23 residential units, which would be 55 residential units fewer than those under the Proposed Project. The 16th Street residential component would have eight residential levels and 82 residential units, which would be eight fewer units than those under the Proposed Project.

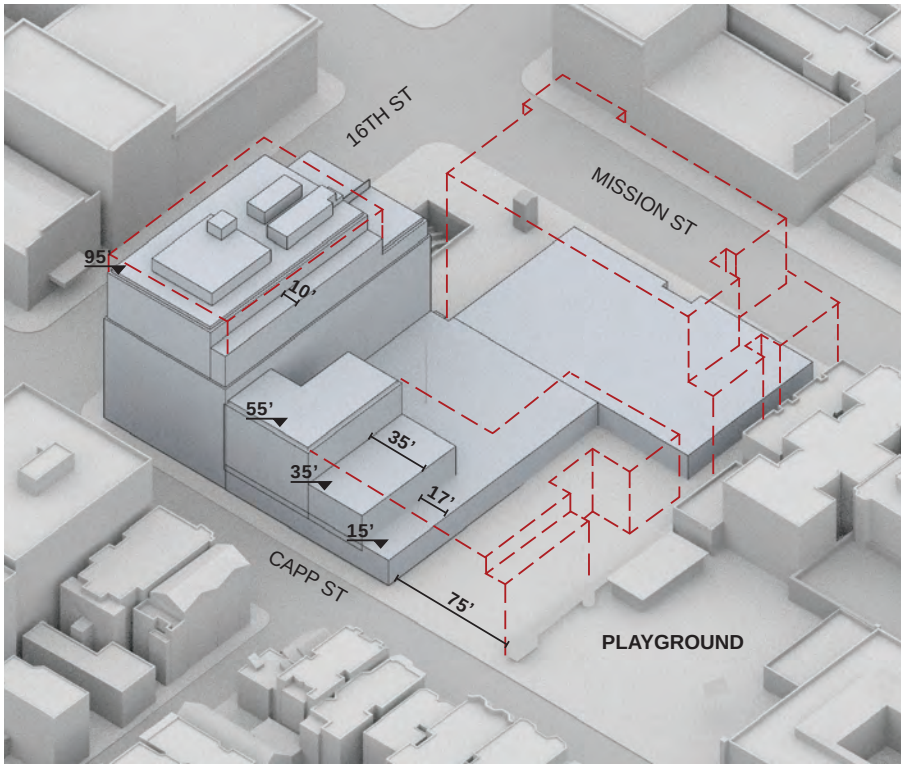
The No New Shadow Alternative would not achieve the Project Sponsor's objectives. It would not advance the City's policies of (1) encouraging and allowing high density mixed use development at a transit hub, such as the project site, which is adjacent to a BART station and Muni transit lines, and (2) constructing housing at the development density anticipated by the Mission Area Plan. This alternative would further substantially reduce the number of market rate and affordable housing units provided by the Proposed Project. This alternative was rejected from further consideration in this EIR because it would not meet the sponsor's objectives and further analysis would not provide additional information for decisionmakers.

c. Alternative Development

Based on the characterization of the shadow as described above, reducing the size of the Capp Street residential component would have the greatest reduction in shadow impact on the Playground. Reducing the size of the Mission Street residential component would have a smaller reduction in shadow impact during the recess and lunch time (between 10:00 a.m. and 1:00 p.m., and reducing the size of the 16th Street residential



Proposed Project



No Shadow Alternative

Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2015.

NO NEW SHADOW ALTERNATIVE

1979 Mission Street Project
San Francisco, California

FIGURE 6-2

component would have minimal shadow reduction. Also, given that there is no existing structure on the Capp Street side of the project site (surface parking lot), even developing the project site with a 40-foot-tall building , as is typical in the project area, would add a substantial amount of shadow on the Playground (see Figure 6-3). As described under the characterization of shadow above, the largest area of shadow resulting from the Proposed Project would be in the winter, and would gradually decrease during the other seasons. In addition, shadow cast on the Playground before 1:00 p.m. would mostly result from the Proposed Project. Existing buildings start to cast shadow on the Playground after 1:00 p.m. By approximately 5:00 p.m., most of the shadow would be from existing buildings. Therefore, development of alternatives focused on reducing the shadow resulting from the Proposed Project before 1:00 p.m., and in particular during the lunch and recess time between 10:00 a.m. and 1:00 p.m.

Five additional alternatives were developed, four of which would reduce shadow impacts on the Playground and one of which is provided for informational purposes to comply with the bulk designation for the project site. Alternative C would reduce the overall shadow on the Playground by raising the Playground by 15 feet in height, thereby reducing the amount of shadow on the play area from existing buildings, and decreasing the total shadow load with the Proposed Project. Alternatives D, E, and F would reduce the overall shadow on the Playground by reducing the Proposed Project's massing in select portions of the building components. These alternatives are analyzed in this chapter. Alternative B (Bulk Code Compliant Alternative) would comply with the Planning Code regulations for the E bulk district, the bulk district designation for the project site. However, this alternative would not reduce the shadow on the Playground. The shadow analysis included herein is based on an evaluation of the project alternatives conducted by CADP.[6]

3. Methodology of Shadow Impacts

Shadow impacts that would result from the project alternatives are described quantitatively as a percentage of TAAS. In addition, a narrative qualitative analysis is provided to describe the size of new shadow, time of the year, times and duration in a given day, and location of new shadow in relation to the different Playground activities.

The shadow analysis included in this chapter is based on an evaluation conducted by CADP of the new shadow that would result from construction of the alternatives to the Proposed Project, as well as a consideration of how the new shadow would affect the use and enjoyment of the affected areas.[6] The shadow study uses an accurately Geo-located 3D computer model of the alternatives, the Playground, and the surrounding urban environment to simulate and calculate both existing amounts of shading and levels of shading that would be present with the addition of the project alternatives, from 1 hour after sunrise through 1 hour before sunset. Between these boundary times, snapshot analyses are performed at 15 minute intervals, and this process is repeated every 7 days between the summer and winter solstices. This half-year is referred to as a "solar year" for the purposes of the analysis, and the data taken from these 27 sample dates throughout the course of the solar year are then mirrored with interim times and dates extrapolated to arrive at the full year shading calculation. The difference between the current levels of shading and the levels of shading that would be present with the addition of the Proposed Project yields the total annual increase, measured in square foot hours (sfh) of shade. This increase is shown as a percentage

[6] CADP, 2016. Shadow Evaluation of Alternatives for the 1979 Mission Street. Prepared for Maximus Real Estate Partners. November.

10:00am **11:00am** **12:00pm** **1:00pm**

December 21 – 40' Building

Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2016.

SHADOW IMPACTS FROM A 40 FOOT BUILDING

1979 Mission Street Project
San Francisco, California

FIGURE 6-3

of total theoretical sfh of sun (TAAS) on the Playground (the amount of sun that would fall on the Playground throughout the year if there were no shading present at any time). The TAAS is calculated by multiplying the area of the park or open space in square feet by 3,721.4 (the maximum number of hours of sunlight available on an annual basis in San Francisco). To determine the Playground's TAAS, the, 14,676 square foot existing Playground area was multiplied by 3,721.4 to arrive at 54,615,706 sfh. The Playground currently has a "shadow load" of 12,061,131 sfh under existing conditions, which represents 22.08 percent of its TAAS.

Annual shadow impacts are analyzed and compared with those of the Proposed Project. As noted above, the analysis describes the shadow throughout the year but also focuses on the shadow impacts in relation to the different activities on the Playground between 10:00 a.m. and 1:00 p.m., when the Playground is used more intensively.

4. Evaluation of Alternatives

The following sections analyze the impacts associated with the Alternatives to the Proposed Project.

A. Alternative A – No Project Alternative

1. Description

Under the CEQA-required No Project Alternative, the site would generally remain in its existing condition and would not be redeveloped with a mixed use building. This alternative would avoid impacts associated with construction of a new building, and the effects associated with a larger building on the project site. The two existing one story buildings and the 25,210 square foot surface parking lot on the site would remain. Under this alternative, the project site would continue to contain two buildings ranging in height from 23 to 30 feet and comprising approximately 50,915 gross square feet (gsf) of retail pharmacy, restaurants, grocery store, a bar, and vacant retail space.

Because the physical environment of the site would remain unchanged, the No Project Alternative would not achieve any of the Project Sponsor's objectives for the Project, including but not limited to development of a mixed use residential project in close proximity to a transit hub, providing high quality housing, new employment opportunities, and streetscape improvements.

2. Impacts

a. Wind

Under the No Project Alternative, the wind conditions in the vicinity of the project site would remain the same as under Existing Conditions. As described in Chapter 4.B (Wind and Shadow), Section 4c., (Impact Evaluation [see page 4.B-5]), under existing conditions, wind speeds at 28 of the 50 measurement locations exceed the 11 mph comfort criterion established by Planning Code Section 148. Under the Proposed Project, the 11 mph comfort criterion would be exceeded at 22 of the 50 measurement locations. In addition, under the No Project Alternative, winds would exceed the 26 mph hazardous wind criterion for a single full hour annually at the northeastern corner of 16th and Capp Streets. This hazardous wind condition at the northeastern corner of 16th and Capp Streets would not occur with the Proposed Project.

b. Shadow

The No Project Alternative would not cast new shadow on open space facilities in the vicinity of the project site, including the Playground and outdoor learning area and the Northeast and Southwest BART Plazas at the 16th Street Mission BART Station. Significant and unavoidable shadow impacts on the Playground that would result under the Proposed Project would be avoided under this alternative, and the Playground would remain shaded approximately 22 percent of the time.

c. Geology and Soils

Under the No Project Alternative, construction within the BART ZOI would not occur. No impacts related to geology and soils would occur under this alternative. Unlike the Proposed Project, implementation of Mitigation Measure M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure, described in Chapter 4.C (Geology and Soils), Section 4.c– (Impact Evaluation [pages 4.C-12 and 4.C-13]), would not be required.

d. Resource Topics Analyzed in the Community Plan Exemption Checklist

Under the No Project Alternative, the existing onsite structures would not be demolished, and a mixed use building that includes three residential components (Capp Street, 16th Street, and Mission Street) and ground floor retail would not be constructed. This alternative would not include any demolition, excavation, or construction activities. Therefore, it would have no impacts to the following environmental topics analyzed in Community Plan Exemption (CPE) Checklist (Appendix A): land use and land use planning, population and housing, cultural and paleontological resources, transportation and circulation, noise, air quality, greenhouse gas emission, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, minerals and energy resources, and agriculture and forest resources.

B. Alternative B – Bulk Code Compliant Alternative

1. Description

Similar to the Proposed Project, all existing on site structures would be demolished under Alternative B, and the project site would be redeveloped with a mixed use building that includes three residential components (Capp Street, 16th Street, and Mission Street) and ground floor retail along Mission Street and 16th Street. The Bulk Code Compliant Alternative would comply with Planning Code Section 270 Bulk Limitations governing the maximum length and maximum diagonal dimensions of buildings above 65 feet and is being provided for informational purposes. It is not a CEQA alternative and is not intended to address significant environmental effects of the Proposed Project.

- Capp Street Residential component. Under Alternative B, unlike the Proposed Project, the fifth floor of the Capp Street residential component would not be set back from the northern property line.

- 16th Street Residential component. Above a height of 65 feet, the 16th Street residential component under Alternative B would be set back 40 feet from the Northeast BART Plaza; in comparison, the Proposed Project would have a 40-foot setback above a height of 75 feet. Below a height of 65 feet, the 16th Street residential component under Alternative B would be identical to the Proposed Project.

- Mission Street Residential component. Above a height of 65 feet, the Mission Street residential component under Alternative B would be set back 6 feet from the Mission Street property line, 45 feet from the northern property line, and 25 feet from the common property line with the Northeast BART Plaza. The Proposed Project would have the same setback from the Mission Street property line (6 feet) as Alternative B. However, above a height of 65 feet, the Proposed Project would have a setback ranging from 17.5 to 30 feet from the northern property line (compared to 45 feet under Alternative B) and a 10-foot setback from the Northeast BART Plaza (compared to 25 feet under Alternative B). To meet the bulk limitation requirements, the corner of the Mission Street residential component would have chamfered corners.[7] Below a height of 65 feet, the southwestern corner of the Mission Street residential component under Alternative B would have a 90 degree angled corner (see Figure 6-4).

This alternative would also include a privately owned publicly accessible ground level open space adjacent to the Northeast BART Plaza, similar to the Proposed Project.

Construction duration for Alternative B would be approximately 21 months, similar to that of the Proposed Project, and the construction activities for this alternative would also require truck trips and construction equipment similar to those for the Proposed Project.

Alternative B would require the same approvals listed for the Proposed Project in Chapter 2 under Section 2 on pages 2-36 through 2-37, except for the conditional use authorization and deviations from the Planning Code pursuant to Section 270. This alternative would comply with Planning Code 270 and would not require deviation from Planning Code Section 270 for the bulk limitations.

2. Impacts

a. Wind

Under the Bulk Code Compliant Alternative, the Mission Street residential component above 65 feet would be set back 25 feet from the southern property line. The chamfered corners of this residential component and the wide setback above 65 feet from the main façade facing the Northeast BART Plaza would help reduce downwashing of winds[8] (see Appendix D). The massing below 65 feet would be taller than most of the surrounding buildings to the west and the northwest. Without chamfered corners up to this elevation of 65 feet, winds would slightly accelerate and flow into the Northeast BART Plaza.

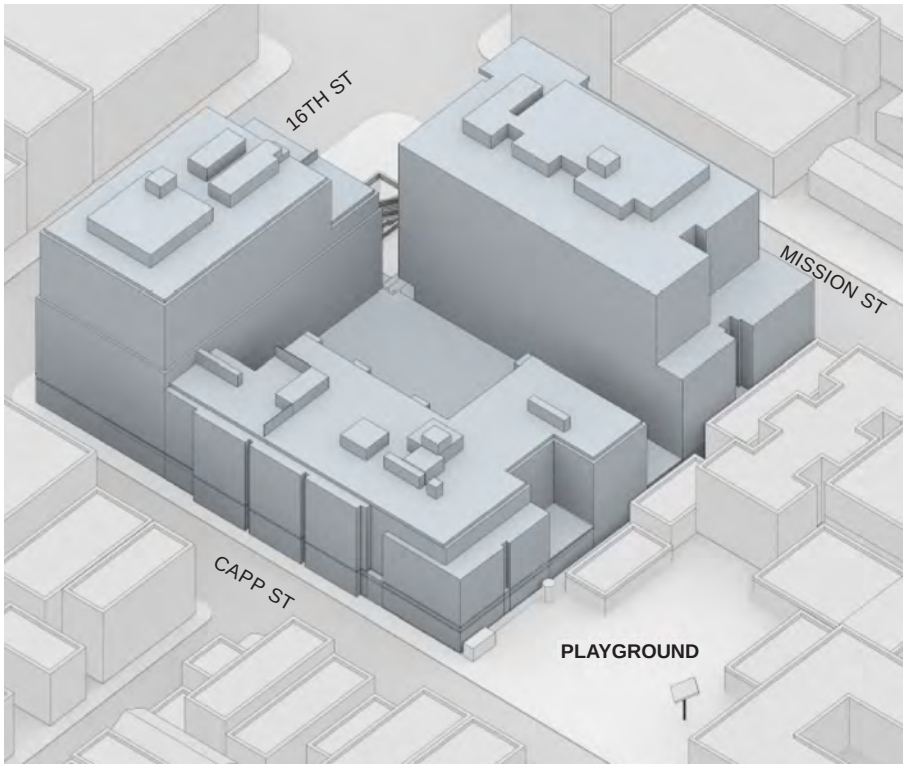
Overall, the wind conditions under Alternative B are expected to be less than significant, similar to those under the Proposed Project. The contribution of this alternative to cumulative wind impacts would be less than significant, similar to that of the Proposed Project, and for the same reasons as the Proposed Project.

b. Shadow

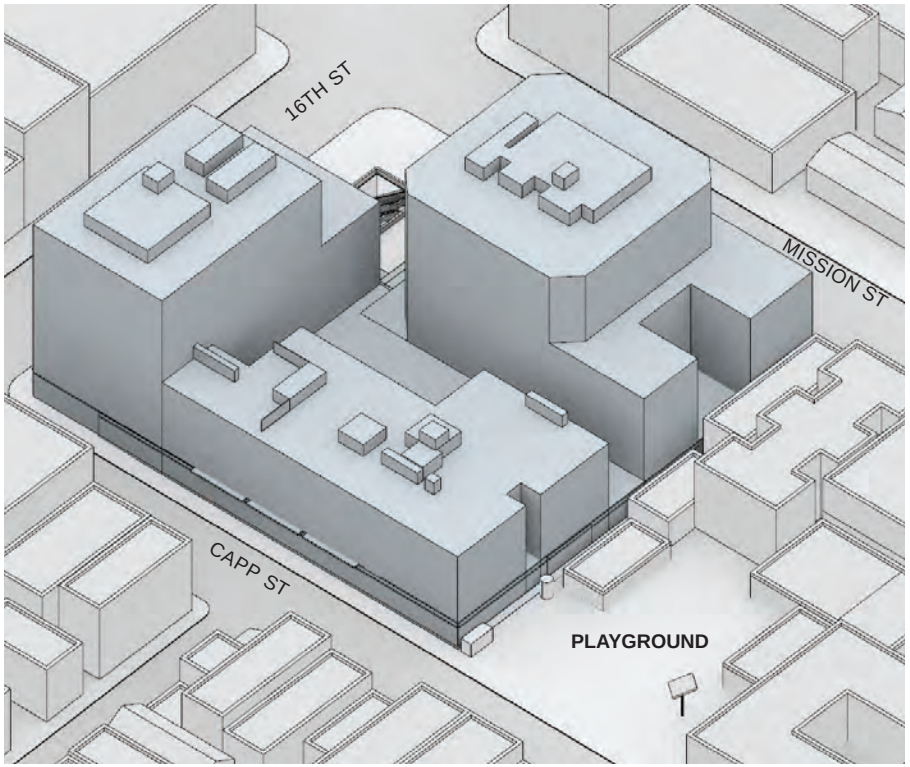
Because the 16th Street residential component under Alternative B would be set back 40 feet from the Northeast BART Plaza above a height of 65 feet compared to a similar setback above a height of 75 feet under the Proposed Project, Alternative B would cast slightly less shadow on the Northeast BART Plaza than would the Proposed Project, which would be in the sun earlier in the day. Alternative B would have shadow impacts on the Southwest BART Plaza similar to those identified for the Proposed Project.

[7] Chamfered corners are flat surfaces resulting from cutting off the edge of a volume.

[8] RWDI, 2016. Pedestrian Wind Study – Review of EIR Alternatives 1979 Mission Street San Francisco, California. February 18.



Proposed Project



Alternative B

Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2015.

ALTERNATIVE B
BULK CODE COMPLIANT ALTERNATIVE

1979 Mission Street Project
San Francisco, California

FIGURE 6-4

Alternative B would result in a new shadow load of 20.35 percent of TAAS (11,051,242 sfh) on the Playground (see Table 6-2). The total shadow load on the Playground under Alternative B would be 42.43 percent of TAAS, which is a reduction of 1.22 percent from the total shadow of 43.65 percent under the Proposed Project. This small reduction in shadow under the Bulk Code Compliant Alternative would result from the 45 foot setback of the Mission Street residential component from the northern property line above 65 feet. With the deeper setback from the north property line, the Playground would experience slightly less shadow in the afternoon hours (after 1:00 p.m.). However, the new shadow from the Capp Street residential component would increase in the morning and afternoon because, unlike the Proposed Project, the fifth floor would not be set back 13 feet from the northern property line. Similar to the Proposed Project, this alternative would result in significant unavoidable shadow impacts on the Playground and would contribute considerably to significant cumulative shadow impacts at the Playground, for the same reasons as described in Section 4.B.8.d. There are no feasible mitigation measures for this shadow impact other than a different building design and massing.

Therefore, unlike the Proposed Project in combination with past, present, and reasonable foreseeable projects, Alternative B would result in a cumulatively considerable significant and unavoidable shadow impact.

Table 6-2
Summary Table
Annual Shadow Load on Marshall Elementary School Playground

Scenario	New Shadow Load (square foot hours)	New Shadow (percentage of TAAS)	Total Shadow Load (square foot hours)	Total Shadow (percentage of TAAS)
Existing Shadow Conditions	N/A	N/A	12,061,131	22.08
Proposed Project	11,785,129	21.57	23,846,260	43.65
Alternative B	11,051,242	20.35	23,112,373	42.43
Alternative C	11,203,056	20.95	15,360,603[1]	28.70
Alternative D	9,276,878	16.99	21,338,009	39.07
Alternative E	6,257,143	11.46	18,318,274	33.54
Alternative F	4,814,316	8.82	16,875,447	30.90

Notes:

N/A = Not applicable.

TAAS = The amount of theoretically available annual sunlight on a park or playground is calculated by multiplying the area of the park (in square feet) by the total hours of sunlight available on an annual basis, ignoring shadows from structures or other natural phenomena, such as clouds, fog, or solar eclipses, that may obscure sunlight. For San Francisco, there are approximately 3,721.4 hours of sunlight available on an annual basis.

[1] Raising the surface of the Playground under this alternative which would decrease the amount of shadow on the Playground from existing buildings.

c. Geology and Soils

Similar to the Proposed Project, the mixed use building under Alternative B would be partially sited within the BART ZOI, and could result in adverse effects on the BART subway during construction or operation if it is not properly designed and constructed. Similar to the Proposed Project, implementation of Mitigation Measure M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure, described in Chapter 4.C (Geology and Soils), Section 4.c– (Impact Evaluation [pages 4.C-12 and 4.C-13]), would ensure that these impacts would be less than significant with mitigation. The contribution of this alternative to cumulative impacts to geology and soil would be less than significant, similar to that of the Proposed Project and for the same reasons as the Proposed Project.

d. Resource Topics Analyzed in the Community Plan Exemption Checklist

Alternative B would have demolition, excavation, and construction activities similar to those of the Proposed Project. Similar to the Proposed Project, Alternative B would include the demolition of the two existing commercial buildings and surface parking lot on the project site. Also similar to the Proposed Project, Alternative B would include the construction of a new, five to ten story mixed use building with a maximum height of 105 feet, exclusive of the mechanical penthouse. In addition, Alternative B would have a similar number of residential units and retail spaces. Vehicular and pedestrian access to the project site under Alternative B would be similar to that of the Proposed Project. Therefore, Alternative B would have impacts similar to those of the Proposed Project, as analyzed in the CPE Checklist (Appendix A), for the following environmental topics: land use and land use planning, population and housing, cultural and paleontological resources, transportation and circulation, noise, air quality, greenhouse gas emission, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, minerals and energy resources, and agriculture and forest resources. Similar to the Proposed Project, Alternative B would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR, and Mitigation Measures and Improvement Measures applicable to the Proposed Project and documented in the CPE Checklist (Appendix A) would be applicable to Alternative B.

e. Conclusion

Alternative B would meet the requirements of the E bulk district. The portions of the site along Mission and 16th Streets are in the 105-E height and bulk district, and the portion of the site along Capp Street is in the 55-X height and bulk district. This alternative design—with a maximum height of 105 feet, 331 residential units, and ground floor retail uses—would meet the Project Sponsor's objectives regarding the development of a mixed use building with high quality housing in close proximity to transit, new employment opportunities, and improvement to the quality and safety of the Northeast BART Plaza and streetscape near the project site. This alternative would also meet the project sponsor's objective of constructing a project with the residential development density anticipated by the Mission Area Plan for this site.

Under the Bulk Code Compliant Alternative, the inner court open space would be reduced to 1,400 square feet, while the Proposed Project would have an inner court of 4,545 square feet. Therefore, this alternative would not comply with Planning Code[9] requirements for common open space for the residential units, nor provide a transition from the lower buildings north of the project site to the ten

[9] Planning Code Section 736.93 requires the provision of 100 square feet of common open space per residential unit.

story portion of the Mission Street residential component. Therefore, the Bulk Code Compliant Alternative would require an exception from the residential open space requirements of Planning Code Section 135.

Similar to the Proposed Project, Alternative B would result in less than significant wind impacts, significant and unavoidable shadow impacts, and less than significant impacts related to geology and soils. In addition, similar to the Proposed Project, Alternative B would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR and documented in the CPE Checklist. This alternative would not reduce the significant shadow impact of the Proposed Project.

C. Alternative C – Raised Playground Alternative

1. Description

Under the Raised Playground Alternative, the Proposed Project would be developed on the project site with residential units above ground floor retail space, off-street vehicular and bicycle parking and building services in the basement, and usable open space (see Figure 6-5). This alternative would also include a privately owned, publicly accessible ground level open space adjacent to the Northeast BART Plaza, similar to the Proposed Project.

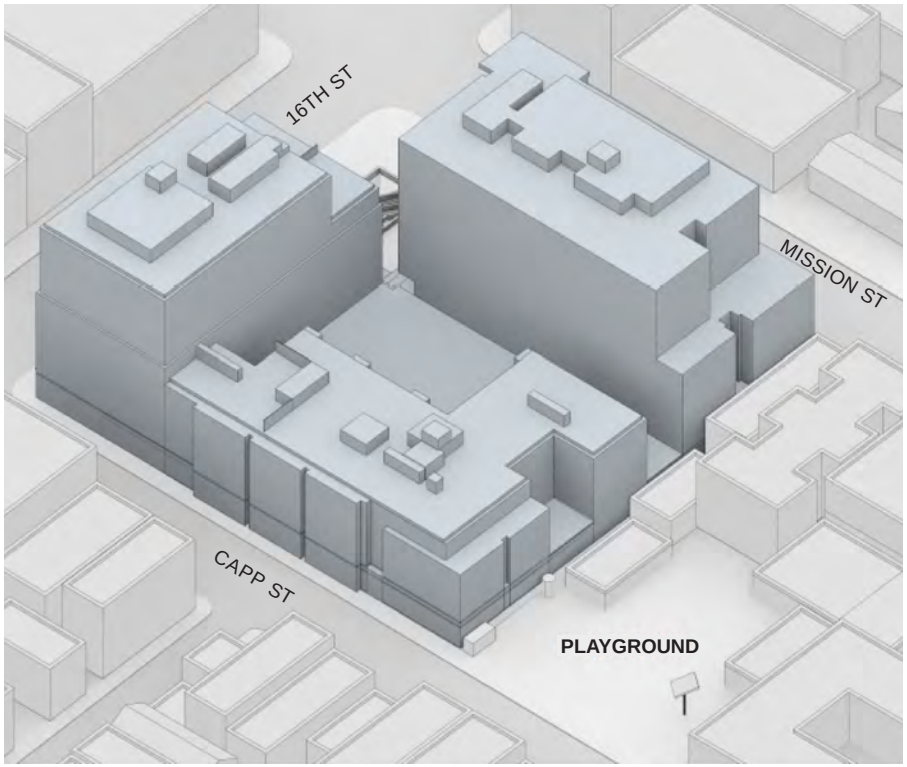
Under this alternative, the existing Playground and the school's one story multi-use room would be demolished, and the temporary modular building housing the library as well as the rainwater tank and photovoltaic tree would be removed. A new 15-foot high, one-story structure would be built on the school property with a new playground (Raised Playground) on the roof (see Figure 6-5). Implementing the Raised Playground Alternative would require the Project Sponsor and SFUSD to agree on and execute an agreement whereby the Project Sponsor would undertake the demolition and construction activities on the school property as described above.

Although not a certainty, construction of the Raised Playground Structure is anticipated to occur concurrently with construction of the Proposed Project, and is estimated to take approximately 3 months to complete. Implementation of Phases 1 through 3 as described below is anticipated to occur during the summer when school is not in session. It is anticipated that the sidewalk and parking lane would be closed during Phases 1, 2, and 3.

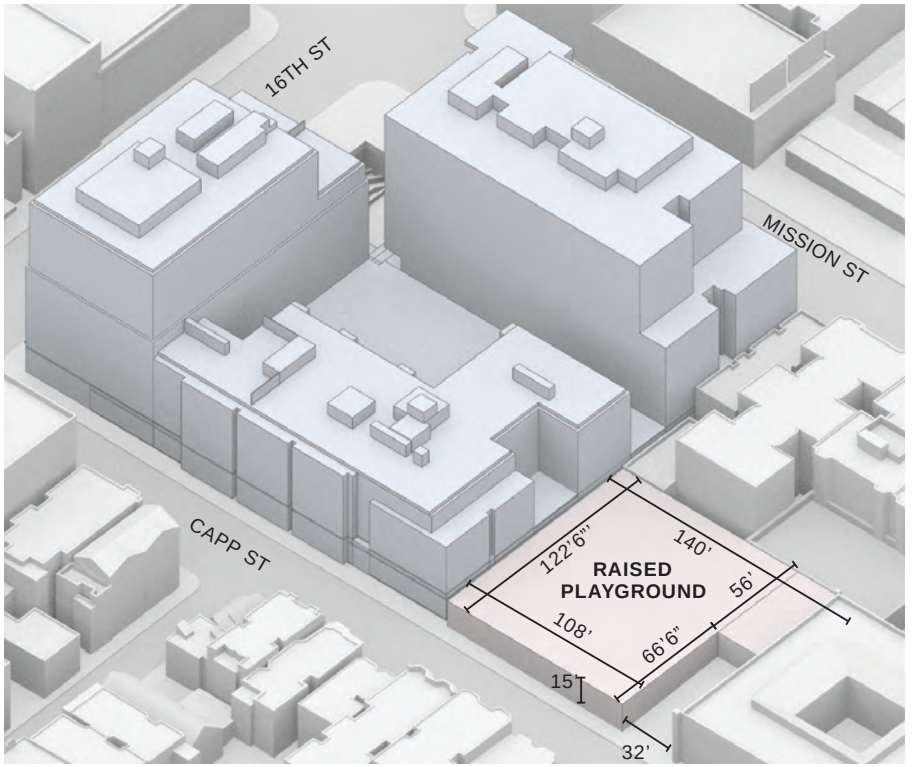
Phase 1 – Demolition. Phase 1 would be expected to take approximately 2 weeks to complete and would generate approximately 20 truck trips to demolish the approximately 13 foot high one story portion of the existing school, and to remove the temporary building, the temporary storage containers, the above grade rainwater tank at the south end of the Playground, and the photovoltaic tree. There would be an average of eight workers at the site daily during this phase.

Phase 2 – Excavation. Phase 2 would be expected to take approximately 1 week to complete. Approximately 300 cubic yards of soil would be excavated and would generate approximately 40 truck trips. There would be an average of eight workers at the site daily during this phase.

Phase 3 – Foundation, floors, side walls and roof Playground for the one story building. Phase 3 would be expected to take approximately 6 weeks to complete and would generate approximately 30 truck trips. There would be an average of 12 workers at the site daily during this phase.



Proposed Project



Alternative C

Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2015.

ALTERNATIVE C
RAISED PLAYGROUND ALTERNATIVE

1979 Mission Street Project
San Francisco, California

FIGURE 6-5

Phase 4 – Interior work, Playground topping and fencing. Phase 4 would generate approximately 30 truck trips and would require an average of 20 workers at the site daily. Phase 4 would overlap by 2 weeks with Phase 3.

Under this alternative, the ground floor of the proposed Raised Playground structure would be used for additional school programs. Uses of the new structure may include a new multi-purpose room, a music room, a library, a classroom, storage space, an area for trash, recycling, and compost bins, and parking for up to eight cars. The final plans and use of the ground floor would be determined by the SFUSD. The northeastern corner of the existing Playground would remain open to create an at grade open air entry to the school. The 14,365 square foot Raised Playground would be approximately 300 square feet (2 percent) smaller than the 14,664 square foot existing at grade Playground. The reduction in shadow as a result of this alternative would be achieved primarily through elevating the Playground rather than modifying the proposed building.

Alternative C would require the same approvals listed for the Proposed Project in Chapter 2 under Section 2 on pages 2-36 through 2-37. In addition, as noted above, Alternative C would require a legally enforceable agreement between the SFUSD and the project sponsor to demolish the existing Playground and one story multi-use room, remove the modular building housing the library, and construct a new 15-foot-high, one-story structure on the school property with a new Raised Playground on the roof. In addition, a permit application and plans for the Raised Playground structure would need to be submitted to the California State Architect for review and approval.

2. Impacts

a. Wind

Under Alternative C, the Raised Playground would have a height of 15 feet above existing grade, while the project site would be developed as described for the Proposed Project. The existing Playground, which is at grade, would be sheltered by the Proposed Project from the predominant westerly winds. The Raised Playground would still be lower in height than the Proposed Project, and would continue to be sheltered from the predominant winds. The existing buildings to the west and the Raised Playground would shield the adjacent sidewalk on the western side of Capp Street from the predominant winds. There would be a slight reduction in wind speeds on the Capp Street sidewalk under this alternative when compared to the Proposed Project. Wind speeds at all other locations around the project site would be similar to the Proposed Project. Therefore, the wind impacts of Alternative C would be less than significant. The contribution of this alternative to cumulative wind impacts would be less than significant, similar to that of the Proposed Project, and for the same reasons as the Proposed Project (see Appendix D).

b. Shadow

The new shadow on the Raised Playground under Alternative C would be 20.95 percent of TAAS, and the total shadow load would be 28.7 percent of the TAAS. The existing Playground at ground level is currently shaded approximately 22.08 percent of the time. Therefore, Alternative C would result in approximately 6.62 percent (28.7 minus 22.08) more shaded time on the Raised Playground, compared to the existing shadow conditions on the Playground (see Table 6-2). Shadow calculations were also prepared for the hours between 10:00 a.m. and 1:00 p.m., which is the recess and lunch period at the Marshall Elementary School. Under existing conditions, the Playground is largely sunny during this time and has a shadow load of 0.39 percent of TAAS. During recess and lunch time, Alternative C would add approximately 1.75 percent more shaded time on the Raised Playground, and would result in 2.14 percent total shaded time (see Table 6-3).

Table 6-3
Shadow Load on Marshall Elementary School Playground Between 10:00 a.m. and 1:00 p.m.

	New Shadow Load 10 a.m. to 1 p.m. (square foot hours)	New Shadow Load 10 a.m. to 1 p.m. (percentage of TAAS)	Total Shadow Load 10 a.m. to 1 p.m. (percentage of TAAS)
Proposed Project	435,156	2.71	3.1[1]
Alternative C	275,237	1.75	2.14[2]
Alternative D	327,258	2.04	2.43[1]
Alternative E	139,150	0.87	1.26[1]
Alternative F	120,308	0.75	1.14[1]

Notes:

N/A = Not applicable
TAAS = Theoretically Available Annual Sunlight

TAAS for the Playground during the time period between 10 a.m. and 1 p.m. is 16,058,175 square foot hours.

[1] Existing shadow load between 10:00 a.m. and 1:00 p.m. is 61,836 sfh (or 0.39 percent of TAAS).
[2] The Raised Playground would have a surface area 300 feet smaller than the existing Playground.

Alternative C would cast new shadow on the Playground throughout the year, with the largest area of shadow cast on December 20 (see Appendix E, Exhibit H.1). During the winter, Alternative C would cast new shadow on the Raised Playground from approximately 8:30 a.m. through 3:54 p.m. Starting at 8:00 a.m., the new shadow in the winter season would cover the southwestern corner of the Raised Playground, where most of the turf field and a portion of the foursquare game area are located. By 10:00 a.m. in the winter, the new shadow under Alternative C would cover approximately the southern half of the Raised Playground. Under Alternative C, the largest new shadow during winter would occur at 1:00 p.m., and would be approximately 8,297 square feet in size (see Appendix E, Exhibit H.1). At 2:00 p.m., the majority of the Raised Playground would be covered in shadow, except for the northeastern corner. Most of the shadow at 2:00 p.m. would result from Alternative C, but there would also be some shadow from existing buildings to the west of the Raised Playground. The shadow from existing buildings would combine with shadow under Alternative C in such a way that by 2:30 p.m., the Raised Playground would be entirely in shade.

The new shadow cast by Alternative C from 8:00 a.m. until 2:00 p.m. in the spring/autumn would mostly result from the Capp Street residential component, and would be located at the southernmost portion of the Raised Playground covering the southwestern corner and a section of the foursquare game area (see Appendix E). The largest new shadow under Alternative C in the spring/autumn would be 2,404 square feet and would occur at 1:00 p.m. After 2:00 p.m., shadow from existing buildings located to the west of the Raised Playground begin to shade the center of the western portion of the Raised Playground and move across the Raised Playground to the east. At the same time, the Mission Street residential component would cast new shadow on a larger portion of the southwestern corner of the Raised Playground, and increase toward the foursquare game area until 5:00 p.m., after which the shadows from Alternative C would decrease. By 1 hour before sunset, most of the shadow on the Raised Playground would be from existing buildings.

The new shadow cast by Alternative C in the summer would occur between 9:00 a.m. and 4:00 p.m. The largest shadow cast by Alternative C on the Raised Playground during the summer would occur at 12:45 p.m., and would cover approximately 669 square feet. The new shadow on the Raised Playground during this season would be minimal in size and located along the southern property line.

Overall, under Alternative C the Raised Playground would be shaded approximately 28.7 percent of the time. During the winter, the Raised Playground would be half shaded until 1:00 p.m. by Alternative C,

and almost fully shaded for the rest of the day by Alternative C in combination with existing shadow from the buildings to the west. This would affect all of the recreational areas on the Raised Playground, especially between 10:00 a.m. and 1:00 p.m. In the spring/autumn, Alternative C would increase shadow along the southern portion of the Raised Playground between 10:00 a.m. and 1:00 p.m., partially shading the turf field and foursquare game area. For these reasons, total shadow under Alternative C would adversely affect the Raised Playground, and shadow impacts would be significant.

There is no feasible available mitigation for Alternative C's shadow impact on the Raised Playground. Any potential mitigation would fundamentally alter the Project's basic design. In addition, because the existing buildings on the project site are one story plus mezzanine and there is a surface parking lot immediately adjacent to the Playground, any multi-story development on the project site would likely have substantial shadow impacts on the Playground.

The shadow analysis shows that Alternative C would create new shadow in a manner that would substantially affect the Raised Playground, and the impact would be significant and unavoidable.

Cumulative Shadow Impacts under Alternative C

Other reasonably foreseeable development projects in the immediate project vicinity are listed in Section 4.A.3 under Approach to Cumulative Analysis. However, none of these projects would cast a shadow on the Playground. Currently, the Playground is shaded 22.08 percent of the time, mostly starting at 1:00 p.m. and lasting until sunset. Cumulative shadow impacts from past and present projects and Alternative C would be cumulatively significant. Alternative C would significantly contribute to cumulative shadow impacts (6.62 percent of TAAS) by shading the Raised Playground mostly in the morning until 1:00 p.m., during recess and lunch time, with the greatest shadow occurring in the winter. Therefore, Alternative C's shadow impacts at the Raised Playground would be cumulatively considerable, and cumulative impacts would be significant and unavoidable.

Shadow Impacts of Alternative C Compared to the Proposed Project

New shadow on the Raised Playground under Alternative C would be 20.95 percent of TAAS, similar to that of the Proposed Project, which would add 21.57 percent shaded time on the existing Playground. However, the total shaded time on the Raised Playground under Alternative C (28.70 percent of TAAS) would be 14.95 percent less than that on the existing Playground under the Proposed Project (43.65 percent of TAAS) (see Table 6-2). This is because raising the height of the Playground would reduce the shadow on the Raised Playground from existing buildings.

Between 10:00 a.m. and 1:00 p.m., total shaded time on the Raised Playground under Alternative C would be 0.96 percent less than the total shaded time on the existing Playground under the Proposed Project on an annual basis. During this time period, Alternative C would result in 2.14 percent total shaded time on the Raised Playground, and the Proposed Project would result in 3.1 percent shaded time on the existing Playground (see Table 6-3).

Similar to the Proposed Project, Alternative C would cast new shadow on the Raised Playground throughout the year, with the largest area of shadow occurring on December 20. During the winter, under Alternative C, most of the southern half of the Raised Playground would be shaded throughout the day and would become fully shaded after 2:30 p.m., due to Alternative C in combination with shadow from existing buildings. Similarly, the existing at grade Playground would be mostly shaded under the Proposed Project in the winter throughout the day, except for a small section at the northeastern corner, which would remain sunny until 2:00 p.m. The largest area of shadow in the winter between 10:00 a.m. and 1:00 p.m. under Alternative C would be 8,297 square feet. It would occur at 1:00 p.m., and would

cover the southern half and the western edge of the Raised Playground. The largest area of shadow during that time period under the Proposed Project would occur at 12:15 p.m. and would be 10,123 square feet. It would cover the southern two thirds of the existing Playground, including the foursquare game area, kickball diamond, basketball hoop, and most of the turf field.

In the autumn/spring, the new shadow cast by Alternative C would cover the southwestern corner of the Raised Playground and a section of the foursquare game area starting at 8:00 a.m. and lasting until 5:00 p.m. (see Exhibits H.1 and H.2 in Appendix E). Similarly, the new shadow cast by the Proposed Project during this time period would cover the southern portion of the existing Playground starting at 8:00 a.m., and would increase slowly throughout the day until 5:00 p.m. The largest area of shadow cast by Alternative C on the Raised Playground between 10:00 a.m. and 1:00 p.m. in the autumn/spring would be 2,404 square feet, and would occur at 1:00 p.m. The largest area of shadow cast by the Proposed Project during the same time period would be 3,584 square feet, and would also occur at 1:00 p.m.

In the summer, a small area would be shaded along the southern boundary of the Raised Playground under Alternative C or the existing Playground under the Proposed Project. However, new shadow on the Raised Playground that would result under Alternative C would be slightly less than the new shadow cast by the Proposed Project on the existing Playground (see Exhibits H.1 and H.2 in Appendix E).

As discussed above, similar to the Proposed Project, Alternative C's shadow impacts at the Raised Playground would be cumulatively considerable, because Alternative C would add shadow on the Raised Playground mostly from the morning until approximately 1:00 p.m., with the greatest shadow in the winter. Therefore, Alternative C's contribution to cumulative shadow impacts on the Raised Playground would be significant. However, Alternative C would contribute to significant shadow impacts to a lesser extent than the Proposed Project. Therefore, although significant, cumulative shadow impacts under Alternative C would be less than those under the Proposed Project.

Shadow Impacts Summary of Alternative C

Alternative C would reduce the shadow impact compared to the Proposed Project (see Table 6-4). The impact would be reduced because under Alternative C the Playground would be raised by 15 feet. This would slightly reduce shadow due to the proposed building, but would also result in less shadow on the Raised Playground attributable to existing buildings. Alternative C would shade the Raised Playground approximately 28.7 percent of the time, in locations similar to those shaded by the Proposed Project, shading the turf field and foursquare game area. Therefore, similar to the Proposed Project, Alternative C would result in significant unavoidable project level and cumulative shadow impacts, though the impacts would be reduced compared to the Proposed Project. As with the Proposed Project, there are no feasible mitigation measures other than to redesign the proposed building.

c. Geology and Soils

Similar to the Proposed Project, the mixed use building under Alternative C would be partially sited within the BART ZOI, and could result in adverse effects on the BART subway during construction or operation if it is not properly designed and constructed. As with the Proposed Project, implementation of Mitigation Measure M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure, described in Section 4C Geology and Soils – Section C – Impact Evaluation (pages 4.C-13 and 4.C-14), would ensure that these impacts would be less than significant with mitigation.

The contribution of this alternative to cumulative impacts to geology and soil would be less than significant with mitigation, similar to that of the Proposed Project, and for the same reasons as the Proposed Project.

Table 6-4
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the EIR

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
IMPACTS							
Wind and Shadow							
Wind	Impact WS-1: The Proposed Project would not alter wind in a manner that substantially affects public areas in the vicinity of the project site. (LTS)	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Substantially reduced impact compared to the Proposed Project (LTS)
Cumulative Wind	Impact C-WS 1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects, would not alter wind in a manner that substantially affects public areas in the vicinity of the project site. (LTS)	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Substantially reduced impact compared to the Proposed Project (LTS).
Shadow	Impact WS 2: The Proposed Project would create new shadow in a manner that could substantially affect the Marshall Elementary School outdoor recreation facilities and open space. (SU)	No impact (NI).	Similar to the Proposed Project impact (SU).	Similar to, but slightly less than, the Proposed Project impact (SU).	Similar to, but slightly less than, the Proposed Project impact (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).
Cumulative Shadow	Impact C-WS 2: The Proposed Project would have a cumulatively considerable contribution to significant cumulative shadow impacts, substantially affecting outdoor recreation facilities and open space. (Significant and Unavoidable)	No impact (NI).	Similar to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).	Similar to, but slightly reduced impact, compared to the Proposed Project (SU).

Table 6-4
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the EIR (Continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Geology and Soils							
Seismicity and Liquefaction	Impact GE 1: The Proposed Project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture, ground shaking, liquefaction, or landslides. (LTS)	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Soil	Impact GE 2: The Proposed Project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project. (LTS)	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Lateral Surcharge on the BART subway	Impact GE 3: The Proposed Project could impose lateral surcharge pressures on the BART subway. (SM)	No impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Cumulative Geology and Soils	Impact C-GE 1: The Proposed Project, in combination with other past, present, and reasonably foreseeable future projects in the vicinity, would not result in a significant cumulative impact related to geology and soils. (LTS)	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).

Legend

NI	No impact
LTS	Less than significant or negligible impact; no mitigation required
SM	Significant but mitigable
SU	Significant and unavoidable adverse impact, no feasible mitigation
SUM	Significant and unavoidable adverse impact, after mitigation
BART	Bay Area Rapid Transit District

d. Resource Topics Analyzed in the Community Plan Exemption Checklist

Similar to the Proposed Project, Alternative C would include the demolition of the two existing commercial buildings and surface parking lot on the project site. Identical to the Proposed Project, Alternative C would include the construction of a four to ten story mixed use building with a maximum height of 105 feet, exclusive of the mechanical penthouses, and would have a similar number of residential units and retail spaces. Vehicular and pedestrian access to the project site under Alternative C would be identical to that under the Proposed Project. However, Alternative C would include the demolition of the existing Playground and a one story, multi-use room, removal of the temporary modular building housing the library, located on the Playground, and the construction of a new 15-foot-high, one-story structure on the school property with a new Raised Playground on the roof.

Demolition and construction activities on the school property would occur concurrently with construction of the Proposed Project. Implementation of construction Phase 1 through Phase 3 of Alternative C would be anticipated to occur in the summer when the school is closed. Phases 1 through 3 would include demolition, excavation, and construction of the foundation, floors, side walls and roof supporting the Playground. Phase 4, which would include the interior finish work, and Playground topping and fencing, would overlap with Phase 3 for 2 weeks, and would require an additional 4 weeks to be completed. Alternative C would result in population densities and parking spaces similar to those of the Proposed Project. In addition to the approvals required for the Proposed Project, Alternative C would require the Project Sponsor and SFUSD to agree on and execute an agreement whereby the Project Sponsor would undertake the demolition and construction activities on the school property, as described above. In addition, a permit application and plans of the Raised Playground structure would need to be submitted to the California State Architect for review and approval.

Similar to the Proposed Project, implementation of Alternative C would be consistent with the Eastern Neighborhoods Rezoning and Area Plans, and would result in construction and operation activities similar to those of the Proposed Project. However, demolition of the existing Playground and construction of the Raised Playground under Alternative C would result in slightly higher emissions of criteria pollutants than the Proposed Project, primarily due to construction. As shown in Table 6-5, these emissions would not exceed the criteria pollutant significance thresholds defined by the Bay Area Air Quality Management District. Noise impacts during construction may be higher than those that would be generated by the Proposed Project. The construction equipment used for the Proposed Project would be similar to that used for Alternative C. This may include backhoes, jackhammers, loaders, excavators, chipping hammers, roller concrete trucks, and concrete pumps. Similar to the Proposed Project, construction noise under Alternative C may exceed the San Francisco Noise Ordinance by emitting noise at a level in excess of 80 A-weighted decibels when measured at a distance of 100 feet from such equipment. This would be a significant impact. Similar to the Proposed Project, noise activities during construction of Alternative C would be subject to the San Francisco Noise Ordinance, and mitigation measures identified for the Proposed Project in the CPE Checklist would be applicable. With implementation of the identified noise mitigation measures, noise impacts during construction under Alternative C would be less than significant with mitigation incorporated. Noise during the operation phase under Alternative C would be less than significant, similar to the Proposed Project.

Table 6-5
Construction Emissions under Alternative C

	ROG	NO_X	Exhaust PM_{10}	Exhaust $PM_{2.5}$
1979 Mission Street Project Construction	3.48	5.29	0.24	0.23
Raised Playground Construction	0.20	0.38	0.02	0.02
Total Emissions (tons)	3.68	5.67	0.26	0.25
Average Daily Emissions (lbs/day)	15.9	24.5	1.1	1.1

Notes:
lbs/day pounds per day
NO_X = oxides of nitrogen
$PM_{2.5}$ = particulate matter less than or equal to 2.5 microns in diameter
PM_{10} = particulate matter less than or equal to 10 microns in diameter
ROG = reactive organic gas

The proposed Raised Playground under Alternative C would not result in a substantially higher number of trips than would be generated by the Proposed Project. Under Alternative C, eight parking spaces would be provided on the ground floor in the new structure of the Raised Playground. Implementation of Alternative C would not alter the activities at the Marshall Elementary School and, similar to the Proposed Project, traffic impacts under Alternative C would be less than significant, and the mitigation measures identified to further reduce the less than significant traffic impacts of the Proposed Project in the CPE Checklist would apply to Alternative C.

Alternative C would not change the activities at the Marshall Elementary School, and therefore would not generate additional transit trips to those identified for the Proposed Project. Therefore, similar to the Proposed Project, Alternative C would have less than significant impacts on transit.

Similar to the Proposed Project, Alternative C would include pedestrian improvements that comply with Planning Code sections to implement the City's Better Streets Policy and Plan, which would enhance pedestrian safety and comfort along Mission, 16th, and Capp Streets. However, in addition to the driveway access point along the western side of Capp Street to access the parking garage at the project site, Alternative C would include a second driveway access to the ground floor parking spaces due to the proposed Raised Playground structure. Vehicle flow in and out of the two driveway access points would be managed via traffic controls, and audible/visual notification would be situated at the parking garage entrance to alert pedestrians of exiting vehicles. Although there would be the potential for additional conflicts between pedestrians and vehicles exiting the school garage, the volume of vehicles exiting the garage would be low and notification measures would ensure awareness of exiting vehicles. Therefore, similar to the Proposed Project, impacts to pedestrians under Alternative C would be less than significant.

Alternative C would have impacts on loading similar to those identified for the Proposed Project. The parking spaces in the ground floor of the new structure of the Raised Playground may be used for garbage pickup activities at the school. Garbage pickup already occurs at the school and would be similar to existing conditions, except that garbage would be stored in the new structure prior to pickup. Therefore, loading impacts under Alternative C would be less than significant. Improvement measures identified for the Proposed Project in the CPE Checklist for move in/move out operations, large deliveries, and garbage pickup operations at the project site would apply to Alternative C, and would reduce the already less than significant loading impacts. Therefore, Alternative C's loading impacts would be less than significant.

Similar to the Proposed Project, traffic related to construction would be temporary and limited in duration. Demolition of the existing Playground and construction of the Raised Playground would be anticipated to

occur simultaneously with the construction of the Project at the project site. Lane and sidewalk closures similar to those under the Proposed Project would be required under Alternative C. Construction traffic impacts as a result of the Proposed Project would be less than significant. However, improvement measures identified for the Proposed Project in the CPE Checklist—to limit construction truck deliveries to off-peak periods and to have a construction management plan—have been agreed to by the project sponsor. These measures would be applicable to the construction of Alternative C. Similar to the Proposed Project, Alternative C impacts on traffic during construction would be less than significant with mitigation.

Alternative C would have impacts similar to those of the Proposed Project, as analyzed in the CPE Checklist (Appendix A), for the following environmental topics: land use and land use planning, population and housing, cultural and paleontological resources, greenhouse gas emission, recreation, utilities and service systems, public services, biological resources, hydrology and water quality, hazards and hazardous materials, minerals and energy resources, and agriculture and forest resources. Similar to the Proposed Project, Alternative C would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR and Mitigation Measures, and Improvement Measures applicable to the Proposed Project and documented in the CPE Checklist (Appendix A) would be applicable to Alternative C (see Table 6-6 on the following page).

e. Conclusion

Under this alternative, the Playground at Marshall Elementary School would be raised by 15 feet, and the project site would be developed as described for the Proposed Project. Therefore, similar to the Proposed Project, Alternative C would achieve all of the Project Sponsor's objectives described in Chapter 2, Section B (pages 2-2 and 2-3).

Similar to the Proposed Project, Alternative C would result in less than significant impacts related to wind. It would result in a significant geology and soils impact that would be mitigated to less than significant with Mitigation Measure M-GE-3, similar to the Proposed Project. In addition, similar to the Proposed Project, Alternative C would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR for all other environmental topics except for shadow. Alternative C would reduce but not avoid the significant project level and cumulative shadow impacts of the Proposed Project.

D. Alternative D – Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)

1. Description

Similar to the Proposed Project, all existing structures on the project site would be demolished under Alternative D, and the site would be redeveloped with a mixed use (residential/retail uses) building that would include three residential components (Capp Street, 16th Street, and Mission Street), ground floor retail along Mission Street and 16th Street, parking, loading, building services, and approximately 28,053 gsf of open space. This alternative would have approximately 327 residential units, which would be four fewer units than the Proposed Project. Under Alternative D, the Mission Street and 16th Street residential components of the building would remain identical to the Proposed Project, but the height of the Capp Street residential component would vary from 35 feet to 65 feet. The height reduction would be accomplished by setting the fourth floor of the Capp Street residential component back 24 feet from the northern property line, and 34 feet from Capp Street at the northeastern corner as the building steps down to a three story height. At the northeastern corner, the fifth floor would be set back between 24 feet and 48 feet from the northern property line, and 34 feet from Capp Street (see Figure 6-6).

Table 6-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Land Use and Land Use Planning	No additional land use and land use planning impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced, impact compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).
Population and Housing	No additional population and housing impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).
Cultural and Paleontological Resources	The Eastern Neighborhoods PEIR cultural and paleontological Mitigation Measures are applicable, and no additional cultural and paleontological impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (SM).	No impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Transportation and Circulation							
Traffic	The Proposed Project is not expected to cause any new significant traffic impacts. A number of measures could be implemented to further lessen the already less than significant effect of project generated vehicle traffic in the project vicinity (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).

Table 6-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Transit	The Proposed Project would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to but slightly reduced impact compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).
Pedestrians	The Proposed Project would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR. Improvement Measures documented in the CPE Checklist would further reduce less than significant pedestrian impacts (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).	Similar to, but slightly reduced impact, compared to the Proposed Project (LTS).
Loading	The Proposed Project would result in significant impacts that were not identified in the Eastern Neighborhoods PEIR. Improvement Measures documented in the CPE Checklist would further reduce less than significant loading impacts (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).

Table 6-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Construction	The Proposed Project would result in less than significant construction related transportation impacts. Improvement Measures documented in the CPE Checklist would further reduce less than significant construction related impacts (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Noise	The Eastern Neighborhoods PEIR noise Mitigation Measures are applicable, and no additional noise impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (SM).	No Impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Air Quality	No additional air quality impacts were identified beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No Impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to Proposed Project (LTS).	Similar to Proposed Project (LTS).	Similar to Proposed Project (LTS).
Greenhouse Gas Emissions	No additional impacts on GHG emissions beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Recreation	No additional impacts on recreation beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).

Table 6-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

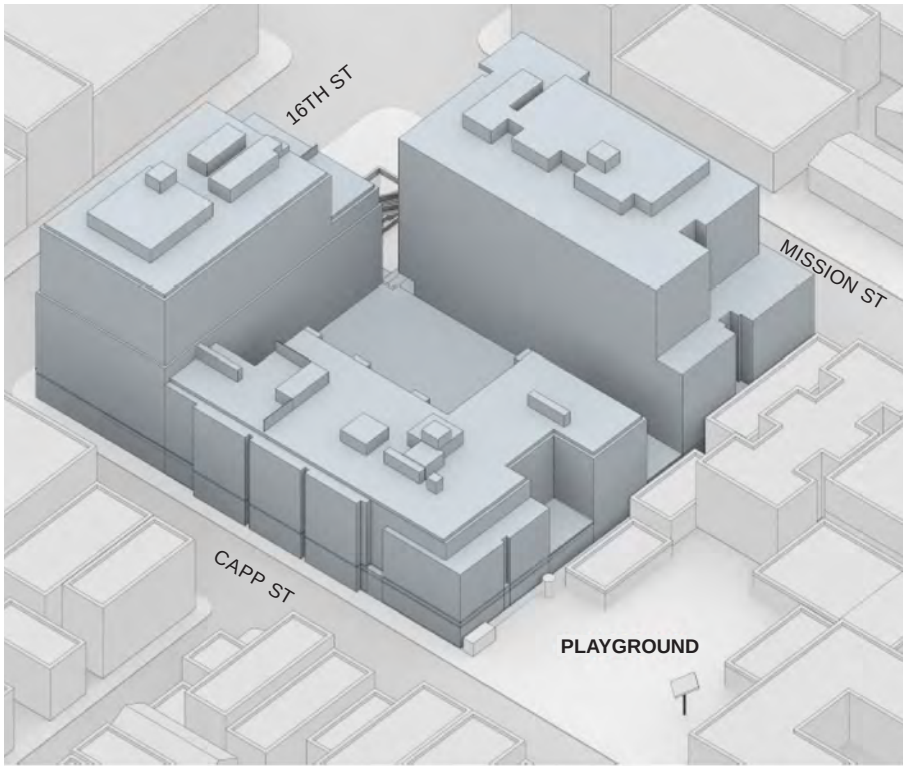
	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Utilities and Service Systems	No additional impacts on utilities and service systems beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Public Services	No additional impacts on public services beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Biological Resources	No additional impacts on biological resources beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Hydrology and Water Quality	No additional impacts related to hydrology and water quality beyond those in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Hazards and Hazardous Materials							
Hazards and Hazardous Materials	The Eastern Neighborhoods PEIR hazardous materials Mitigation Measures are applicable and no additional impacts beyond those identified in the PEIR (SM).	No impact (NI).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).	Similar to the Proposed Project (SM).
Soil and Groundwater Contamination	No additional impacts associated with soil and groundwater contamination beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).	Similar to the Proposed Project, and similar regulatory requirements would apply (LTS).

Table 6-6
Comparison of Impacts of Proposed Project to Impacts of Alternatives
Environmental Topics Analyzed in the Community Plan Exemption Checklist (continued)

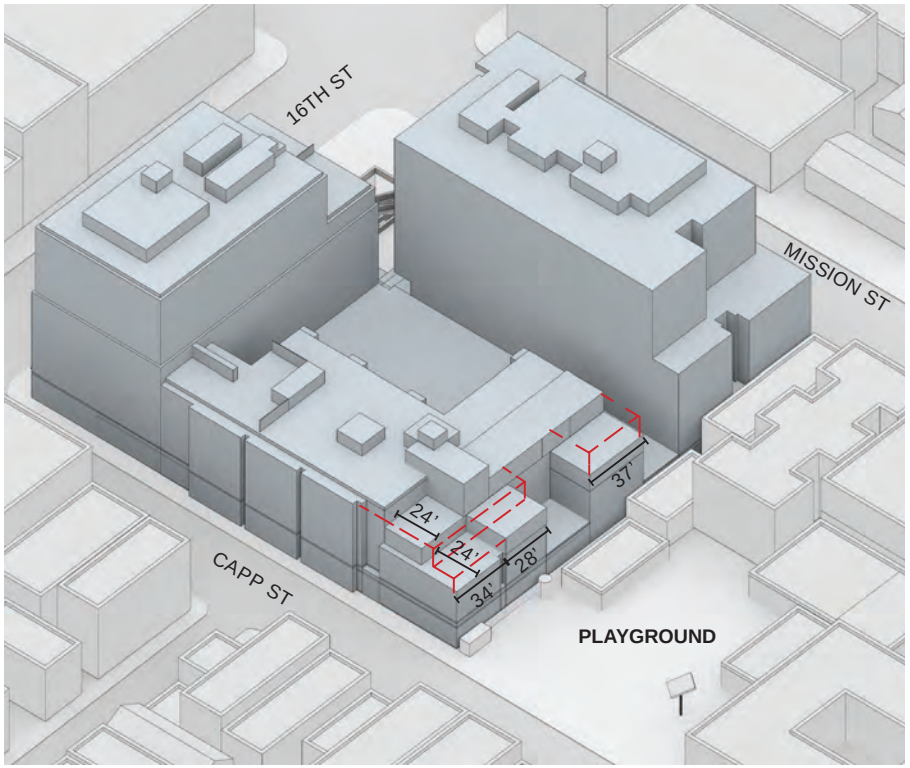
	Proposed Project	No Project Alternative	Alternative B: Bulk Code Compliant Alternative	Alternative C: Raised Playground Alternative	Alternative D: Reduced Shadow Alternative 1 – Reduced Capp Component (Sculpted Northeast Side)	Alternative E: Reduced Shadow Alternative 2 – Reduced Capp Component (35 foot Setback)	Alternative F: Reduced Shadow Alternative 3 – Reduced Mission and Capp Components
Mineral and Energy Resources	No additional impacts on mineral and energy resources beyond those analyzed in the Eastern Neighborhoods PEIR (LTS).	No impact (NI).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).	Similar to the Proposed Project (LTS).
Agriculture and Forest Resources	No additional impacts on agriculture and forest resources beyond those analyzed in the Eastern Neighborhoods PEIR (NI).	No Impact (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).	Similar to the Proposed Project (NI).

Legend

NI	No impact
LTS	Less than significant or negligible impact; no mitigation required
SM	Significant but mitigable
SU	Significant and unavoidable adverse impact, no feasible mitigation
SUM	Significant and unavoidable adverse impact, after mitigation



Proposed Project



Alternative D

Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2015.

ALTERNATIVE D
REDUCED SHADOW ALTERNATIVE 1
REDUCED CAPP COMPONENT (SCULPTED NORTHEAST SIDE)

1979 Mission Street Project
San Francisco, California

FIGURE 6-6

Alternative D would have an additional 2,447 square feet (for a total 3,192 square feet) of private usable open space, and 688 square feet less of common usable open space, when compared to the Proposed Project. The common usable open space under Alternative D would be in the form of roof decks and a portion of the interior courtyard open space.[10] Open space would include a publicly accessible ground level open space adjacent to the Northeast BART Plaza. Alternative D would require the same deviations from the Planning Code requirements as the Proposed Project, and would comply with the Mission Neighborhood Commercial Transit (NCT) district zoning. Due to the increased setbacks on the northern end of the Capp Street residential component, a portion of the private usable open space under Alternative D would be increased by 2,447 square feet, from 10,234 square feet under the Proposed Project to 12,681 square feet. This alternative would also include a privately owned publicly accessible ground level open space adjacent to the Northeast BART Plaza, similar to the Proposed Project.

The construction duration of Alternative D would be approximately 21 months, similar to that of the Proposed Project. Alternative D would require the same approvals as those listed for the Proposed Project in Chapter 2 under Section 2 on pages 2-36 through 2-37.

2. Impacts

a. Wind

Compared to the Proposed Project, the massing changes under Alternative D would not cause substantial changes in wind impacts. The setback at the fourth and fifth floors of the Capp Street residential component under this alternative compared with the Proposed Project would have no substantial effects on wind conditions for the following reasons: The Capp Street residential component would be sheltered from the prevailing winds by the taller massing of the Mission Street and 16th Street residential components, and by other surrounding buildings. For this reason, the setback of the Capp Street residential component would not change wind speeds in the Project area, and would be similar to conditions in the area with the Proposed Project. Therefore, Alternative D's impacts related to wind would be less than significant, similar to the Proposed Project. The contribution of this alternative to cumulative wind impacts would be less than significant, similar to that of the Proposed Project, and for the same reasons as the Proposed Project (see Appendix D).

b. Shadow

As presented in Table 6-2, Alternative D would result in a new shadow load of 16.99 percent of TAAS. The total shadow load on the Playground under Alternative D would be 39.07 percent of TAAS. Therefore, on an annual basis Alternative D would result in 16.99 percent (39.07 minus 22.08) more shaded time on the Playground compared to the existing conditions (see Table 6-2). Exhibits I.1 and I.2 in Appendix E provide graphics of the shadows cast on the Playground and quantified shadow impact results for Alternative D, respectively.

Between 10:00 a.m. and 1:00 p.m. during the recess and lunch period at the Marshall Elementary School, on an annual basis Alternative D would add approximately 2.04 percent shaded time and would result in a total of 2.43 percent shaded time (see Table 6-3).

[10] See Planning Code Section 135(f) for definition of private usable open space, and Section 135(g) for common usable open space, and Section 135(d) and Table 135A for amount required.

Alternative D would cast new shadow on the Playground throughout the year with the largest area of shadow being cast on December 20. The largest new shadow area, 8,337 square feet in size, would occur at 1:00 p.m. in the winter, and would cover most of the turf field, and all the foursquare game area, the basketball hoop, and the kickball diamond (Exhibits I.1 and I.2 in Appendix E). Under Alternative D, these sections of the Playground would start to be partially shaded in the winter at 9:00 a.m., and would continue to be shaded until after 3:00 p.m. During winter, between 9:00 a.m. and 1:00 p.m. shadow would only result from Alternative D. Between 1:00 p.m. and 3:00 p.m., both Alternative D and existing buildings would shade the Playground. The Playground would be shaded only by existing buildings after 3:00 p.m. until sunset.

During autumn/spring, the largest new shadow area, 2,551 square feet in size, would occur at 1:00 p.m., and would cover the southern portion of the turf field, and the foursquare game area (Exhibits I.1 and I.2 in Appendix E). Under Alternative D, these sections of the Playground would start to be partially shaded in the autumn/spring at 9:00 a.m., and would continue to be shaded for the rest of the day. Before that time (sunrise to 9:00 a.m.), most of the Playground is shaded by existing buildings. Between 9:00 a.m. and 2:00 p.m., shadow would only result from the Alternative D building. Between 2:00 p.m. and 5:00 p.m., both the Alternative D building and existing buildings would shade the Playground and would entirely cover the turf field, the kickball diamond, and the foursquare game area. By 6:00 p.m., the Playground would be fully shaded by existing buildings. In the summer season, the Alternative D building would cast minimal new shadow on the Playground, mostly between 12:00 p.m. and 3:00 p.m. The largest shadow cast by the Alternative D building on the Playground during the summer would occur at 12:45 p.m. and would cover approximately 913 square feet. The new shadow would be on the southern property line between the Playground and the Capp Street residential component (see Exhibits I.1 and I.2 in Appendix E).

As noted above, under Alternative D the Playground would be shaded approximately 39.07 percent of the time. During the winter, most of the turf field, and all the foursquare game area, the basketball hoop, and the kickball diamond would be shaded under this alternative from approximately 8:30 a.m. through 3:54 p.m. In the autumn/spring, new shadow would cover the southernmost portion of the Playground, half of the foursquare game area, and a portion of the turf field. For these reasons, total shadow under Alternative D would adversely affect the Playground, and shadow impacts would be significant.

There is no feasible available mitigation for Alternative D's shadow impact on the Playground. Any potential mitigation would fundamentally alter the Project's basic design. In addition, because the existing buildings on the project site are one-story plus mezzanine and there is a surface parking lot immediately adjacent to the Playground, any multi-story development on the project site would likely have substantial shadow impacts on the Playground.

Alternative D would create new shadow in a manner that would substantially affect the Playground's activities, and the impact would be significant and unavoidable.

Cumulative Shadow Impacts under Alternative D

Other reasonably foreseeable development projects in the immediate project vicinity are listed in Section 4.A.3 under Approach to Cumulative Analysis. However, none of these projects would cast a shadow on the Playground. Currently, the Playground is shaded 22.08 percent of the time. As described above, Alternative D would result in a significant and unavoidable shadow impact to the Playground, because on an annual basis it would increase the shaded time by 16.99 percent. Cumulative shadow impacts from past projects in conjunction with Alternative D would be significant. The Playground

would be shaded by Alternative D during peak use times, including during recess and lunch, which would substantially affect the use of the Playground. Therefore, Alternative D's contribution to the cumulative shadow impacts at the Playground would be cumulatively considerable, and cumulative impacts would be significant. There are no feasible mitigation measures other than to consider alternative building designs. Therefore, the cumulative shadow impact would be a significant and unavoidable impact.

Shadow Impacts of Alternative D Compared to the Proposed Project

Under Alternative D, the northeastern corner of the Capp Street residential component would have setbacks at the fifth and fourth floors adjacent to the Playground, which would reduce the shadow impact under Alternative D when compared to the Proposed Project.

There would be a 4.58 percent reduction in the percentage of TAAS compared to the Proposed Project between the total shadow load on the Playground under Alternative D (39.07 percent) and the total shadow load on the Playground under the Proposed Project (43.65 percent).

On an annual basis between 10:00 a.m. and 1:00 p.m., Alternative D would have 0.67 percent less total shaded time on the Playground than the Proposed Project. During this time period, Alternative D would result in 2.43 percent total shaded time on the Playground, and the Proposed Project would result in 3.1 percent shaded time on the existing Playground (see Table 6-3).

Similar to Alternative D, the Proposed Project would result in new shadow throughout the year. However, new shadow cast by Alternative D would be slightly smaller than that cast by the Proposed Project. This would result from the setbacks at the fourth and fifth floors of the northeastern corner of the Capp Street residential component under Alternative D.

Similar to the Proposed Project, Alternative D would cast new shadow on the Playground throughout the year, with the largest area of shadow occurring on December 20. During the winter, the Playground would be mostly shaded throughout the day under either Alternative D or the Proposed Project, except for a small section at the northeastern corner, which would remain sunny until 2:00 p.m. However, new shadow under Alternative D would be slightly less than that cast by the Proposed Project. The largest area of shadow under Alternative D would occur at 1:00 p.m. and would be approximately 8,336 square feet in size. Under the Proposed Project, the largest area of shadow would occur at 12:15 p.m. and would be approximately 10,123 square feet in size.

In the autumn/spring, similar to the Proposed Project, new shadow on the Playground under Alternative D would be cast on the southern end of the Playground starting at 9:00 a.m., and would gradually increase for the rest of the day. However, new shadow load would be slightly less under Alternative D than under the Proposed Project. Under Alternative D, larger portions of the foursquare game area and the turf field would remain sunny for parts of the morning until 2:00 p.m., compared to conditions under the Proposed Project (see Exhibits I.1 and I.2 in Appendix E). The largest area of shadow in the autumn/spring would occur at 1:00 p.m. under both Alternative D and the Proposed Project, and would be 2,551 square feet and 3,584 square feet, respectively.

Similar to the Proposed Project, Alternative D would result in minimal new shadow along the southern edge of the Playground along the property line with the project site during the summer season. The shadow would start at 10:00 a.m. and stay until 4:00 p.m., but would not cover any of the Playground game areas (see Exhibit I.1 in Appendix E).

Cumulative Shadow Impacts of Alternative D Compared to the Proposed Project

Alternative D would contribute significantly to cumulative shadow impacts on the Playground, but to a lesser degree than the Proposed Project. Alternative D would result in shaded time of 39.07 percent of TAAS, compared to the Proposed Project at 43.65 percent of TAAS. Therefore, significant cumulative shadow impacts under this alternative would be somewhat less than those identified under the Proposed Project. However, cumulative shadow impacts under Alternative D, while reduced compared to the Proposed Project, would remain significant and unavoidable.

Shadow Impacts Summary of Alternative D

Alternative D would have slightly reduced shadow impacts compared to the Proposed Project (see Table 6-4). However, Alternative D would shade the Playground approximately 39 percent of the time, and would cover most of the turf field, the foursquare game area, the basketball hoop, and the kickball diamond before 1:00 p.m. during winter. Alternative D would also cover the southern portion of the turf field and the foursquare game area during autumn/spring. Similar to the Proposed Project, Alternative D would result in significant unavoidable shadow impacts. Alternative D would contribute significantly to cumulative shadow impacts on the Playground. However, significant cumulative shadow impacts under this alternative would be less than those identified under the Proposed Project.

c. Geology and Soils

Similar to the Proposed Project, the mixed use building under Alternative D would include the same below grade garage, and would be partially sited within the BART ZOI. Therefore, similar to the Proposed Project, Alternative D could result in adverse effects on the BART subway during construction or operation if it is not properly designed and constructed. Similar to the Proposed Project, implementation of Mitigation Measure M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure, described in Section 4C (Geology and Soils), Section C (Impact Evaluation) (pages 4.C-13 and 4.C-14), would ensure that these impacts would be less than significant with mitigation. The contribution of this alternative to cumulative impacts to geology and soil would be less than significant with mitigation, similar to that of the Proposed Project, and for the same reasons as the Proposed Project.

d. Resource Topics Analyzed in the Community Plan Exemption Checklist

Alternative D would have demolition, excavation, and construction activities similar to those of the Proposed Project. Similar to the Proposed Project, Alternative D would include the demolition of the two existing commercial buildings and surface parking lot on the project site. Also similar to the Proposed Project, Alternative D would include the construction a new, four to ten story mixed use building with a maximum height of 105 feet. Vehicular and pedestrian access to the project site under Alternative D would be similar to that under the Proposed Project. However, Alternative D would have four fewer residential units than the Proposed Project. Therefore, Alternative D would result in slightly less population density and a slightly smaller number of vehicles, pedestrians, bicyclists, and transit users. With similar demolition, excavation, and construction activities, Alternative D would have impacts similar to those of the Proposed Project, as analyzed in the CPE Checklist (Appendix A), for the following environmental topics: land use and land use planning, cultural and paleontological resources, greenhouse gas emission, noise, biological resources, hydrology and water quality, hazards and hazardous materials, minerals and energy resources, and agriculture and forest resources. In addition, Alternative D would have construction impacts associated with air quality and noise similar to those under the Proposed Project. Because Alternative D would have fewer residential units and a smaller

number of vehicles, pedestrians, bicyclists, and transit users than the Proposed Project, impacts associated with the following environmental topics would be slightly reduced from those identified for the Proposed Project: population and housing, transportation and circulation, recreation, utilities and service systems, public services, and air quality and noise impacts associated with operational activities. In addition, Alternative D would not result in any significant impacts that were not identified in the Eastern Neighborhoods PEIR. Mitigation Measures and Improvement Measures applicable to the Proposed Project and documented in the CPE Checklist (Appendix A) would be applicable to Alternative D (see Table 6-6).

e. Conclusion

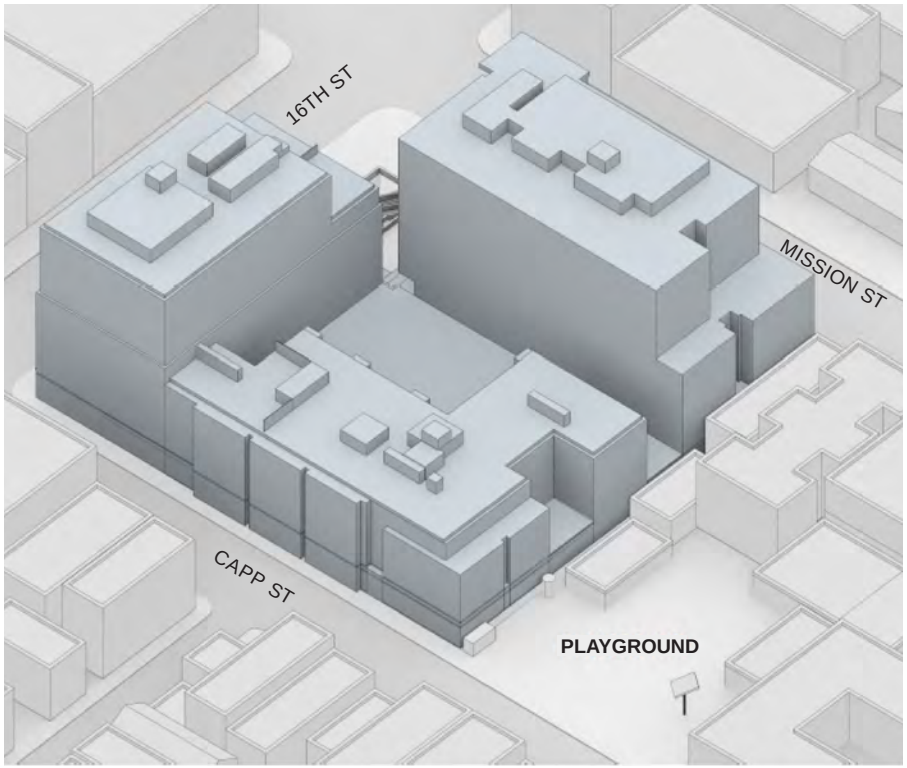
Alternative D would achieve the Project Sponsor's objectives, but to a lesser extent compared with the Proposed Project. Alternative D would meet the objectives for the Project regarding the development of a mixed use residential building in close proximity to transit, providing high quality housing, generating new employment opportunities, and improving the quality and safety of the open space and streetscape. However, although the affordable housing component under Alternative D would comply with the inclusionary affordable housing requirements under the Planning Code, and this alternative would include street improvements and other public improvements (similar to the Proposed Project), it would have four fewer residential units, resulting in fewer affordable units for low, moderate, and middle income households than the Proposed Project. Therefore, Alternative D would achieve the Project Sponsor's objectives to a lesser extent.

Similar to the Proposed Project, Alternative D would result in less than significant impacts related to wind and geology and soils. In addition, similar to the Proposed Project, Alternative D would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR. Alternative D would reduce, but not avoid, the significant shadow impact of the Proposed Project.

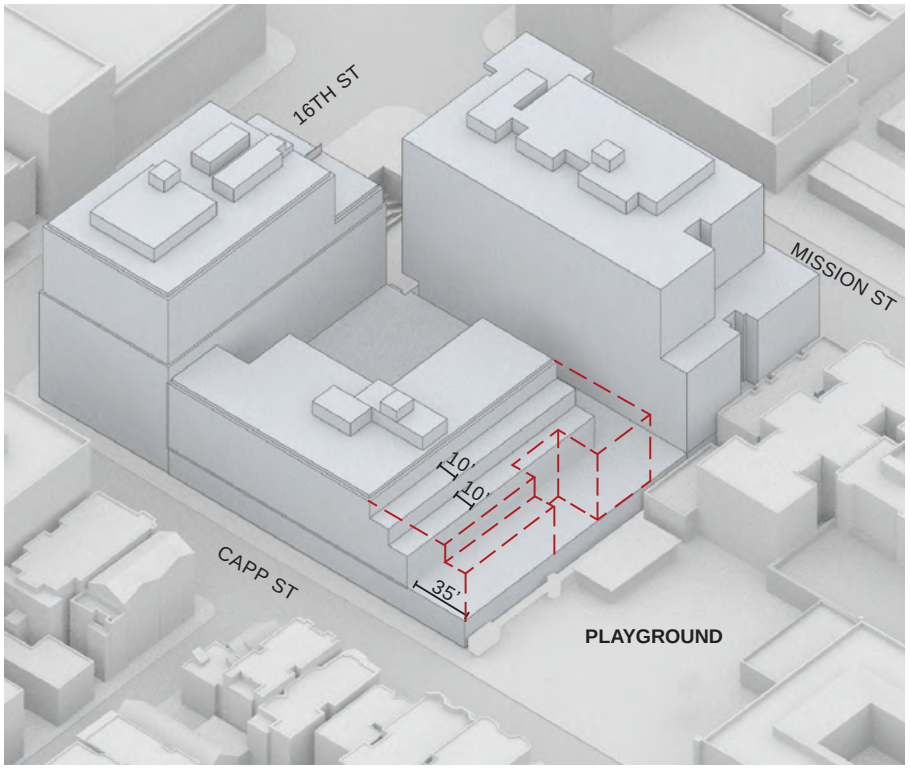
E. Alternative E – Reduced Shadow Alternative 2 – Reduced Capp Component (35-Foot Setback)

1. Description

Similar to the Proposed Project, all existing onsite structures would be demolished under Alternative E, and the site would be redeveloped with a mixed use building that would include three residential components (Capp Street, 16th Street, and Mission Street), ground floor retail along Mission Street and 16th Street, parking, loading, building services, and approximately 25,508 gsf of open space. Alternative E would include approximately 310 residential units, 21 fewer residential units than the Proposed Project. Under Alternative E, the Mission Street and 16th Street residential components of the building, and the retail uses, parking, loading, and building services would be identical to those under the Proposed Project, as shown on Figure 6-7. The Capp Street residential component would be 15 feet to 55 feet high, with a maximum of 71 feet to the top of the elevator penthouse. The northern end of the Capp Street building would be set back 35 feet from the northern property line above the ground floor, 45 feet at the fourth floor, and 55 feet at the fifth floor, as shown on Figure 6-7.



Proposed Project



Alternative E

Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2015.

ALTERNATIVE E
REDUCED SHADOW ALTERNATIVE 2
REDUCED CAPP COMPONENT (35-FOOT SETBACK)

1979 Mission Street Project
San Francisco, California

FIGURE 6-7

Alternative E would require the same deviations from the Planning Code requirements as the Proposed Project, and would comply with NCT district zoning. Common usable open space would be provided in the form of roof decks and a portion of the interior podium courtyard. The northern 35 feet of the Capp Street residential component at the second level would include both common and private usable open space. The common usable open space totaling 25,508 square feet would decrease by 3,233 square feet when compared to the Proposed Project. Although the amount of common usable open space would decrease under this alternative, the number of residential units would also decrease by 21 units.

This alternative would provide no private usable open space. This alternative would also include a privately owned publicly accessible ground level open space adjacent to the Northeast BART Plaza, similar to the Proposed Project.

Alternative E would require the same approvals as those listed for the Proposed Project in Chapter 2 under Section 2 on pages 2-36 through 2-37.

2. Impacts

a. Wind

Alternative E would have a 35-foot setback from the northern property line along the Capp Street residential component. The massing reduction under this alternative would slightly reduce the potential wind impact on Capp Street when compared to the Proposed Project, but would especially reduce the impact of the prevailing winds from the west-northwest and northwest directions at the northeastern corner of the project site. The wind conditions on Mission Street and 16th Street would not be negatively affected by this alternative because of the setback of the Capp Street residential component and the local wind directions, and would not substantially change the wind impacts when compared to the Proposed Project. Therefore, impacts related to wind would be less than significant for both the Proposed Project and Alternative E. The contribution of this alternative to cumulative wind impacts would be less than significant, similar to that of the Proposed Project, and for the same reasons as the Proposed Project (see Appendix D).

b. Shadow

As presented in Table 6-2, Alternative E would result in a new shadow load of 11.46 percent of TAAS. The total shadow load on the Playground under Alternative E would be 33.54 percent of TAAS. Exhibits J.1 and J.2 in Appendix E provide graphics of the shadows cast on the Playground and quantified shadow impact results for Alternative E, respectively. Between 10:00 a.m. and 1:00 p.m. during the recess and lunch period at the Marshall Elementary School, Alternative E would add approximately 0.87 percent shaded time, and would result in a total of 1.26 percent shaded time.

Alternative E would cast new shadow on the Playground throughout the year, with the largest area of shadow cast on December 20. During winter, Alternative E would cast new shadow on the Playground from approximately 8:30 a.m. through 3:54 p.m. The largest new shadow area as a result of Alternative E would be 4,779 square feet in size and would occur at 1:00 p.m. It would cover the western half of the turf field and the foursquare game area (Exhibit J.1 in Appendix E). Under Alternative E, these sections of the Playground would start to be partially shaded in the winter at 9:00 a.m. By 2:00 p.m., all of the Playground would be shaded and would remain shaded until sunset. Shadow on the Playground from sunrise until 10:00 a.m. would result from Alternative E and the existing buildings during winter.

Between 10:00 a.m. and 1:00 p.m., shadow would only result from Alternative E. Shadow would result from both Alternative E and existing buildings for the remaining part of the day.

During autumn/spring, the largest net new shadow area under Alternative E, 1,246 square feet in size, would occur at 1:00 p.m., and would cover the southernmost portion of the Playground, shading a minor portion of the foursquare game area (Exhibit J.1 in Appendix E). Under Alternative E, these sections of the Playground would start to be partially shaded in the autumn/spring at 9:00 a.m. and would continue to be shaded for the rest of the day. Before 9:00 a.m., most of the Playground is shaded by existing buildings, except for the southern portion of the turf field, which remain sunny. Between 9:00 a.m. and 2:00 p.m., shadow would only result from Alternative E. Between 2:00 p.m. and 5:00 p.m., both Alternative E and existing buildings would shade the Playground and would cover the turf field, the kickball diamond, and the foursquare game area. By 6:00 p.m., the Playground would be fully shaded, mostly by existing buildings.

In the summer, Alternative E would cast minimal new shadow on the Playground between 11:00 a.m. and 3:00 p.m. The largest shadow cast by the Alternative E on the Playground during the summer would occur at 12:45 p.m., and would cover approximately 440 square feet. The new shadow resulting from Alternative E would occur on the very edge of the southern boundary of the Playground (see Exhibit J.1 in Appendix E). Shadow from existing building starts along the western boundary of the Playground at 3:00 p.m. in the summer, and covers most of the Playground by 7:00 p.m. (see Exhibit J.1 in Appendix E).

As noted above, under Alternative E, the Playground would be shaded 33.54 percent of the time. During the winter, the western half of the turf field and the foursquare game area would be shaded under this alternative from approximately 8:30 a.m. through 3:54 p.m. In the autumn/spring, new shadow would cover the southernmost portion of the Playground, shading a minor portion of the foursquare game area. For these reasons, total shadow under Alternative E would adversely affect the Playground, and shadow impacts would be significant.

There is no feasible available mitigation for Alternative E's impacts on the Playground. Any potential mitigation would fundamentally alter the Project Alternative's basic design. In addition, because the existing buildings on the project site are one story plus mezzanine and there is a surface parking lot immediately adjacent to the Playground, any multi-story development on the project site would likely have substantial shadow impacts on the Playground.

The shadow analysis shows that Alternative E would create new shadow in a manner that would substantially affect the Playground, and the impact would be significant and unavoidable.

Cumulative Shadow Impacts under Alternative E

Other reasonably foreseeable development projects in the immediate project vicinity are listed in Section 4.A.3 under Approach to Cumulative Analysis. However, none of these projects would cast a shadow on the Playground. Currently, the Playground is shaded 22.08 percent of the time. As described above, Alternative E would result in a significant and unavoidable shadow impact to the Playground. In conjunction with impacts from past projects, cumulative shadow impacts as a result of Alternative E would be significant. The Playground would be shaded by Alternative E in the winter and autumn/ spring during peak use times, including during recess and lunch, which would substantially affect the use of the Playground. Therefore, Alternative E's contribution to the cumulative shadow impacts at the Playground would be cumulatively considerable, and cumulative impacts would be significant. Because there are no feasible mitigation measures, the impact would be cumulatively significant and unavoidable.

Shadow Impacts of Alternative E Compared to the Proposed Project

Under Alternative E, the northern end of the Capp Street building, adjacent to the Playground, would be set back 35 feet from the northern property line above the ground floor, 45 feet at the fourth floor, and 55 feet at the fifth floor, respectively. The setback would reduce the shadow impact from the Capp Street residential component when compared to the Proposed Project.

There would be a 10.11 percent reduction in the percentage of TAAS compared to the Proposed Project between the total shadow load on the Playground under Alternative E (33.54 percent) and the total shadow load on the Playground under the Proposed Project (43.65 percent).

Between 10:00 a.m. and 1:00 p.m., Alternative E would result in 1.84 percent less total shaded time on the Playground than the Proposed Project. During this time period, Alternative E would result in 1.26 percent total shaded time on the Playground, and the Proposed Project would result in 3.1 percent shaded time on the existing Playground (see Table 6-3).

Similar to the Proposed Project, Alternative E would result in new shadow throughout the year. However, new shadow cast by Alternative E would be substantially less than that under the Proposed Project due to the setbacks above the ground floor of the Capp Street residential component along the northern boundary.

Similar to the Proposed Project's new shadow cast, Alternative E would cast new shadow on the Playground throughout the year, with the largest area of shadow occurring on December 20. During the winter, under Alternative E, the middle portion of the Playground, including the basketball hoop, kickball diamond, and northern half of the turf field, would remain sunny from 9:00 a.m. until 2:00 p.m. During that same period of the day, the Playground would be mostly shaded under the Proposed Project, except for a small section at the northeastern corner. The largest area of shadow under Alternative E would occur at 1:00 p.m., and would be approximately 4,779 square feet in size. Under the Proposed Project, the largest area of shadow would occur at 12:15 p.m., and would be approximately 10,123 square feet in size. Similar to the Proposed Project, new shadow on the Playground under Alternative E would result from the Capp Street building component until approximately 12:45 p.m. After this time, both the Capp Street and Mission Street residential would cast new shadow on the Playground until the end of the day.

In the autumn/spring, similar to the Proposed Project, new shadow on the Playground under Alternative E would be cast on the southern end of the Playground starting at 9:00 a.m., and would gradually increase for the rest of the day. However, the extent of the shadow would be substantially less under Alternative E compared with the Proposed Project. Under Alternative E, the foursquare game area would not be shaded until approximately 4:00 p.m., compared to being shaded after approximately 10:00 a.m. under the Proposed Project (see Exhibits J.1 and J.2 in Appendix E). The largest area of shadow in autumn/spring under Alternative E would be 1,246 square feet, and would occur at 1:00 p.m. at the southern edge of the Playground. The largest area of shadow during that time period under the Proposed Project would occur at the same location and time. However, it would be 3,584 square feet in size. Similar to the Proposed Project, new shadow under Alternative E that would occur in the morning in the autumn/spring would result from the Capp Street residential component. After approximately 2:00 p.m., new shadow would result from either the Capp Street or Mission Street residential components.

Similar to the Proposed Project, Alternative E would result in a minor area of new shadow along the southern edge of the Playground during summer. Also similar to the Proposed Project, this area would be shaded from approximately 10:00 a.m. until approximately 4:00 p.m.

Cumulative Shadow Impacts of Alternative E Compared to the Proposed Project

Similar to the Proposed Project, Alternative E would contribute significantly to cumulative shadow impacts on the Playground. However, because Alternative E would result in shading that would be 33.54 percent of TAAS and would result in relatively less shadow than the Proposed Project (43.65 percent of TAAS), significant cumulative shadow impacts under this alternative would be less than those identified under the Proposed Project.

Shadow Impacts Summary of Alternative E

Alternative E would have less reduced shadow impacts compared to the Proposed Project (see Table 6-4). However, Alternative E would shade the Playground approximately 33.54 percent of the time, and similar to the Proposed Project would result in significant unavoidable shadow impacts. The shadow reduction under Alternative E would result from the setbacks above the ground floor of the Capp Street residential component adjacent to the Playground.

Similar to the Proposed Project, Alternative E would contribute significantly to cumulative shadow impacts on the Playground. However, significant cumulative shadow impacts under this alternative would be less than those identified under the Proposed Project.

c. Geology and Soils

Similar to the Proposed Project, the mixed use building under Alternative E would be partially sited within the BART ZOI, and could result in adverse effects on the BART subway during construction or operation if not properly designed and constructed. Similar to the Proposed Project, implementation of Mitigation Measure M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure, described in Chapter 4.C Geology and Soils, – Section 4.c – Impact Evaluation (pages 4.C-13 and 4.C-14), would ensure that these impacts would be less than significant with mitigation. The contribution of this alternative to cumulative impacts to geology and soil would be less than significant, similar to that of the Proposed Project, and for the same reasons as the Proposed Project.

d. Resource Topics Analyzed in the Community Plan Exemption Checklist

Alternative E would have demolition, excavation, and construction activities similar to those of the Proposed Project. Similar to the Proposed Project, Alternative E would include the demolition of the two existing commercial buildings and surface parking lot on the project site. Also similar to the Proposed Project, Alternative E would include the construction of a new, four to ten story mixed use building with a maximum height of 105 feet. Vehicular and pedestrian access to the project site under Alternative E would be similar to that under the Proposed Project. However, Alternative E would have 21 fewer residential units than the Proposed Project. Therefore, Alternative E would result in slightly less population density and a slightly smaller number of vehicles, pedestrians, bicyclists, and transit users. With similar demolition, excavation, and construction activities, Alternative E would have impacts similar to those of the Proposed Project, as analyzed in the CPE Checklist (Appendix A), for the following environmental topics: land use and land use planning, cultural and paleontological resources, greenhouse gas emission, noise, biological resources, hydrology and water quality, hazards and

hazardous materials, minerals and energy resources, and agriculture and forest resources. In addition, Alternative E would have similar construction impacts associated with air quality and noise. Because Alternative E would have fewer residential units and a smaller number of vehicles pedestrians, bicyclists, and transit users than the Proposed Project, impacts associated with the following environmental topics would be slightly reduced from those identified for the Proposed Project: population and housing, transportation and circulation, recreation, utilities and service systems, public services, and air quality and noise impacts associated with operational activities. However, Alternative E would not result in any significant impacts that were not identified in the Eastern Neighborhoods PEIR, and Mitigation Measures and Improvement Measures applicable to the Proposed Project and documented in the CPE Checklist (Appendix A) would be applicable to Alternative E (see Table 6-6).

e. Conclusion

Alternative E would redevelop the project site with a mixed use building (residential/retail), and would meet some of the objectives of the Project Sponsor to develop a mixed use high quality residential building for residents with varying incomes that would (1) be in close proximity to a major transit hub, (2) generate employment opportunities, (3) enhance the safety of public open space, and (4) improve the streetscape. However, although the affordable housing component under Alternative E would comply with the inclusionary affordable housing requirements under the Planning Code, and this alternative would include street improvements and other public improvements (similar to the Proposed Project), it would have 21 fewer residential units, resulting in fewer affordable units for low, moderate, and middle income households than the Proposed Project. Therefore, Alternative E would achieve the Project Sponsor's objectives to a lesser extent as a result of a 6 percent reduction in the number of residential units provided.

Similar to the Proposed Project, Alternative E would result in less than significant impacts related to wind and geology and soils. In addition, similar to the Proposed Project, Alternative E would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR. Shadow impacts under Alternative E would be significant and unavoidable, similar to the Proposed Project. However, Alternative E would result in somewhat reduced shadow impacts on the Playground compared to the shadow impacts on the Playground under the Proposed Project.

F. Alternative F – Reduced Shadow Alternative 3 – Reduced Mission and Capp Components (70-Foot Setback for Capp Component and 40-Foot Height Reduction for Mission Component)

1. Description

Under Alternative F, all existing onsite structures would be demolished, and the site would be redeveloped with a mixed use project with three residential components (Capp Street, 16th Street, and Mission Street) above ground floor retail. Alternative F would include 243 residential units above the second floor (Podium Level) and three residential units on the ground floor of the Capp Street building. This would be 85 fewer residential units than under the Proposed Project. The ground floor and basement level would be identical to the Proposed Project.

The northern end of the Capp Street residential component would be set back 70 feet above the ground floor, and the height of the Mission Street residential component would be reduced from 105 to 65 feet, when compared to the Proposed Project (see Figure 6-8). The 16th Street residential component would remain identical to the Proposed Project. Alternative F would contain 88 fewer residential units than the Proposed Project, and an additional 2,767 square feet of common usable space. This alternative would comply with the Mission NCT district zoning, and would require deviations from the Planning Code similar to the Proposed Project.

Compared to the Proposed Project, under Alternative F the height of the Mission Street residential component would be reduced by five levels of residential use over ground floor retail, or 65 feet high plus a 16–foot high elevator penthouse. The 16th Street residential component would be identical to the Proposed Project, with an approximately 40 foot setback above the seventh floor from the eastern property line of the Northeast BART Plaza, a maximum height of 105 feet as allowed under the Planning Code, and 121 feet to the top of the elevator penthouses (see Figure 6-8). The Capp Street residential component would be set back 70 feet at the second floor (Podium Level) from the northern property line, with a maximum height of 55 feet as allowed under the Planning Code, and 71 feet to the top of the elevator penthouses. The ground floor would include three at grade residential units, residential lobbies, three freight loading spaces, and one ADA accessible van parking space. Access to the parking levels and building services would be provided from Capp Street. The second through fifth floors would be for residential use only.

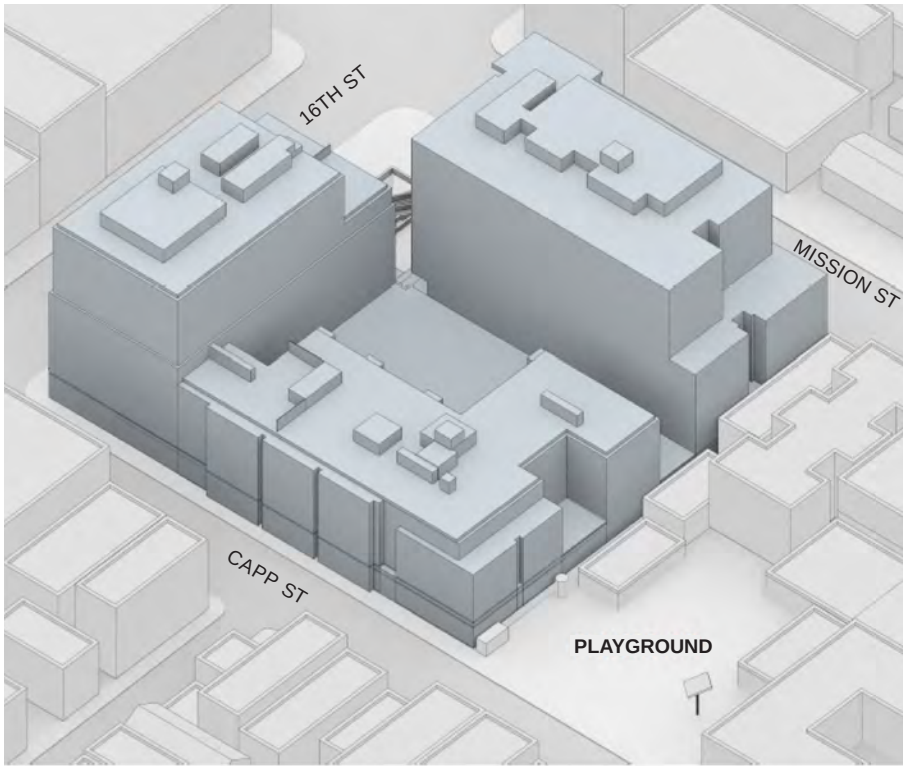
Alternative F would provide approximately 31,508 square feet of common usable open space in the form of roof decks and an outer court, which is 2,767 square feet more common open space for 88 fewer units than in the Proposed Project. This alternative would also include a privately owned publicly accessible ground level open space adjacent to the Northeast BART Plaza, similar to the Proposed Project.

The construction duration of Alternative F would be approximately 21 months, similar to that of the Proposed Project. Alternative F would require the same approvals listed for the Proposed Project in Chapter 2 under Section 2 on pages 2-36 through 2-37.

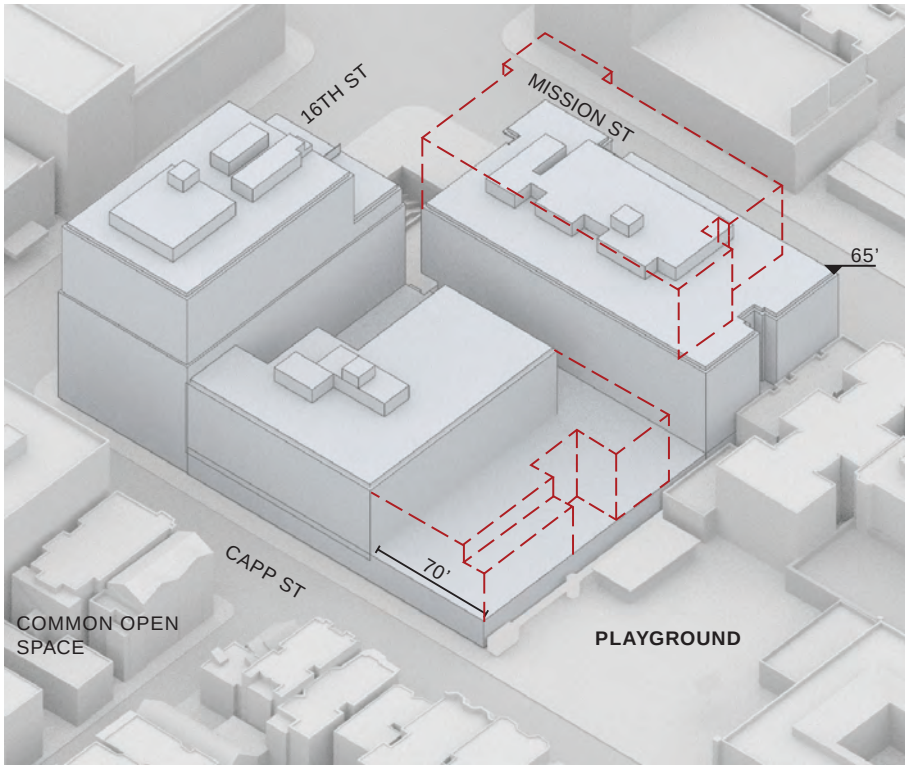
2. Impacts

a. Wind

Under Alternative F, a large portion of the northern building on Capp Street would be removed, and the Mission Street residential component would be similar in height to the existing surroundings in all directions, resulting in reduced wind exposure. Consequently, the wind speeds under this alternative along Mission and 16th Streets and the Northeast BART Plaza would be lower than those identified for the Proposed Project and described in Chapter 4.B, Wind and Shadow, Section 4.c, Impact Evaluation (see pages 4.B-5 through 4.B-9). Alternative F would not result in hazardous winds on and around the project site. The wind impacts under this alternative would be less than significant. The contribution of this alternative to cumulative wind impacts would be less than significant, similar to that of the Proposed Project, and for the same reasons as the Proposed Project (see Appendix D).



Proposed Project



Alternative F

Not to Scale

Source: Skidmore, Owings & Merrill LLP, 2015.

ALTERNATIVE F
REDUCED SHADOW ALTERNATIVE 3
REDUCED MISSION AND CAPP COMPONENTS

1979 Mission Street Project
San Francisco, California

FIGURE 6-8

b. Shadow

As presented in Table 6-2, Alternative F would result in a new shadow load of 8.82 percent of TAAS. The total shadow load on the Playground under Alternative F would be 30.90 percent of TAAS. Exhibits K.1 and K.2 in Appendix E provide graphics of the shadows cast on the Playground and quantified shadow impact results for Alternative F, respectively. For the hours between 10:00 a.m. and 1:00 p.m. during the recess and lunch period at the Marshall Elementary School, Alternative F would add approximately 0.75 percent shaded time and would result in a total of 1.14 percent shaded time.

Alternative F would cast new shadow on the Playground throughout the year, with the largest area of shadow cast on December 20. During winter, the Playground is fully shaded by existing buildings from sunrise until 9:00 a.m. Between 9:00 a.m. and 10:00 a.m., both Alternative F and existing buildings would partially shade the Playground, with existing buildings shading the eastern edge of the Playground and Alternative F shading the southern portion of the turf field and most of the foursquare game area. Between 10:00 a.m. and 1:00 p.m. during the winter, Alternative F would continue to shade the same sections of the Playground with no shadow from existing buildings. The largest new shadow area cast by the Alternative F building during the winter would be 3,064 square feet at 12:15 p.m. Between 1:00 p.m. and 2:15 p.m. in the winter, shadow from the Alternative F building would increase to cover all of the turf field and the foursquare game area. During that time of the day, shadow from existing buildings would cover the western edge and the northwestern corner of the Playground. By 3:00 p.m. and through the end of the day, the Playground would be fully shaded and shadow would result from both Alternative F and existing buildings (see Exhibit K.1 in Appendix E).

The new shadow cast by Alternative F in the spring/autumn would cover the southernmost portion of the Playground. However, it would not shade the foursquare game area until approximately 5:00 p.m. During the autumn/spring, from sunrise until 8:00 a.m., existing buildings shade most of the Playground except for its southwestern corner. Alternative F would start to cast shadow on the Playground by 9:00 a.m., and would shade the edge of the Playground's southern boundary until 3:00 p.m. The largest shadow area cast by Alternative F in the autumn/spring would be 1,246 square feet and would occur at 1:00 p.m. Between 3:00 p.m. and 5:00 p.m., the shadow from the Alternative F building would increase to cover the southern portion of the turf field and all of the foursquare game area. Also by 3:00 p.m., shadow from existing buildings starts covering the western boundary of the Playground and gradually covers all of the Playground until sunset (see Exhibit K.1 in Appendix E).

During the summer, from sunrise until approximately 8:00 a.m., existing buildings shade the Playground, covering the basketball hoop, the kickball diamond, the foursquare game area, and part of the turf field. Between 9:00 a.m. and 3:00 p.m., the Playground would be fully sunny during the summer under this Alternative, except for the edge of its southern boundary that would be shaded by the Alternative F building. The largest area of shadow cast by Alternative F during the summer would be 440 square feet and would occur at 12:45 p.m. By 3:00 p.m. in the summer, existing buildings start gradually shading the Playground along it western boundary to fully shade it by 7:00 p.m. (see Exhibit K.1 in Appendix E).

As noted above, under Alternative F the Playground would be shaded 30.90 percent of the time. During the winter, between 10:00 a.m. and 1:00 p.m., shadow on the Playground would only result from the Alternative F building. By 1:00 p.m. and through the rest of the day, both Alternative F and the existing buildings would shade the Playground. In the autumn/spring, new shadow would cover the southernmost portion of the Playground. For these reasons, total shadow under Alternative E would adversely affect the Playground, and shadow impacts would be significant.

There is no feasible available mitigation for Alternative F's impact on the Playground. Any potential mitigation would fundamentally alter the Project Alternative's basic design. In addition, because the existing buildings on the project site are one story plus mezzanine and there is a surface parking lot immediately adjacent to the Playground, any multi-story development on the project site would likely have substantial shadow impacts on the Playground.

The shadow analysis shows that Alternative F would create new shadow in a manner that would substantially affect the Playground, and the impact would be significant and unavoidable.

Cumulative Shadow Impacts under Alternative F

Other reasonably foreseeable development projects in the immediate project vicinity are listed in Section 4.A.3 under Approach to Cumulative Analysis. However, none of these projects would cast a shadow on the Playground. Currently, the Playground is shaded 22.08 percent of the time. As described above, Alternative F would result in a significant and unavoidable shadow impact to the Playground, because on an annual basis it would increase the shaded time by 8.82 percent. Cumulative shadow impacts from past projects in conjunction with Alternative F would be significant. The Playground would be shaded by Alternative F during peak use times, including during recess and lunch, which would substantially affect the use of the Playground. Therefore, Alternative F's contribution to the cumulative shadow impacts at the Playground would be cumulatively considerable, and cumulative impacts would be significant. There are no feasible mitigation measures, resulting in a cumulatively significant and unavoidable impact.

Shadow Impacts of Alternative F Compared to the Proposed Project

Under Alternative F, the northern end of the Capp Street residential component would be set back 70 feet above the ground floor, and the height of the Mission Street residential component would be reduced from 105 to 65 feet, compared to the Proposed Project. The reduction of the height of the Mission Street residential component would result in an overall shadow reduction on the Playground after 2:00 p.m. when compared with the Proposed Project.

There would be an 8.82 percent reduction in the percentage of TAAS compared to the Proposed Project, when comparing the total shadow load on the Playground under Alternative F (30.90 percent) and the total shadow load on the Playground under the Proposed Project (43.65 percent).

Between 10:00 a.m. and 1:00 p.m., Alternative F would result in 1.96 percent less total shaded time on the Playground than the Proposed Project. During this time period, Alternative F would result in 1.14 percent total shaded time on the Raised Playground, and the Proposed Project would result in 3.1 percent shaded time on the existing Playground (see Table 6-3).

Similar to the Proposed Project, Alternative F would result in new shadow throughout the year. However, new shadow cast by Alternative F would be substantially smaller due to the setbacks above the ground floor of the northeastern corner of the Capp Street residential component, as well as the reduction in height of the Mission Street component from 105 feet under the Proposed Project to 65 feet under this alternative.

The shadow reduction under Alternative F in winter would primarily occur between 10:00 a.m. and 1:00 p.m. In winter, between 10:00 a.m. and 1:00 p.m., the Playground would be mostly shaded under the Proposed Project. Under Alternative F, the Playground would be mostly sunny during this timeframe, with the middle portion of the Playground—including the basketball hoop, kickball diamond, and turf

field—being sunnier compared with the Proposed Project. The largest area of shadow would occur at 12:15 p.m. under either Alternative F or the Proposed Project. However, the largest shadow area would be approximately 3,064 square feet under Alternative F, compared with approximately 10,123 square feet under the Proposed Project.

In autumn/spring, similar to the Proposed Project, Alternative F would result in new shadow throughout the day along the southern portion of the Playground; however, the extent of the shadow would be substantially less than that under the Proposed Project. Under Alternative F, the foursquare game area would not be shaded until approximately 4:00 p.m., compared to being shaded throughout the day after approximately 10:00 a.m. under the Proposed Project (see Exhibits J.1 and J.2 in Appendix E). The largest area of shadow in autumn/spring under Alternative F would be 1,246 square feet, and would occur at 1:00 p.m. The largest area of shadow during that time period under the Proposed Project would be 3,584 square feet.

Similar to the Proposed Project, Alternative F would result in minimal new shadow along the southern edge of the Playground during summer, and would start at approximately 10:00 a.m. and stay until approximately 4:00 p.m.

Cumulative Shadow Impacts of Alternative F Compared to the Proposed Project

Similar to the Proposed Project, Alternative F's shadow impacts at the Playground would be cumulatively considerable. However, this alternative would contribute to cumulative shadow impacts to a lesser extent than the Proposed Project. The Playground would be shaded 30.90 percent under Alternative F, and 43.57 percent under the Proposed Project.

Shadow Impacts Summary of Alternative F

Alternative F would have reduced shadow impacts compared to the Proposed Project (see Table 6-4). However, Alternative F would shade the Playground approximately 30.90 percent of the time, and similar to the Proposed Project would result in significant unavoidable shadow impacts. The shadow reduction under Alternative F would result from the setbacks above the ground floor of the Capp Street and Mission Street residential components.

c. Geology and Soils

Similar to the Proposed Project, the mixed use building under Alternative F would include the same basement and below grade garage. It would be partially sited within the BART ZOI, and could result in adverse effects on the BART subway during construction or operation if it is not properly designed and constructed. Similar to the Proposed Project, implementation of Mitigation Measure M-GE-3: Design Approval and Construction Monitoring for BART Subway Structure, described in Section 4C Geology and Soils – Section C – Impact Evaluation (pages 4.C-10 and 4.C-14), would ensure that these impacts would be less than significant with mitigation. The contribution of this alternative to cumulative impacts to geology and soil would be less than significant, similar to that of the Proposed Project, and for the same reasons as the Proposed Project.

d. Resource Topics Analyzed in the Community Plan Exemption Checklist

Alternative F would have demolition, excavation, and construction activities similar to those of the Proposed Project. Similar to the Proposed Project, Alternative F would include the demolition of the two

existing commercial buildings and surface parking lot on the project site. Also similar to the Proposed Project, Alternative F would include the construction of a new, one to ten story mixed use building with a maximum height of 105 feet. Vehicular and pedestrian access to the project site under Alternative F would be similar to that under the Proposed Project. However, Alternative F would have 88 fewer residential units than the Proposed Project. Therefore, Alternative F would result in less population density and smaller number of vehicles, pedestrians, bicyclists, and transit users. With similar demolition, excavation, and construction activities, Alternative F would have impacts similar to those of the Proposed Project, as analyzed in the CPE Checklist (Appendix A), for the following environmental topics: land use and land use planning, cultural and paleontological resources, greenhouse gas emission, noise, biological resources, hydrology and water quality, hazards and hazardous materials, minerals and energy resources, and agriculture and forest resources. In addition, Alternative F would have similar construction impacts associated with air quality and noise. Because Alternative F would have fewer residential units and a smaller number of vehicles pedestrians, bicyclists, and transit users than the Proposed Project, impacts associated with the following environmental topics would be somewhat reduced from those identified for the Proposed Project: population and housing, transportation and circulation, recreation, utilities and service systems, public services, and air quality and noise impacts associated with operational activities. However, Alternative F would not result in any significant impacts that were not identified in the Eastern Neighborhoods PEIR and Mitigation Measures and Improvement Measures applicable to the Proposed Project and documented in the CPE Checklist (Appendix A) would be applicable to Alternative F (see Table 6-6).

e. Conclusion

Alternative F would redevelop the project site with a mixed use building (residential and retail) that would meet some of the objectives of the Project Sponsor to develop a mixed-use high quality residential building for residents with varying incomes that would (1) be in close proximity to a major transit hub, (2) generate employment opportunities, (3) enhance the safety of the open space, and (4) improve the streetscape. However, although the affordable housing component under Alternative F would comply with the inclusionary affordable housing requirements under the Planning Code, and this alternative would include street improvements and other public improvements (similar to the Proposed Project), it would have 88 fewer residential units, resulting in fewer affordable units for low, moderate, and middle income households than the Proposed Project. Therefore, Alternative F would achieve the Project Sponsor's objectives to a much lesser extent as a result of providing 26 percent fewer residential units compared to the Proposed Project.

Similar to the Proposed Project, Alternative F would result in less than significant impacts related to wind and geology and soils. In addition, similar to the Proposed Project, Alternative F would not result in significant impacts that were not identified in the Eastern Neighborhoods PEIR. Shadow impacts under Alternative F would be significant and unavoidable, similar to the Proposed Project. However, Alternative F would result in somewhat reduced shadow impacts on the Playground compared to the shadow impacts on the Playground under the Proposed Project.

G. Alternatives Considered but Rejected from Further Consideration

Pursuant to CEQA Guidelines §15126.6(c), 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." The screening process for identifying viable EIR alternatives included consideration of the following criteria: ability to meet the Project objectives; potential ability to substantially lessen or avoid significant environmental effects associated with the Proposed Project; and potential feasibility.

Similar to the Proposed Project, all of the rejected alternatives would include three residential components (Capp Street, 16th Street, and Mission Street), ground floor retail along Mission Street and 16th Street, parking, loading, building services, and approximately 28,741 gsf of common usable open space. The discussion below describes the alternatives considered and the reasons for rejecting them from detailed consideration in the EIR.

Original Massing Alternative – This alternative was the project analyzed in the CPE Checklist, which would also have 331 residential units, similar to the Proposed Project. However, when this Original Massing alternative was tested, the wind tunnel analysis found a hazardous wind impact. This alternative was rejected due to the potential for the new structure to create new hazardous wind location(s). As a result, this alternative was modified to include a chamfered corner above the third floor at the southwestern corner of the Mission Street residential component, which would eliminate the hazardous wind impact, and the Original Massing Alternative with this one modification (chamfered corner) is the Proposed Project analyzed in this EIR. This alternative would result in the same shadow impact on the Playground as the Proposed Project.

Reduced Mission Street Building Component Alternative – The Capp Street and 16th Street residential components would be identical to the Proposed Project under this alternative. However, the height of the Mission Street residential component would be reduced by 40 feet, or four stories. The height of the Mission Street component under this alternative would be 65 feet, compared to the height range of 65 to 105 feet under the Proposed Project. This alternative would have 266 units, which is 65 units less than the Proposed Project. In addition, this alternative would reduce the number of required affordable housing from 40 units to 32 units if provided on-site, or from 66 units to 53 units if provided off-site, or payment of a 20 percent in lieu fee.

This alternative would reduce new shadow on the Playground mostly in the afternoon to late afternoon compared to the Proposed Project, but would not reduce new shadow during lunch and recess times, because the Capp Street component would be the same as under the Proposed Project. Reducing the height of the Proposed Project's Mission Street residential component by 40 feet would result in minimal shadow reduction, because without any reduction in massing for the Capp Street residential component, this alternative would still cast substantial shadow on the Playground. Instead of this alternative, it was determined that Alternative F, with a similar reduction in the height of the Mission Street residential component in combination with a reduction in the massing of the Capp Street residential component, would reduce the Proposed Project's shadow impacts and should be considered.

This alternative would further substantially reduce the number of market rate and affordable housing units provided by the Proposed Project. It would not substantially reduce the shadow impact of the Proposed Project compared to an alternative already being studied. Therefore, this alternative was rejected from further consideration.

Reduced Capp Street and Mission Street Building Components Alternative – This alternative would set back the Capp Street residential component 70 feet from the northern property line above the ground floor, and the height of the Mission Street residential component would be reduced from 105 feet to 45 feet (four stories), reducing the number units from 331 under the Proposed Project to 201 units (130

fewer units). Preliminary shadow analysis showed that this alternative would reduce late afternoon shadow after 3:00 p.m. when compared to Alternative F, but would not reduce shadow during the 10:00 a.m. to 1:00 p.m. time period compared with Alternative F. In addition, this alternative would result in lower density on a site adjacent to a local and regional transit hub, which would include 42 fewer residential units than Alternative F. In addition, this alternative would reduce the number of required affordable housing from 40 units to 24 units if provided on site, or 66 units to 40 units if provided off site, or payment of a 20 percent in lieu fee.

This alternative would not reduce shadow impacts during the 10:00 a.m. to 1:00 p.m. time frame, compared with Alternative F. Therefore, this alternative was dismissed from further consideration, and Alternative F was selected for further analysis in the EIR.

An Offsite Alternative – An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative (CEQA Guidelines, Section 15126.6 [f][3]). Whether a property is owned or can reasonably be acquired by the project sponsor has a strong bearing on the feasibility of developing a project alternative at a different site. No viable alternative sites have been identified in San Francisco that are under the project sponsor's control, that are where the Proposed Project could be constructed, and that would meet most of the project sponsor's objectives. Therefore, no offsite alternative was analyzed.

H. Environmentally Superior Alternative

CEQA Guidelines Section 15126.6(e)(2) requires identification of an Environmentally Superior Alternative if the proposed project has significant impacts that cannot be mitigated to a less than significant level. The Environmentally Superior Alternative is the alternative that best avoids or lessens any significant effects of the proposed project, even if the alternative would impede to some degree the attainment of some of the project objectives. Tables 6-2 and 6-3 provide a brief development comparison of the alternatives with the Proposed Project.

The Proposed Project would result in significant and unavoidable shadow impacts by creating new shadow in a manner that could substantially affect the Marshall Elementary School Playground. For projects in developed areas, the alternative with the least development—in this case the No Project Alternative—would eliminate the impacts. However, the No Project Alternative would result in a hazardous wind condition. Under the existing conditions, winds average 26 mph and exceed the hazard criterion at the northeastern corner of 16th and Capp Streets. In addition, the No Project Alternative would not meet any of the Project Sponsor's objectives.

Alternative C is identified as one of the environmentally superior alternatives. Under Alternative C, the existing Playground would be replaced with a new, 15-foot-tall, one-story structure with a Raised Playground on the roof. Elevating the Playground by 15 feet would substantially reduce overall shadow on the Raised Playground from existing buildings. Shadow impacts would be reduced to the maximum extent of any alternative compared to the Proposed Project. However, shadow impacts would remain significant and unavoidable under this alternative, because similar to the Proposed Project, the alternative would substantially shade the Raised Playground, including between 10:00 a.m. and 1:00 p.m., the lunch and recess periods, when the Playground is more intensively used for recreational activities. In addition, Alternative C would also achieve the Project Sponsor's objectives to the same extent as the Proposed Project. However, the school property is not part of the project site and is not under the control of the project sponsor. Implementation of this alternative would require the Project Sponsor and SFUSD to

agree on and execute an agreement whereby the Project Sponsor would undertake the demolition and construction activities on the school property as described above. The City cannot require or condition the Proposed Project on completion of an offsite mitigation alternative. Approvals and permits would be outside the jurisdiction of the City. The California State architect would need to review and approve the plans and permits for the demolition and new construction. Therefore, there is uncertainty as to whether or not this alternative would be approved.

Due to the uncertainty of Alternative C, Alternative F – Reduced Shadow Alternative 3 (Reduced Capp Street and Mission Street residential components) is the other environmentally superior alternative. Alternative F would redevelop the project site with a mixed use building (residential and retail) that would meet some of the objectives of the Project Sponsor to develop a mixed use high quality residential building that would (1) be in close proximity to a major transit hub, (2) generate employment opportunities, (3) enhance the safety of the open space, and (4) improve the streetscape. However, when compared to the Proposed Project, this alternative would have 88 fewer residential units, resulting in fewer affordable units for low, moderate, and middle income households adjacent to a major transit hub.

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CHAPTER 7

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1979 Mission Street Mixed Use Project,

Planning Department Case No. 2013.1543E

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