

Appendix B

Initial Study

This page intentionally left blank

INITIAL STUDY

Potrero Power Station Mixed-Use Development Project

Planning Department Case No. 2017-011878ENV

Table of Contents

	<u>Page</u>
A. Project Description.....	B-1
B. Project Setting	B-1
C. Compatibility with Existing Zoning and Plans	B-1
D. Summary of Environmental Effects	B-1
E. Evaluation of Environmental Effects.....	B-4
1. Land Use and Land Use Planning.....	B-4
2. Population and Housing	B-4
3. Cultural Resources	B-5
4. Transportation and Circulation	B-14
5. Noise.....	B-15
6. Air Quality.....	B-15
7. Greenhouse Gas Emissions	B-16
8. Wind and Shadow	B-21
9. Recreation	B-21
10. Utilities and Service Systems	B-28
11. Public Services	B-39
12. Biological Resources.....	B-49
13. Geology and Soils	B-49
14. Hydrology and Water Quality.....	B-64
15. Hazards and Hazardous Materials	B-65
16. Mineral and Energy Resources.....	B-66
17. Agriculture and Forest Resources	B-71
18. Mandatory Findings of Significance	B-72
F. Mitigation Measures.....	B-73
G. Public Notice and Comment	B-78
H. Determination	B-79
I. Initial Study Preparers	B-80

	<u>Page</u>
List of Tables	
Table 1 Phased Potable Water Demands of the Proposed Project.....	30
Table 2 Phased Non-potable Water Demands of the Proposed Project.....	30
Table 3 Summary of Operational Annual Energy Resource Use	68

A. Project Description

The Potrero Power Station Mixed-Use Development project (proposed project) description is provided in Chapter 2, Project Description, of the EIR, to which this initial study is attached.

B. Project Setting

The project setting and existing site land use characteristics are provided in Chapter 2, Project Description, of the EIR, to which this initial study is attached.

C. Compatibility with Existing Zoning and Plans

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

See Chapter 3, Plans and Policies, in the EIR for a detailed discussion of land use plans applicable to the Potrero Power Station Mixed-Use Development project and identification of the proposed project's potential to be inconsistent with any of those plans or policies, including the existing zoning and height and bulk designations for the project site.

D. Summary of Environmental Effects

The proposed project could potentially result in adverse physical effects on the environmental resources checked below, and where those impacts are significant or potentially significant, CEQA requires identification of mitigation measures to reduce the severity of the impacts to less than significant to the extent feasible. The initial study and the EIR present a more detailed checklist and discussion of each environmental resource.

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

This initial study evaluates the potential for the proposed project to result in significant environmental impacts and identifies which environmental resource topics are appropriately analyzed in the initial study and those that warrant more detailed analysis in the EIR.

On the basis of this initial study, the resource topics for which there is a potential for project-specific effects to be significant or for which the analysis requires additional detail are analyzed in the EIR and are as follows:

- Land Use and Land Use Planning (all topics);
- Population and Housing (all topics);
- Noise (all topics);
- Air Quality (all topics);
- Wind and Shadow (all topics);
- Biological Resources (all topics);
- Hydrology and Water Quality (all topics);
- Hazards and Hazardous Materials (all topics);
- Cultural Resources (historic architectural resources only); and
- Transportation and Circulation (all topics).

Effects Found Not To Be Significant

The initial study determined that the potential individual and cumulative environmental effects on the following resource topics are either less than significant or would be reduced to a less-than-significant level through recommended mitigation measures identified in this initial study:

- Cultural Resources (archeological resources, human remains, and tribal cultural resources);
- Greenhouse Gas Emissions (all topics);
- Recreation (all topics);
- Utilities and Service Systems (all topics);
- Public Services (all topics);
- Geology and Soils (all topics);
- Mineral and Energy Resources (all topics); and
- Agricultural and Forest Resources (all topics).

Impacts associated with these topics are discussed with mitigation measures, where appropriate, in Section E, Evaluation of Environmental Effects, of this initial study, and require no further environmental analysis in the EIR. All mitigation measures identified in this initial study are listed in Section F, Mitigation Measures and Improvement Measures, and have been agreed to be implemented by the project sponsor as part of implementation of the proposed project, if approved. For each checklist item, the evaluation considers both project-specific and cumulative impacts of the proposed project.

Other Topics Not Addressed in this Initial Study or EIR

Aesthetics and Parking

In accordance with CEQA section 21099 – Modernization of Transportation Analysis for Transit Oriented Projects – aesthetics and parking shall not be considered in determining if a project has the potential to result in significant environmental effects, provided the project meets all of the following three criteria:

- a) The project is in a transit priority area;
- b) The project is on an infill site; and
- c) The project is residential, mixed-use residential, or an employment center.

The proposed project meets each of the above three criteria and thus, this initial study and the EIR do not consider aesthetics or parking in determining the significance of project impacts under CEQA.¹ Project elevations are included in the project description.

Approach to Cumulative Impact Analysis

The cumulative impact analyses for topics addressed in Section E, Evaluation of Environmental Effects, use the list-based approach. Past, present, and reasonably foreseeable development and infrastructure projects that could potentially contribute to cumulative impacts on various resource topics are listed in Table 4.A-2, Cumulative Projects in the Project Vicinity of EIR Section 4.A, Impact Overview, and mapped on Figure 4.A-2, Cumulative Projects in the Project Vicinity p. 4.A-15 of the EIR.

¹ San Francisco Planning Department. Eligibility Checklist: CEQA Section 21099 – Modernization of Transportation Analysis for 1201A Illinois Street, September 2018. This document (and all other documents cited in this report, unless otherwise noted), is available for review at the San Francisco Planning Department, 1650 Mission Street, Suite 400 as part of Case File No. 2017-011878ENV.

E. Evaluation of Environmental Effects

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
1. LAND USE AND LAND USE PLANNING— Would the project:					
a) Physically divide an established community?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

All land use and land use planning topics are addressed in EIR Section 4.B.

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

The project has the potential to result in a significant impact related to population growth; all topics related to population and housing are addressed in EIR Section 4.C.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
3. CULTURAL RESOURCES— Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5, including those resources listed in Article 10 or Article 11 of the San Francisco Planning Code?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

This initial study addresses archeological resources, human remains, and tribal cultural resources. Impact CR-1, below, addresses archeological resources, including both prehistoric and historic archeological resources. Impacts CR-2 and CR-3, below, address the impacts of the project on human remains and tribal cultural resources, respectively. Impact C-CR-1, below, addresses the cumulative impacts of projects in the vicinity on archeological resources, human remains, and tribal cultural resources. Because the project has the potential to result in a significant impact related to historic architectural resources, this topic is not addressed in this initial study; instead, this project-specific and cumulative impacts related to historic architectural resources are addressed in detail in EIR Section 4.D.

Impact CR-1: The project could cause a substantial adverse change in the significance of an archeological resource. (*Less than Significant with Mitigation*)

This impact discusses whether the project could cause a substantial adverse change to a significant, or potentially significant, archeological resource. Archeological resources can be considered both as historical resources according to CEQA Guidelines section 15064.5 as well as unique archeological resources as defined in CEQA section 21083.2(g). Both prehistoric and historic archeological resources are addressed.

Prehistoric Archeological Resources

An *Archeological Sensitivity Assessment* was completed for the proposed project in March 2018.² In summary, the assessment found that there is a moderate sensitivity for terrestrial prehistoric archeological resources within the north-central part of the project site surrounding the former location of a small coastal lagoon, which was filled during the early development of the site for gas manufacturing and power generation. The location of the lagoon itself, as well the portions of the filled area that were impacted by the 1960s construction of two large fuel oil tanks and their 2017

² Environmental Science Associates (ESA), *Archeological Sensitivity Assessment, Potrero Power Station Project, San Francisco, California*, prepared for the San Francisco Planning Department Environmental Planning, March 2018.

demolition, are excluded from the area of moderate sensitivity, as discussed below under the subsection Historic-era Archeological Resources. The assessment also found low sensitivity for terrestrial prehistoric archeological resources in the remainder of the former onshore locations of the project site. This conclusion is based on the *surficial bedrock geology*,³ the historically moderately steep slope, extensive historical cutting of the original slope to create level ground and reclaim offshore areas, and intensive industrial development throughout the nineteenth and twentieth centuries.

For submerged prehistoric archeological resources, there is a moderate sensitivity beneath the Bay Mud and above bedrock at depths ranging from 30 to 77 feet below ground surface in former offshore portions of the project site. This sensitivity is assigned because those areas were exposed before being inundated by rising sea levels, and prehistoric habitation sites could have been established there and later buried beneath Bay Mud as San Francisco Bay sea levels rose in the Middle Holocene (4,000 to 6,000 years ago).

Historic-era Archeological Resources

Areas of the project site considered to have a high sensitivity for historic archeological resources include the intact 1850s land surface beneath 1870s fill surrounding the small, coastal lagoon formerly present in the north-central part of the project site. This location is sensitive for remains of the Gibbons and Lamot powder magazine, a gun powder storage facility that was constructed on the project site in the mid-1850s, as well as remains of other structures or deposits associated with the powder magazine. Another area of high historic archeological sensitivity is the location of the historical California Barrel Company factory in the northwest corner of the project site, where buried remains of the factory and associated deposits may be present. An additional area of high historic archeological sensitivity is the western end of 23rd Street, in the southwest corner of the project site, which may contain remains of the Tubbs Cordage Company, a rope making facility also constructed on the project site in the mid-1850s, that may have been incorporated into historic fill during the land reclamation process and may still be present below modern 23rd Street.

Portions of the project site with moderate sensitivity for historic archeological resources include the remainder of the project site that was not impacted by major sources of historic and modern ground disturbance. Subsurface remains of industrial facilities, buildings, structures, equipment, or waste and refuse deposits associated with the City Gas Company (later San Francisco Gas and Electric Company and PG&E) manufactured gas plant, Independent Electric Light and Power Company, Western Sugar Refinery, and the Station A power generating station may be present beneath the modern landscape.

Areas of the project site with a low sensitivity for historic archeological deposits include the areas that have been disturbed by historic or modern ground disturbance. Extensive ground disturbance may have either impacted resources that could have been previously present, or may have precluded development of archeological resources. In addition, other recent surveys and finding

³ Surficial geology refers to the study of landforms and the unconsolidated sediments that lie beneath them.

of effect documents have concluded that the Northeast remediation area⁴ also has a low archeological sensitivity.⁵

A significant impact could result if ground-disturbing activities during project construction were to uncover terrestrial prehistoric archeological resources, submerged prehistoric archeological resources, or historic-period archeological resources. However, implementation of **Mitigation Measure M-CR-1, Archeological Testing**, would reduce this impact to a less-than-significant level. Mitigation Measure M-CR-1 would require the development of an archeological testing program to determine presence or absence of archeological resources and an evaluation of whether any archeological resource encountered constitutes a historical resource under CEQA. This mitigation would also ensure that work would halt if archeological resources are inadvertently discovered during project implementation and that proper procedures are followed to ensure appropriate treatment of significant archeological resources. Therefore, this impact would be *less than significant with mitigation*.

Mitigation Measure M-CR-1: Archeological Testing

Based on a reasonable presumption that archeological resources may be present within the project site in locations determined to have moderate or high archeological sensitivity, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the San Francisco rotational Department Qualified Archeological Consultants List maintained by the San Francisco Planning Department archeologist. The project sponsor shall contact the department archeologist to obtain the names and contact information for the next three archeological consultants on the list. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the City's appointed project Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the review officer, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines section 15064.5 (a) and (c).

⁴ The Northeast remediation area is described under Section 4.K, Hazards and Hazardous Materials, see Figure 4.K-1, Project Site Remediation Areas and Adjacent Sites.

⁵ AECOM, *Archaeological Survey Report and Finding of Effect, Remedial Action Plan, Northeast Area of the Potrero Power Plant and a Portion of the Southeast Area of Pier 70, Potrero Power Plant Site, San Francisco, California*, prepared for Pacific Gas and Electric Company, 2016; Psota, Sunshine, *Preliminary Archaeological Sensitivity Survey for the Northeast Area of the Potrero Power Plant Site and a Portion of the Southeast Area of Pier 70 Remedial Action Plan, City and County of San Francisco, California*, prepared for Baseline Environmental Consulting and San Francisco Bay Regional Water Quality Control Board, 2015.

Consultation with Descendant Communities: On discovery of an *archeological site*⁶ associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group an *appropriate representative*⁷ of the descendant group and the review officer shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the review officer regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archeological Resources Report shall be provided to the representative of the descendant group.

Archeological Testing Program. The archeological consultant shall prepare and submit to the review officer for review and approval an archeological testing plan. The archeological testing program shall be conducted in accordance with the approved archeological testing plan. The archeological testing plan shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the review officer. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the review officer in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. No archeological data recovery shall be undertaken without the prior approval of the review officer or the planning department archeologist. If the review officer determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- A. The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- B. A data recovery program shall be implemented, unless the review officer determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the review officer in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

⁶ The term archeological site is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

⁷ An appropriate representative of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist.

- The archeological consultant, project sponsor, and review officer shall meet and consult on the scope of the archeological monitoring plan reasonably prior to any project-related soils disturbing activities commencing. The review officer in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context;
- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the project sponsor, archeological consultant, and the ERO until the review officer has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving or deep foundation activities (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving or deep foundation activities may affect an archeological resource, the pile driving or deep foundation activities shall be terminated until an appropriate evaluation of the resource has been made in consultation with the review officer. The archeological consultant shall immediately notify the review officer of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan. The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the archeological data recovery plan prior to preparation of a draft plan. The archeological consultant shall submit a draft plan to the ERO. The archeological data recovery plan shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the archeological data recovery plan will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely

affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the archeological data recovery plan shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.
- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an onsite/offsite public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains, 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, including immediate notification of the Office of the Chief Medical Examiner of the City and County of San Francisco and in the event of the medical examiner'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 (Public Resources Code section 5097.98). The ERO shall also be immediately notified upon discovery of human remains. The archeological consultant, project sponsor, ERO, and a most likely descendant shall have up to but not beyond six days after the discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing state regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of a most likely descendant. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such as agreement has been made or, otherwise, as determined by the archeological consultant and the ERO. If no agreement is reached, state regulations shall be followed including the reburial of the human remains and associated burial objects with appropriate dignity on the property in a location not subject to further subsurface disturbance (Public Resources Code section 5097.98).

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the Final Archeological Resources Report shall be distributed as follows: California Historical Resource Information System Northwest Information Center shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the report to the Northwest Information Center. The San Francisco Planning Department Environmental Planning Division shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the report along with copies of any formal site recordation forms (California Department of Parks and Recreation 523 form) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Significance after Mitigation: Less than Significant

Impact CR-2: The project could disturb human remains, including those interred outside of dedicated cemeteries. (*Less than Significant with Mitigation*)

There are no known human remains, including those interred outside of dedicated cemeteries, located in the immediate vicinity of the project site. In the event that construction activities disturb unknown human remains within the project site, any inadvertent damage to human remains would be considered a significant impact. With implementation of **Mitigation Measure M-CR-1, Archeological Testing**, as described above, the proposed project would have a less-than-significant impact on previously unknown human remains. Therefore, this impact would be *less than significant with mitigation*.

Mitigation Measure M-CR-1: Archeological Testing (see Impact CR-1, above)

Significance after Mitigation: Less than Significant

Impact CR-3: The project could result in a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code section 21074. (*Less than Significant with Mitigation*)

CEQA section 21074.2 requires the lead agency to consider the effects of a project on tribal cultural resources. As defined in section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that

are listed, or determined to be eligible for listing, on the national, state, or local register of historical resources. In San Francisco, prehistoric archeological resources are presumed to be potential tribal cultural resources. A tribal cultural resource is adversely affected when a project causes a substantial adverse change in the resource's significance.

Pursuant to CEQA section 21080.3.1(d), within 14 days of a determination that an application for a project is complete or a decision by a public agency to undertake a project, the lead agency is required to contact the Native American tribes that are culturally or traditionally affiliated with the geographic area in which the project is located. Notified tribes have 30 days to request consultation with the lead agency to discuss potential impacts on tribal cultural resources and measures for addressing those impacts. On May 1, 2018 the San Francisco Planning Department contacted Native American individuals and organizations for the San Francisco area, providing a description of the project and requesting comments on the identification, presence, and significance of tribal cultural resources in the project vicinity.

During the 30-day comment period, no Native American tribal representatives contacted the Planning Department to request consultation. Unknown archeological resources may be encountered during construction that could be identified as tribal cultural resources at the time of discovery or at a later date. Therefore, the potential adverse effects of the proposed project on previously unidentified archeological resources, discussed under Impact CR-1 above, also represent a potentially significant impact on tribal cultural resources. Implementation of **Mitigation Measure M-CR-3, Tribal Cultural Resources Interpretive Program**, would reduce potential adverse effects on tribal cultural resources to a less-than-significant level. Mitigation Measure M-CR-3 would require either preservation-in-place of the tribal cultural resources, if determined effective and feasible, or an interpretive program regarding the tribal cultural resources developed in consultation with affiliated Native American tribal representatives. Therefore, this impact would be *less than significant with mitigation*.

Mitigation Measure M-CR-1: Archeological Testing (see Impact CR-1, above)

Mitigation Measure M-CR-3: Tribal Cultural Resources Interpretive Program

If the Environmental Review Officer (ERO) determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the review officer determines that the resource constitutes a tribal cultural resource and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned so as to avoid any adverse effect on the significant tribal cultural resource, if feasible.

If the ERO, in consultation with the affiliated Native American tribal representatives, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the project sponsor shall implement an interpretive program of the tribal cultural resource in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the ERO would be required to implement the interpretive program. The plan shall identify, as appropriate, proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program

may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays.

Significance after Mitigation: Less than Significant

Impact C-CR-1: The proposed project or variant, in combination with past, present, and reasonably foreseeable future projects in the vicinity of the project site, could result in cumulative impacts to archeological resources, tribal cultural resources, and human remains. (*Less than Significant*)

Archeological resources, tribal cultural resources, and human remains are nonrenewable, finite resources. All adverse effects to archeological resources have the potential to erode a dwindling cultural/scientific resource base. Federal and state laws protect archeological resources in most cases, either through project redesign or by requiring that the scientific data present within an archeological resource be recovered.

Most of the historic-period industrial facilities located within the project site were contained within the project site; therefore, adjacent projects would not have the potential for a cumulative impact to those resources. The exception to this is the California (or Western) Sugar Refinery and the Hazard Powder Company magazine, both of which extended outside of project site. Several buildings associated with the Sugar Refinery were located south of the project site. Only a portion of the Hazard Powder Company magazine was located within the project site; the majority of the magazine, as well as its adjacent wharf, was located south of the project site. There are no past, present, or reasonably foreseeable future projects identified for these locations.

The nearby 1201–1225 Tennessee Street project, which is currently under construction, was determined to be sensitive for remnants of the Tubbs Cordage Company ropewalk, which may also extend into the project site. However, archeological investigations at the site by Pacific Legacy, completed in the spring of 2017, did not identify significant archeological features associated with the Tubbs Cordage Company ropewalk.

Recent remediation work in areas of the project site determined to have a moderate or high archeological sensitivity includes the North Switchyard and General Construction Yard area, portions of the Station A area and Tank Farm area, and the Unit 3 area. The approved remediation in these areas does not include ground disturbance; therefore, there would be no cumulative impact to archeological resources. The Northeast area, where remediation did include ground disturbance to a depth of 12 feet, has been determined to have low archeological sensitivity.

Partial façades and the foundation remain of the Boiler Building, which was demolished in 1983, are extant at the project site. This area has been determined to have a moderate archeological sensitivity; however, as there was no ground disturbance from removal of the Boiler Building there would have been no cumulative impact to archeological resources, should they exist.

Archeological resources associated with Union Iron Works are not anticipated within the project site and there would be no cumulative impact to those resources.

For the reasons described above, there are no past, present, or reasonably foreseeable future projects that would impact the same archeological resources as the proposed project. Therefore, the proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in a cumulative impact on archeological resources, tribal cultural resources, and human remains, and this impact would be *less than significant*.

Mitigation: None required.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
4. TRANSPORTATION AND CIRCULATION— Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project has the potential to result in significant transportation impacts related to circulation, congestion management, transit, and traffic hazards; all transportation and circulation topics are addressed in EIR Section 4.E.

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

The project has the potential to result in significant construction and operational noise impacts related to increases in ambient noise levels; all noise topics are addressed in EIR Section 4.F.

<i>Topics:</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Not Applicable</i>
6. AIR QUALITY—Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal, state, or regional ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
6. AIR QUALITY—Would the project:					
e) Create objectionable odors affecting a substantial number of people?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project has the potential to result in significant air quality impacts related to increases in air pollutant emissions during construction and operations; all air quality topics are addressed in EIR Section 4.G.

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

Gases that trap heat in the atmosphere are referred to as greenhouse gases (GHGs) because they capture heat radiated from the sun as it is reflected back into the atmosphere, much like a greenhouse does. The accumulation of GHGs contributes to global climate change. The primary GHGs, or climate pollutants, are carbon dioxide, black carbon, methane, nitrous oxide, ozone, and water vapor.

Individual projects contribute to the cumulative effects of climate change by emitting GHGs during demolition, construction, and operational phases. While the presence of some of the primary GHGs in the atmosphere is naturally occurring, carbon dioxide, methane, and nitrous oxide are also emitted from human activities, accelerating the rate at which these compounds occur within earth's atmosphere. Emissions of carbon dioxide are largely by-products of fossil fuel combustion, whereas methane results from off-gassing associated with agricultural practices and landfills. Black carbon has emerged as a major contributor to global climate change, possibly second only to carbon dioxide. Black carbon is produced naturally and by human activities as a result of the incomplete combustion of fossil fuels, biofuels and biomass.⁸ Nitrous oxide is a by-product of various industrial processes. Other GHGs include hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride, and are generated in certain industrial processes. GHGs are typically reported in *carbon dioxide-equivalents*.⁹

⁸ Center for Climate and Energy Solutions, *What is Black Carbon?* April 2010, <http://www.c2es.org/docUploads/what-is-black-carbon.pdf>, accessed March 3, 2016.

⁹ Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

There is international scientific consensus that human-caused increases in GHGs contribute to global warming and, thus, climate change. Many impacts resulting from climate change, including sea level rise, increased fires, floods, severe storms and heat waves, already occur and will only become more severe and costly.¹⁰ Secondary effects of climate change likely include impacts to agriculture, the state's electricity system, and native freshwater fish ecosystems, an increase in the vulnerability of levees such as in the Sacramento-San Joaquin Delta, changes in disease vectors, and changes in habitat and biodiversity.^{11,12}

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

The Bay Area Air Quality Management District has prepared guidelines and methodologies for analyzing GHGs. These guidelines are consistent with CEQA Guidelines sections 15064.4 and 15183.5, which address the analysis and determination of significant impacts from a proposed project's GHG emissions. CEQA Guidelines section 15064.4 allows lead agencies to rely on a qualitative analysis to describe GHG emissions resulting from a project. CEQA Guidelines section 15183.5 allows for public agencies to analyze and mitigate GHG emissions as part of a larger plan for the reduction of GHGs and describes the required contents of such a plan. Accordingly, San Francisco has prepared *Strategies to Address Greenhouse Gas Emissions*,¹³ which presents a comprehensive assessment of policies, programs, and ordinances that collectively represent San Francisco's qualified GHG Reduction Strategy in compliance with the CEQA guidelines. These GHG reduction actions have resulted in a 29 percent reduction in GHG emissions in 2016 compared to 1990 levels,¹⁴ exceeding the year 2020 reduction goals outlined in the air district's Bay Area 2017 Clean Air Plan, Executive Order S-3-05, and Assembly Bill 32 (also known as the Global Warming Solutions Act).¹⁵

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

¹⁰ Intergovernmental Panel on Climate Change, *Climate Change 2013: The Physical Science Basis, Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, 2013, http://www.climatechange2013.org/images//WG1AR5_ALL_FINAL.pdf, accessed March 3, 2016.

¹¹ Ibid.

¹² California Climate Change Center. *Our Changing Climate 2012: Vulnerability and Adaptation to the Increasing Risks from Climate Change in California*, July 2012, <http://www.energy.ca.gov/2012publications/CEC-500-2012-007/CEC-500-2012-007.pdf>, accessed March 3, 2016.

¹³ San Francisco Planning Department, *Strategies to Address Greenhouse Gas Emissions in San Francisco*, 2010, <http://www.sf-planning.org/index.aspx?page=2627>, accessed February 12, 2018.

¹⁴ San Francisco Environment, *San Francisco's Carbon Footprint*, May 2018, <https://sfenvironment.org/carbon-footprint>, accessed February 13, 2018.

¹⁵ Executive Order S-3-05, Assembly Bill 32, and the *Bay Area 2010 Clean Air Plan* set a target of reducing GHG emissions to below 1990 levels by year 2020.

under Executive Order S-3-05¹⁶, Executive Order B-30-15,^{17,18} and Senate Bill 32,^{19,20} the City's GHG reduction goals are consistent with Executive Order S-3-05, Executive Order B-30-15, Assembly Bill 32, SB 32, and the Bay Area 2017 Clean Air Plan. Therefore, projects that are consistent with the City's GHG Reduction Strategy would be consistent with the aforementioned GHG reduction goals, would not conflict with these plans or result in significant GHG emissions, and would, therefore, not exceed San Francisco's applicable GHG threshold of significance.

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

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

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

The proposed project would construct up to approximately 5.4 million gross square feet (gsf), of uses, including between approximately 2.4 and 3.0 million gsf of residential uses (about 2,400 to 3,000 dwelling units), between approximately 1.2 and 1.9 million gsf of commercial uses (office,

¹⁶ Office of the Governor, Executive Order S-3-05, June 1, 2005, https://www.cetesb.sp.gov.br/proclima/wp-content/uploads/sites/36/2014/08/governor_state_california.pdf, accessed March 16, 2016. Executive Order S-3-05 sets forth a series of target dates by which statewide emissions of GHGs need to be progressively reduced, as follows: by 2010, reduce GHG emissions to 2000 levels (approximately 457 million metric tons of carbon dioxide equivalents (MTCO₂E)); by 2020, reduce emissions to 1990 levels (approximately 427 million MTCO₂E); and by 2050 reduce emissions to 80 percent below 1990 levels (approximately 85 million MTCO₂E). Because of the differential heat absorption potential of various GHGs, GHG emissions are frequently measured in "carbon dioxide-equivalents," which present a weighted average based on each gas's heat absorption (or "global warming") potential.

¹⁷ Office of the Governor, Executive Order B-30-15, April 29, 2015, <https://www.gov.ca.gov/news.php?id=18938>, accessed March 3, 2016. Executive Order B-30-15, issued on April 29, 2015, sets forth a target of reducing GHG emissions to 40 percent below 1990 levels by 2030 (estimated at 2.9 million MTCO₂E).

¹⁸ San Francisco's GHG reduction goals are codified in Section 902 of the Environment Code and include: (i) by 2008, determine City GHG emissions for year 1990; (ii) by 2017, reduce GHG emissions by 25 percent below 1990 levels; (iii) by 2025, reduce GHG emissions by 40 percent below 1990 levels; and by 2050, reduce GHG emissions by 80 percent below 1990 levels.

¹⁹ Senate Bill 32 amends California Health and Safety Code Division 25.5 (also known as the California Global Warming Solutions Act of 2006) by adding Section 38566, which directs that statewide greenhouse gas emissions to be reduced by 40 percent below 1990 levels by 2030.

²⁰ Senate Bill 32 was paired with Assembly Bill 197, which would modify the structure of the State Air Resources Board; institute requirements for the disclosure of greenhouse gas emissions criteria pollutants, and toxic air contaminants; and establish requirements for the review and adoption of rules, regulations, and measures for the reduction of greenhouse gas emissions.

R&D/life science, retail, hotel, and PDR), approximately 922,000 gsf of parking, approximately 100,000 gsf of community facilities, and approximately 25,000 gsf of entertainment/assembly uses. The proposed project would also include transportation and circulation improvements, shoreline improvements, and utilities infrastructure improvements. Therefore, the proposed project would contribute to annual long-term increases in GHGs as a result of increased vehicle trips (mobile sources) and residential and commercial operations that result in an increase in energy use, water use, wastewater treatment, and solid waste disposal. Construction activities would also result in temporary increases in GHG emissions over the approximately 15-year construction period.

The proposed project would be subject to regulations adopted to reduce GHG emissions as identified in the GHG reduction strategy. All new buildings and additions to existing buildings under the proposed project (including those on Port property) would be required to comply with the San Francisco Green Building Ordinance requirements of the San Francisco Green Building Code. As discussed below, compliance with the applicable regulations would reduce the project's GHG emissions related to transportation, energy use, waste disposal, and use of refrigerants.

The proposed project would be subject to and would comply with GHG reduction measures.²¹ Applicable regulations address multiple GHG emission sectors (e.g., transportation, energy efficiency, renewable energy, etc.), and the Planning Department has analyzed the consistency of the project with these measures to provide a direct correlation between the proposed project's sources of GHG emissions and regulations that would reduce those emissions. Based on this analysis, the Planning Department has determined that the proposed project would comply with San Francisco's Greenhouse Gas Reduction Strategy through consistency with the applicable regulations, as summarized below.

Compliance with the City's Commuter Benefits Program, Emergency Ride Home Program, and transportation demand management programs, Transportation Sustainability Fee, Jobs-Housing Linkage Program, bicycle parking requirements, low-emission car parking requirements, and car sharing requirements would reduce the proposed project's transportation-related emissions. Compliance with these regulations would reduce GHG emissions from single-occupancy vehicles by promoting the use of alternative transportation modes.

The proposed project would be required to comply with the energy efficiency requirements of the City's Green Building Code, Stormwater Management Ordinance, Water Conservation and Irrigation ordinances, and Energy Conservation Ordinance, all of which would promote energy and water efficiency, thereby reducing the proposed project's energy-related GHG emissions.²² Additionally, the project would be required to meet the renewable energy criteria of the Green Building Code, further reducing the project's energy-related GHG emissions.

²¹ San Francisco Planning Department. *Greenhouse Gas Analysis: Compliance Checklist for the Potrero Power Station Project*, dated September 2018.

²² Compliance with water conservation measures reduce the energy (and GHG emissions) required to convey, pump and treat water required for the project.

The proposed project's waste-related emissions would be reduced through compliance with the City's Recycling and Compositing Ordinance, Construction and Demolition Debris Recovery Ordinance, and Green Building Code requirements. These regulations reduce the amount of materials sent to a landfill, reducing GHGs emitted by landfill operations. These regulations also promote reuse of materials, conserving their embodied energy²³ and reducing the energy required to produce new materials.

Compliance with the City's street tree planting requirements would serve to increase carbon sequestration. Other regulations, including those limiting refrigerant emissions and the Wood Burning Fireplace Ordinance would reduce emissions of GHGs and black carbon, respectively. Regulations requiring low-emitting finishes would reduce volatile organic compounds.²⁴ The proposed project has been determined to be consistent with San Francisco's GHG reduction strategy by the San Francisco Planning Department through the City's compliance checklist.²⁵

The project sponsor is required to comply with these regulations, which have proven effective as San Francisco's GHG emissions have measurably decreased when compared to 1990 emissions levels, demonstrating that the City has met and exceeded Executive Order S-3-05, Assembly Bill 32, and the *Bay Area 2017 Clean Air Plan* GHG reduction goals for the year 2020. Other existing regulations, such as those implemented through Assembly Bill 32, will continue to reduce a proposed project's contribution to climate change. In addition, San Francisco's local GHG reduction targets are consistent with the long-term GHG reduction goals of Executive Order S-3-05, Executive Order B-30-15, Assembly Bill 32, Senate Bill 32 and the Bay Area 2010 Clean Air Plan. Therefore, because the proposed project is consistent with the City's GHG reduction strategy, it is also consistent with the GHG reduction goals of Executive Order S-3-05, Executive Order B-30-15, Assembly Bill 32, Senate Bill 32 and the Bay Area 2017 Clean Air Plan, would not conflict with these plans, and therefore would not exceed San Francisco's applicable GHG threshold of significance. As such, the proposed project would result in a *less-than-significant* impact with respect to GHG emissions, and no mitigation measures are required.

Additionally, the project sponsor has included sustainability measures to address other renewable energy considerations, which are detailed in the proposed project's Design for Development document. The proposed project would, at minimum, comply with the state's Title 24 energy efficiency requirements, the San Francisco Green Building Requirements for renewable energy, the Better Roof Requirements for Renewable Energy Standards, and the City's Recycled Water Ordinance. In addition, the proposed project would be constructed to achieve LEED Gold certification.

²³ Embodied energy is the total energy required for the extraction, processing, manufacture and delivery of building materials to the building site.

²⁴ While not a GHG, volatile organic compounds are precursor pollutants that form ground level ozone. Increased ground level ozone is an anticipated effect of future global warming that would result in added health effects locally. Reducing volatile organic compounds emissions would reduce the anticipated local effects of global warming.

²⁵ San Francisco Planning Department, *Greenhouse Gas Analysis: Compliance Checklist* for the Potrero Power Station Project, dated September 2018.

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

The project has the potential to result in significant wind impacts related to alteration of wind patterns as well as significant shadow impacts related to shading effects on public areas in the project vicinity; all wind and shadow topics are addressed in EIR Section 4.H.

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

Existing and Under Construction Recreation Resources

The San Francisco Recreation and Parks Department administers more than 220 parks, playgrounds, and open spaces throughout the city, as well as recreational facilities including recreation centers, swimming pools, golf courses, and athletic fields, tennis courts, and basketball courts.²⁶ Citywide, public property dedicated to open space uses are identified in the San Francisco General Plan Recreation and Open Space Element. This element identifies levels of need for recreation and open spaces throughout the city.²⁷ The element defines a *high needs area* of the city as an area “with high population densities, high concentrations of seniors and youth, and lower income populations that are located outside of existing park service areas.”²⁸ As shown on Maps 4a and 4b of the element, the project site is partially located within the 0.5-mile service area of active use/sports fields and passive use/tranquil spaces, and as shown on Maps 4c, the project site is located outside of a 0.25-mile buffer for playground walkability. As shown on Maps 5a, 5c, and 5d of the element, the project site is within an area of the city that exhibits lower population densities

²⁶ San Francisco Planning Department, *Recreation and Open Space Element* (ROSE), April 2014, p. 15, http://generalplan.sfplanning.org/Recreation_OpenSpace_Element_ADOPTED.pdf.

²⁷ San Francisco Planning Department, ROSE, April 2014, p. 24.

²⁸ San Francisco Planning Department, ROSE, April 2014, p. 13.

(Map 5a), and lower concentrations for children and youth (Map 5c), and seniors (Map 5d), relative to the city as a whole. The project site is also located within an area with a higher percentage of high-income households relative to the city as a whole (Map 5b) and an area designated to absorb future population growth (Map 6). Based on these variables, a composite map was generated to identify areas of the city that receive priority when opportunities to acquire land for development of new parks arise and when funding decisions for the renovation of existing parks are made (Map 7).²⁹ As shown on Map 7 of the Recreation and Open Space Element, a portion of the project site, itself, is located within a high needs area.

The project site is located in a developed urban neighborhood with mixed residential-serving uses and industrial uses, and while it does not contain large regional park facilities, it does include a number of neighborhood parks and open spaces, as well as other recreational facilities. There are several facilities owned and/or managed by the Recreation and Parks Department, the Port of San Francisco, Caltrans, and community groups within approximately 0.5 mile of the project site that are currently operational, including the following:

- **Potrero Hill Recreation Center**, at 801 Arkansas Street, is a 9.5-acre park that includes a recreation center, playground, basketball court, ball fields, two lighted tennis courts, picnic tables, and barbeque grills along with an indoor recreation center. It has a computer room, gymnasium, stage, and auditorium and is located approximately 0.5 mile west of the project site.
- **Potrero Hill Mini Park**, adjacent to Potrero Hill Recreation Center, is a 0.3-acre off-leash dog run and is located 0.5 mile west of the project site.
- **Progress Park**, on Indiana Street between 23rd and 25th streets, is a 1-acre park with meandering paths, benches, a pull-up bar, a bocce court, and a fenced off-leash dog area. It is located approximately 0.3 mile west of the project site.
- **Tunnel Top Park**, at the corner of 25th Street and Pennsylvania Avenue, is an approximately 0.7-acre park featuring a native plant garden, community gathering square, seating areas, and public art. It is located approximately 0.5 mile southwest of the project site.
- **Esprit Park**, bounded by Minnesota, Indiana, 19th, and 20th streets, is a 1.8-acre park with a grass field bordered with picnic tables, benches, redwood trees, and an athletic circuit. It is located approximately 0.3 mile northwest of the project site.
- **Warm Water Cove**, at the end 24th Street, east of Illinois and Third streets is a 1.85-acre park with walking paths, landscaped lawns, benches, and views of the bay. It is located less than 0.1 mile south of the project site.
- **Woods Yard Park**, on the southeastern corner of Indiana and 22nd streets, is a one-block long (0.25-acre) open space with two grassy areas, shade trees, and a playground with a sand pit. It is located approximately 0.2 mile west of the project site.
- **Agua Vista Park**, on the east side of Terry A. Francois Boulevard between 16th and Mariposa streets in Mission Bay, is a 0.5-acre landscaped park with a fishing pier, picnic tables, and a 600-foot-long portion of the Bay Trail. It is located approximately 0.5 mile north of the project site.

²⁹ San Francisco Planning Department, ROSE, April 2014, Maps 4 through 7.

- **Mariposa Park**, north of Mariposa Street between Minnesota Street and I-280 is comprised of two parcels owned by the City in the Mission Bay Redevelopment Area totaling 2.38 acres, with a grass lawn and walking paths, a kids' play area, benches, and tables. It is located approximately 0.5 mile northwest of the project site.

In addition to these currently operational parks and recreational facilities, there are several projects currently approved or under construction (as of the November 2017) that would be operational prior to the project's completion in 2034 (refer to EIR Section 4.A, Impact Overview, Table 4.A-2). These projects are also considered in analyzing the project's potential effects on recreational resources and the potential for a cumulative effect on these resources:

- **Pier 70 Mixed-Use District**, adjacent to and north of the project site, will include approximately 9 acres of open space broken down into various areas. Once completed, the Waterfront Promenade, Waterfront Terrace, and Slipways Commons (separate project parks and recreational spaces) will encompass a minimum 100-foot-wide portion of an approximately 5-acre waterfront park area. Together these multi-purpose open spaces will provide four viewing pavilions with large-scale public art and artifact pieces, and include portions of and connections to the Blue Greenway and Bay Trail system. The Building 12 Plaza and Market Square, the 20th Street Plaza, and the Irish Hill Playground, (also project features), will collectively accommodate everyday passive uses as well as public outdoor events, including art exhibitions, theater performances, cultural events, outdoor fairs, festivals and markets, outdoor film screenings, evening/night markets, food events, street fairs, and lecture services. The rooftop open space areas at Buildings C1 and C2 (structured parking rooftops) will provide single activity or multi-purpose courts.³⁰ The following recreational facilities associated with this development will be completed in five phases between 2019 and 2029.
- **20th Street Historic Core at Pier 70**, once completed, will provide approximately 42,000 square feet of open space in the form of a plaza. It is expected that this plaza will host up to 100 events a year, such as farmers markets, craft fairs, and free concerts. While building permits have not yet been approved, once they are it is expected that construction of the project would occur within 18 to 24 months.³¹
- **Crane Cove Park**, in the Port's Union Iron Works district between 19th and Mariposa streets east of Illinois Street, will provide an approximately 9-acre waterfront park located approximately 0.25 mile north of the project site. Upon completion, this park will comprise five sub-areas to provide a sandy shoreline edge to allow for boating access, a shoreline park and paths, a new pier, formal and informal children's play areas, native planting areas, multi-purpose lawns, and a public plaza, as well as vehicle circulation. Phase 1 of this project is anticipated to be completed in 2018, with Phase 2 completed between 2026 and 2028.³²

³⁰ Potential programming may include, but would not be limited to, basketball, tennis, handball, volleyball, and bocce ball. Natural or artificial playing surfaces may be used for the intended sports facilities. If rooftop community gardens are built, garden plots would be accessible to the public and may be managed by either a community organization or by local residents.; City and County of San Francisco *Responses to Comments on Draft Environmental Impact Report Case No. 2014-001272ENV: Pier 70 Mixed-Use District Project* available at the San Francisco Planning Department Case No. 2014-001272ENV and State Clearinghouse No. 2015052024.

³¹ City and County of San Francisco, *Final Community Plan Mitigated Negative Declaration*, Case No 2016-000346ENV, June 14, 2017.

³² City and County of San Francisco, *Historic Resource Evaluation Response*, Case No 2015-001314ENV, September 15, 2015.

- **The Bayfront Park** is a partially completed park comprising four parcels (P21, P22, P23, and P24) owned by the Port of San Francisco in the Mission Bay Redevelopment Area located approximately 0.5 mile north of the project site. Both P21 and P22 are located east of Terry Francois Boulevard between South and Mariposa streets. P21 is an existing 1.83-acre area featuring a boat launch with a parking lot, and a 300-foot-long portion of the San Francisco Bay Trail. P22 is partially developed with a 990-foot-long, 8-foot-wide continuation of the San Francisco Bay Trail (0.18 acre). An additional 5.22 acres of P22 will be developed (5.4 acres total) to include a new grass lawn and other amenities to complement the existing trail and waterfront. P23 (0.76 acre) and P24 (1.13 acres) are two recently completed triangular parcels located west of Terry Francois Boulevard between Mariposa and 16th streets; together these are referred to as Mariposa Bayfront Park. Collectively, these four spaces will provide lawn space, sports courts (basketball), and picnic areas, portions of the Bay Trail, native plant gardens, kayak launch space and public plazas.³³ As of January 2017, P22 had initiated pre-construction work.³⁴

Additional recreation and open spaces, both existing and recently approved, are located beyond 0.5 mile but less than approximately 1 mile of the project site. These include Jackson Playground, Mariposa Park, Koret Quad, the Mission Bay Commons Park, Daniel Webster Elementary School,³⁵ and the Seawall Lot 337/Pier 48 project. Of these projects, Seawall Lot 337/Pier 48 is a major project recently approved. It is included in the cumulative list in EIR Section 4.A, Table 4.A-2 and described in detail below.

- **Seawall Lot 337/Pier 48** is a recently entitled project that would involve approximately 8 acres of new parks and open spaces, including parks, paseos, and open spaces (China Basin Park, Mission Rock Square, Channel Wharf, Channel Lane, a waterfront promenade, pedestrian paseos, and new public access on the apron of Pier 48). It is located approximately 1 mile north of the project site. Together these spaces will provide for uses such as multi-purpose lawn open space, a new little league field, a maritime use wharf, bicycle and pedestrian pathways, and public art.³⁶ Construction and occupancy of the project is anticipated between 2019 and 2025.³⁷

Of these existing, and yet to be completed parks and recreational facilities, there are ball fields and courts at the Potrero Hill Recreation Center, with baseball and basketball facilities, as well as at Bayfront Park, which provides a basketball court. Once completed the Pier 70 Mixed-Use District project could also provide sports courts (including but not limited to, basketball, tennis, handball, volleyball, and bocce ball).

³³ Mission Bay Development Group, Bayfront Park/Mission Bay P 22 San Francisco Bay Conservation and Development Commission's Design Review Board, review December 5, 2016, <http://www.bcdc.ca.gov/drb/2016/1205MissionBayEx.pdf>, accessed May 24, 2018.

³⁴ Office of Community Investment and Infrastructure (OCII), *OCII Redevelopment Project Area, Mission Bay North and Mission Bay South*, January 1, 2017.

³⁵ Daniel Webster Elementary School is located at 465 Missouri Street and is a participant of the Shared Schoolyard Project. Additional information at: San Francisco Shared Schoolyard Project, View School Status, <http://www.sfschoolyard.org/schools>, accessed July 18, 2018.

³⁶ City and County of San Francisco, *Seawall Lot 337 and Pier 48 Mixed-Use Project EIR* Case No 2013.0208E, State Clearinghouse No. 2013122024, April 26, 2017.

³⁷ Port of San Francisco, Mission Rock Project Schedule, <https://sfport.com/missionrock>, accessed May 24, 2018.

Impact RE-1: The project would increase the use of existing neighborhood parks and other recreational facilities, but not to such an extent such that substantial physical deterioration of the facilities would occur or be accelerated or such that the construction of new or expanded facilities would be required. (*Less than Significant*)

The project would include approximately 6.3 acres of publicly accessible open space in four key areas to serve project residents and visitors (refer to EIR Chapter 2, Project Description). The proposed open space would comprise a 3.7-acre Waterfront Park that would extend the Blue Greenway and Bay Trail from the Pier 70 Mixed-Use District project through the project site and provide spill-out spaces for retail, quiet spaces, waterfront viewing terraces, and a waterfront playground; the park would extend along the waterfront as a bulb-shaped area into the bay. The project open spaces also include a 0.7-acre plaza-type open space (Louisiana Paseo) adjacent to Blocks 6 and 10, which would have spill-out space for outdoor dining and a path to the proposed Power Station Park; and a 1.2-acre central green space called Power Station Park that would extend east-west through the interior of the project site and connect the Louisiana Paseo to the waterfront. This park would contain flexible lawn spaces suitable to accommodate two *U-6 soccer fields*.³⁸ The portion of the proposed Power Station Park between the Louisiana Paseo and Maryland Street would be intended for community building activities such as an outdoor game room. The fourth element of the open space is on a portion of the roof of the parking structure on Block 5. This rooftop open space would include a 0.7-acre publicly accessible *U-10 soccer field*.³⁹ Overall, the project would provide for a total of 6.3 acres of community, recreation and park space. These features would meet the project objectives of expanding network trails, open space and recreational uses in the Dogpatch, and Potrero Hill neighborhoods and complementing other nearby passive open space uses and parks in the Central Waterfront. Accordingly, the project would enhance and expand publicly available recreational and open spaces of various types at the project site.

Because development under the project would increase the number of new residents and employees in the area, the project would also result in increased demand for, and use of neighborhood parks and recreational facilities. It can reasonably be presumed that among the future residents, employees, and visitors of the proposed development, residents would make the greatest *active*⁴⁰ use of parks and open spaces, using playgrounds, ball fields, and like facilities both within and outside the project site. In general, it is anticipated that new employees would typically frequent open spaces during the midday period, when many office workers spend the lunch hour in publicly accessible open spaces, during other midday breaks, and after work, particularly in the case of workers who are also city residents. Hotel guests visiting for business purposes would be expected to be infrequent park users. While leisure visitors would use public parks, they would be more likely to visit citywide parks, notably Golden Gate Park and other iconic Recreation and Parks Department properties, though the waterfront nature of the site and park may also attract visitors resulting in the site also functioning as a citywide asset. Therefore, because residential populations

³⁸ U-6 soccer fields refer to soccer fields for children under six years old, and generally measure approximately 20 yards in width by 30 yards in length.

³⁹ U-10 soccer fields refer to soccer fields for children under ten years old, and generally measure approximately 40 yards in width by 60 yards in length.

⁴⁰ Active use often involves cooperative or team activity, including playgrounds, and ball fields and involves intensive management, maintenance, and high cost; whereas passive use, or low intensity recreation may involve a low level of development, such as rustic picnic areas, benches and trail and emphasizes the open-space aspect of a park and allows for the preservation of natural habitat.

tend to be more intensive users of open space than worker populations, this analysis assumes the maximum residential scenario in order to provide the most conservative, worst-case analysis of potential impacts with respect to recreation. As described in Table 4.A-1 in EIR Section 4.A, Impact Overview, up to 3,014 new residential units would be developed under the maximum residential scenario, which would result in approximately 6,842 new residents at the project site.

An increase in the local population could contribute to or accelerate the deterioration of existing parks and recreational facilities if the demand generated by the new residents were to lead to overuse of existing facilities and that would result in the need for new or modified facilities. Under the proposed project, while there would be an increase in the demand for facilities generated by an estimated 6,842 new residents, the project would include onsite parks and recreational facilities that would serve to offset the increased demand by project residents. Given the project's proposed network of new open spaces, including trails, a new waterfront park, several new and expanded linear open spaces and plazas, fields, and community facilities, along with new private residential open space as guided by planning code requirements, implementation of the project would result in an increase in the overall availability of a variety of publicly and privately accessible recreational facilities and open spaces on the project site. Additionally, the increased parks and recreation facilities in the project area, when compared to those available when the San Francisco Recreation and Open Space Element was published, such as Crane Cove and Bayfront Park, would also offset the increased demand for open space and recreational facilities by project residents.

In sum, implementation of the project under the maximum residential scenario would result in an increase in the demand for recreational resources on the project site, in the project area, and at the citywide level. However, the anticipated use of recreational resources would not be expected to substantially increase or accelerate the physical deterioration or degradation of existing recreational resources, and would not result in the need to provide new or expanded parks or recreational facilities since that demand would be offset by the development of recreational and open space facilities proposed to be constructed on the project site. Therefore, no new recreational facilities would need to be constructed beyond those included as part of the project, and the proposed project's impact to recreational resources would be *less than significant*, and no mitigation is necessary.

Mitigation: None required.

Impact C-RE-1: The proposed project, in combination with other past, present, and reasonably foreseeable development within approximately 0.5 mile of the project site, would not increase the use of existing neighborhood parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated or such that the construction of new or expanded facilities would be required. (*Less than Significant*)

The project's potential contribution to cumulative impacts on recreation is evaluated in the context of past, present, and reasonably foreseeable future development expected in San Francisco and relies on a list-based approach. The cumulative projects and plans considered are listed in EIR Section 4.A, Impact Overview, Table 4.A-2 and for the purposes of this analysis, the parks and recreational

facilities identified under Table 4.A-2 are described above as projects currently approved or under construction (as of the November 2017). Based on this approach, and as discussed in EIR Section 4.C, Population and Housing, the cumulative projects would add an estimated 15,863 new residents within 7,001 dwelling units in the project vicinity. Overall, these approved and proposed projects, when combined with the proposed project, would add up to approximately 22,734 net new residents in 10,015 units in the project vicinity, which would provide approximately 7.3 percent of the total number of units required to meet the regional housing need (137,800 new units). In addition, the cumulative projects would add an estimated 19,542 new employees within the 0.5-mile radius of the project site. Park and recreational facility use in the project area would increase with the development of the proposed project and the cumulative projects identified in Table 4.A-2, resulting in the potential for cumulative impacts on parks and recreational facilities.

Of this future population, it is feasible to assume that not all residents generated by the development of cumulative projects would use every local park, or use them at equal rates, particularly given that other recreational opportunities are available citywide. Each project identified in Table 4.A-2, (other than Pier 70)⁴¹ would also be subject to compliance with the open space requirements of Planning Code section 135.3 to partially meet the demand for recreational resources from future residents of those projects. In addition, it is also possible that the planned development of additional recreational facilities in the project vicinity would offset the increased demand.

Taken collectively and including the project, the cumulative projects identified in Table 4.A-2, and as described above, would add approximately 1.77 million square feet (or 40.7 acres) of new parks and recreational facilities. These added facilities, as described above would provide both active use and passive use spaces, with multi-purpose uses such as plazas, open green spaces and lawns, shoreline access and trails, a recreational boat launch space, children's play areas and at least one new basketball court, along with the potential for additional court uses at Pier 70. Presently, the only active use/sports fields within 0.5 mile of the project site are the Potrero Hill Recreation Center and Esprit Park; however, with the added cumulative projects, there would be additional active space/sports fields located at Pier 70, Crane Cove Park, and the Bayfront Park, with a little league baseball field located further away at Pier 48, in addition to the U-6 and U-10 soccer fields proposed under the project.

Additionally, the San Francisco Bay Trail, which runs along the eastern and northern portions of the project site would be extended through many of these cumulative projects' sites. Thus, new park facilities, in addition to those already existing in the project vicinity, would be available to the increased population in the area and would serve to offset the increased demand for recreational facilities. With respect to a concern for overcrowding of fields or courts, the cumulative parks and recreational development would not only provide additional facilities that would serve this purpose, they would also create spaces to expand the breadth of recreation services available to residents (such as improved trails and water access) that could support the development of other recreational activities. Therefore, it is expected that cumulative parks and recreational facility demand throughout the project area would be met by existing and planned adjacent parks and recreational facilities.

⁴¹ The open space requirements for the Pier 70 are contained in the project's Design for Development, which is similar to Planning Code section 135.

Based on the above analysis, existing, approved, and proposed parks and recreational facilities would be adequate to serve anticipated cumulative population growth. As such, cumulative growth would not increase the use of existing neighborhood and regional parks or other recreational facilities to such an extent that substantial physical deterioration of those facilities would occur. Nor would cumulative growth require the construction or expansion of recreational facilities beyond those that have already been approved or are proposed.

Moreover, current planning efforts for the provision of parks and open space, including the passage of the 2008 and 2012 Clean and Safe Neighborhood Parks General Obligation Bonds has allowed the parks department to enhance its open space system by providing additional amenities to park users within existing properties, and thus reflects the City's efforts to continually assess and improve its open space system and to match recreational facilities and services provided to the population served. In addition, the expanding Shared Schoolyard Project will contribute to increased public recreation space throughout the city. In June 2016, San Francisco voters approved Local Measure B, which extends until 2046 a funding set-aside in the City budget for the San Francisco Recreation and Parks Department, and also, provides for annual increases through 2026–2027 in general fund monies for the parks department.⁴² Maintenance and operation of existing recreational facilities, and development of new and upgraded facilities as a result of these bond measures has also led to improvements in the delivery of recreational programs, facilities, and services to a growing population.

For these reasons, the proposed project in combination with other past, present, or reasonably foreseeable future projects are not anticipated to result in cumulative impacts on recreational facilities or resources such that substantial physical deterioration of existing facilities would occur. Therefore, the cumulative impact on recreational facilities would be *less than significant*; and no mitigation measures would be required.

Mitigation: None required.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
10. UTILITIES AND SERVICE SYSTEMS— Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

⁴² San Francisco Department of Elections, *June 7, 2016 Official Election Results*, (last updated June 24, 2016) <http://www.sfelections.org/results/20160607/>, accessed May 3, 2018.

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

Water Supply

Impact UT-1: The City's water service provider would have sufficient water supply available to serve the proposed project from existing entitlements and resources. The proposed project would not require new or expanded water supply resources or entitlements or the construction of new or expanded water treatment facilities. (*Less than Significant*)

Construction

During construction, the proposed project would intermittently use non-potable water for dust control in accordance with article 21 of the San Francisco Public Works Code (and as otherwise permitted by law) and would use relatively small amounts of potable water for various site needs such as drinking water, onsite sanitary needs, and for cement mixing. The small increase in potable water demand would not be substantial. In addition, this water use would be temporary, terminating with the completion of construction. Water supplies for San Francisco are provided by the San Francisco Public Utilities Commission (SFPUC), and are planned such that short-term spikes in water use can be accommodated. Therefore, project construction would not warrant construction or expansion of water treatment facilities, and this impact would be *less than significant* during construction.

Operation

Once constructed, the proposed project would need potable water for residential and commercial uses. Under San Francisco's Non-potable Water Program, described in EIR Section 4.J, Hydrology and Water Quality, the project would also be required to use non-potable water for appropriate purposes such as toilet and urinal flushing, cooling, and landscape irrigation.

As discussed in Chapter 2, Project Description, subsection 2.E “Project Characteristics and Components,” and under Section 4.A “Impact Overview,” the proposed project incorporates a flexible land use program in which certain blocks would permit development of either commercial or residential land uses. For the purposes of this analysis, the scenario that would result in the greatest residential development is referred to as the maximum residential scenario. Conversely, the scenario that would result in the greatest commercial development is referred to as the maximum commercial land use program. The proposed project includes a blend of residential and commercial land uses.

The project sponsor has estimated the potable and non-potable water demands for the proposed project as well as for the maximum residential and maximum commercial scenarios.⁴³ The water demand estimates use the SFPUC’s Non-Potable Water Program district-scale water calculator, and the phased water demands for the years 2020, 2025, 2030, and 2035 are shown in **Tables 1, Phased Potable Water Demands of the Proposed Project**, and **Table 2, Phased Non-Potable Water Demands of the Proposed Project**. As indicated in these tables, the maximum residential scenario would result in the greatest water demand. At full build out (expected by 2034), the maximum potable water use for this land use program would be 0.25 million gallons per day (mgd). This is 0.23 mgd greater than the existing use of 0.02 mgd at the project site. The project sponsor also estimates that at full build out, the non-potable water demand for this scenario would be a maximum of 0.074 mgd. The total water demand would be 0.325 mgd for the maximum residential scenario.

TABLE 1
PHASED POTABLE WATER DEMANDS OF THE PROPOSED PROJECT

Land Use Program	Total Average Daily Potable Water Demand, gallons per day			
	2020	2025	2030	2035
Proposed Project (Preferred Program)	0	30,700	132,200	224,400
Maximum Residential	0	57,300	158,800	251,000
Maximum Commercial	0	30,700	117,400	205,000

SOURCE: CBG, 2018

TABLE 2
PHASED NON-POTABLE WATER DEMANDS OF THE PROPOSED PROJECT

Land Use Program	Total Average Daily Non-Potable Water Demand, gallons per day			
	2020	2025	2030	2035
Proposed Project (Preferred Program)	0	16,700	55,000	78,900
Maximum Residential	0	14,400	49,900	73,800
Maximum Commercial	0	16,700	49,800	79,300

SOURCE: CBG, 2018

⁴³ CBG, *Potrero Power Station – Project Water Demand*, March 21, 2018.

The SFPUC approved and adopted a *water supply assessment* for the proposed project (included in **Appendix H**) on April 24, 2018. The assessment conservatively analyzed the water demand of the maximum residential scenario, and assessed whether the total potable and non-potable water demand could be accommodated within existing and projected water supplies. The assessment concluded that the total 0.325 mgd increased demand of the project represents approximately 0.38 percent of the SFPUC's projected retail water demand in 2035, and is accounted for in the city's retail water demands during normal years, single dry years, and multiple dry years from 2015 through 2035. The assessment also indicates that the demand from the proposed project is accounted for within the overall San Francisco retail water demand being used for current water supply planning. Therefore, as confirmed by the SFPUC, existing water supplies serving the City and County of San Francisco would be sufficient to meet the projected increase in water demand for the project. Impacts related to water supply would be *less than significant*.

To assess the need for improvements to the existing water distribution systems, the SFPUC City Distribution Division would conduct a hydraulic analysis to confirm that the existing system is adequate to meet the project's water demands, including fire suppression system pressure and flow demands. If the existing infrastructure is found to be inadequate to meet the project's demand, the SFPUC would modify the water conveyance system, such as upsizing the water mains and appurtenances. The construction of the larger facilities could require a limited amount of excavation, trenching, soil movement, and other activities typically associated with construction of development projects in San Francisco and generally within public rights-of way. These activities, if determined to be required, would be similar to those associated with construction of the project, and these activities would not result in significant environmental effects not already disclosed in the EIR and initial study for the proposed project. Therefore, impacts related to requiring the construction of new water treatment facilities or expansion of existing facilities would be *less than significant*, and no mitigation measures are required.

Mitigation: None required.

Wastewater

Impact UT-2: The proposed project would not exceed wastewater treatment requirements of the Southeast Water Pollution Control Plant. (*Less than Significant*)

Construction

During construction, workers would use portable toilets and hand washing facilities for their sanitary needs and there would be no related discharges to the combined sewer system. The only discharges to the combined sewer system would be groundwater pumped from excavations during construction. Most of the excavations at the project site would be within the artificial fill materials, young bay mud, and bedrock that underlie the project site. Where these shallow excavations would be completed below the water table, the shoring systems used in the shallow excavations would minimize the amount of groundwater flow into the excavations. Only limited dewatering would be required to maintain a dry working area within these shallow excavations. Therefore, there

would be minimal flows to the combined sewer system and impacts related to exceeding the wastewater treatment requirements of the Southeast Water Pollution Control Plant during construction would be *less than significant*.

Operation

Based on the estimated water demand for the proposed project (refer to Impact UT-1), the project sponsor estimates that at full build out, the maximum average dry-weather wastewater flow would be 0.31 mgd, and the peak dry-weather wastewater flow would be 0.93 mgd.⁴⁴ These estimates assume that the sewer demand would be 95 percent of the indoor potable water demand and 100 percent of the indoor non-potable demand.

Wastewater flows from the project site would be conveyed to the Southeast Water Pollution Control Plant for treatment prior to discharge to San Francisco Bay. This plant has a dry-weather capacity of 84.5 mgd, and the annual average wastewater flow to the Southeast Plant during dry weather is 51.4 mgd.⁴⁵ Therefore, the plant has a remaining capacity of approximately 33.1 mgd, and the proposed project's average dry-weather wastewater demand of up to 0.31 mgd would be well within the remaining capacity of the plant. Therefore, impacts related to exceeding the wastewater treatment requirements of the plant during operation would be *less than significant*, and no mitigation is necessary. Water quality impacts associated with wet weather discharges to the City's combined sewer system are discussed in EIR Section 4.J, Hydrology and Water Quality (Impact HY-2).

Mitigation: None required.

Impact UT-3: The proposed project would not require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects, nor would the project result in a determination by the SFPUC that it has inadequate capacity to serve the project's projected demand in addition to its existing commitments. (*Less than Significant*)

Wastewater flows from the project site would be conveyed to the Southeast Water Pollution Control Plant for treatment under either of the two wastewater and stormwater collection options under the proposed project (see EIR Chapter 2, Project Description). The new sewer system to be constructed under either option would convey the majority of wastewater generated at the project site to a new pump station to be constructed near Unit 3 as shown on Figures 2-18 and 2-19 in Chapter 2, Project Description. The proposed project would include construction of a force main to convey wastewater flows from the pump station to the existing combined sewer beneath 23rd Street. Wastewater from Block 10 would discharge directly to the combined sewer line.

The combined sewer line beneath 23rd Street connects with a sewer line that flows southward beneath Illinois Street. This sewer line beneath Illinois Street eventually arrives at Third and Cesar Chavez streets where there is a flow split such that dry weather flows continue directly to the

⁴⁴ CBG, *Potrero Power Station – Projected Wastewater Flows*, February 9, 2018.

⁴⁵ San Francisco Water Power Sewer, *Southeast Water Pollution Control Plant and Bayside Wet Weather Facilities 2017 Annual Self-Monitoring Report*, February 1, 2018.

Southeast Plant and wet weather flows can be diverted to the Islais Creek transport/storage box during periods of high flow.

The SFPUC is currently in the process of constructing improvements to the sewer lines beneath 23rd and Illinois streets and has confirmed that the combined sewer system has sufficient downstream capacity to convey wastewater flows generated under the proposed project to the Southeast Water Pollution Control Plant with construction of the planned improvements. Further, as discussed in Impact UT-2, the plant has sufficient capacity to treat wastewater flows from the proposed project. Therefore, the project would not require new or expanded wastewater facilities to accommodate the anticipated wastewater demand of the project and impacts related to the construction of new or expanded wastewater treatment facilities and wastewater treatment capacity would be *less than significant*. No mitigation measures are required.

While the project could affect the frequency and volume of combined sewer discharges from the city's combined sewer system during wet weather as a result of the addition of stormwater, this would not be considered an exceedance of wastewater treatment capacity. If an increase of stormwater and wastewater flows during wet weather caused an increase in the long-term average of combined sewer discharge frequency, an NPDES permit violation could occur. The water quality effects related to changes in combined sewer discharges are analyzed in Impact HY-2 of EIR Section 4.J, Hydrology and Water Quality.

Mitigation: None required.

Stormwater

Impact UT-4: The proposed project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (*Less than Significant*)

The proposed project considers two options for stormwater and wastewater management: (1) a dual system in which some of the stormwater would be directed to the combined sewer system and the remainder would be directed to a separate storm drainage system constructed under the proposed project, and (2) a project-wide combined sewer system. The dual system would utilize the combined sewer system for wastewater flows from the entire project site. The combined sewer system option would utilize the combined sewer system for both wastewater and stormwater from the entire project site.

Appendix B of the City's Subdivision Regulations specifies that both the combined sewer system and any separate stormwater system must have sufficient capacity to accommodate stormwater runoff from the entire tributary area that could result from a five-year storm (defined as a storm that has a 20 percent probability of occurring in any one year). Streets and drainage channels must be sized to accommodate excess surface flows from a 100-year storm (defined as a storm that has a 1 percent probability of occurring in any one year). Because the new stormwater system(s) constructed under either stormwater and wastewater management option would be constructed

to these standards as a condition of project approval, stormwater flows from the project site would be accommodated within the newly constructed infrastructure. No new or expanded stormwater drainage facilities other than those proposed as part of the project would be required. Therefore, this impact would be *less than significant*, and no mitigation measures are required.

Mitigation: None required.

Solid Waste

Impact UT-5: Project construction and operation would result in increased generation of solid waste but would be served by a landfill with sufficient capacity to accommodate the proposed project's solid waste disposal needs. (*Less than Significant*)

Recology, Inc. provides residential and commercial solid waste collection, recycling, and disposal services for the City of San Francisco. Recyclable materials are taken to Recology's Pier 96 facility, where they are separated into commodities (e.g., aluminum, glass, and paper) and transported to other users for reprocessing. Compostables (e.g., food waste, plant trimmings, soiled paper) are transferred to a Recology composting facility in Solano County, where they are converted to soil amendment and compost. The remaining material that cannot otherwise be reprocessed (*trash*) is primarily transported to a landfill.

In September 2015, San Francisco approved an agreement with Recology, Inc., for the transport and disposal of the City's municipal solid waste at the Recology Hay Road Landfill in Solano County.^{46,47} The City began disposing the vast majority of its municipal solid waste at Recology Hay Road Landfill in January 2016, and is anticipated to continue for approximately nine years, with an option to renew the agreement thereafter for an additional six years. The Recology Hay Road Landfill is permitted to accept up to 2,400 tons of waste per day, and, at this maximum rate of acceptance, the landfill has permitted remaining capacity of 30,433,000 cubic yards and is expected to continue to receive waste approximately through the year 2077. At present the landfill receives an average of approximately 1,850 tons per day from all sources, with approximately 1,200 tons per day from San Francisco.⁴⁸ In 2016, San Francisco generated a total of about 600,000 tons of landfill waste, 404,000 tons of which were directed to the Hay Road Landfill with the remaining 196,000 tons received at roughly 23 other landfills; Potrero Hills Landfill received most of this remaining volume (106,000 tons).⁴⁹

⁴⁶ City and County of San Francisco, Notice of Availability of and Intent to Adopt a Negative Declaration for the Agreement for Disposal of San Francisco Municipal Solid Waste at Recology Hay Road Landfill in Solano County, Case No 2014.0653E, March 4, 2015.

⁴⁷ San Francisco Planning Department, Agreement for the Disposal of San Francisco Municipal Solid Waste and Recology Hay Road Landfill in Solano County, Case No. 2014.0653E, Final Negative Declaration, July 21, 2015.

⁴⁸ California Integrated Waste Management Board, Solid Waste Information System (updated 2017), www.calrecycle.ca.gov/SWFacilities/Directory/48-AA-0002/Detail/, accessed March 1, 2018.

⁴⁹ California Department of Resources Recycling and Recovery (CalRecycle) Disposal Reporting System, Jurisdiction Disposal by Facility, <http://www.calrecycle.ca.gov/LGCentral/Reports/Viewer.aspx?P=ReportYear%3d2016%26ReportName%3dReportEDRSJurisDisposalByFacility%26OriginJurisdictionIDs%3d438>, accessed March 1, 2018.

Construction

Construction and demolition debris must be transported by a registered transporter to a registered facility that can process mixed construction and demolition debris pursuant to the City and County of San Francisco Construction and Demolition Ordinance. The ordinance requires that at least 65 percent of construction and demolition debris from a site go to a registered construction and demolition recycling facility. This requirement has been augmented by the Green Building Ordinance, which requires that at least 75 percent of construction and demolition debris be diverted from landfills.

Over the 15-year duration of the proposed Potrero Power Station Mixed-Use Development project construction phases, construction and demolition activities would generate construction debris at the project site, some of which would require disposal. The project would be subject to the City's various solid waste diversion requirements, including the San Francisco Construction and Demolition Debris Recovery Ordinance, the 2013 Green Building Ordinance (enforced by the Department of Building Inspection), and California Code of Regulations Title 24. Treatment and removal of hazardous material is addressed under EIR Section 4.K, Hazards and Hazardous Materials. Compliance with these mandatory diversion requirements, would ensure construction of the project would not exceed permitted landfill capacity. The impact from construction would therefore be *less than significant*.

Operation

Operation of the project would increase generation of solid waste and recyclables at the project site compared to existing conditions. According to CalRecycle, in 2016 San Francisco residents generated approximately 3.7 pounds of solid waste for disposal in a landfill per resident per day, while commercial uses generate approximately 4.6 pounds for disposal in a landfill per employee per day.⁵⁰ Due to the varying rates of solid waste generation between resident and employee use, and because employee-waste generation is higher than residential, this analysis considers the maximum office scenario as worst case scenario for project-generated solid waste. Applying existing city waste generation rates and the project anticipated population under the maximum office scenario (that is, 5,541 residents and 5,524 employees), the project would be expected to generate a net increase of approximately 8,379 tons of solid waste per year.⁵¹

The total operational solid waste that would be generated under the project that requires disposal in a landfill would represent 1.4 percent of City's generated landfill waste, and less than 1 percent of the landfill's 2,400-tons maximum throughput per day. Furthermore, this landfill has a remaining capacity of over 30.4 million cubic yards, with an anticipated closure in 2077; and therefore can accommodate solid waste disposal needs of the project through the duration of the proposed project.

⁵⁰ CalRecycle, Jurisdiction Diversion/Disposal Rate Detail, <http://www.calrecycle.ca.gov/LGCentral/reports/diversionprogram/.aspx>, accessed March 1, 2018.

⁵¹ Total sum of project generated operational waste is based on the following: (5,541 residents x 3.7 pounds/day) + (5,524 employees x 4.6 pounds/day) = 45,912.1 pounds/day, or (45,912.1pounds/day x 365 days/year)/2,000 pounds) = 8,379 tons. Note this is a conservative assumption of solid waste landfill generation for the life of the project as the City will implement new measures to achieve their 2020 land diversion targets.

During operation, the project would be subject to the City's Mandatory Recycling and Composting Ordinance, which requires the separation of refuse into recyclables, compostables, and trash, thereby minimizing solid waste disposal and maximizing recycling and composting. Although the project would increase total waste generation from the City by increasing the number of residents and employees at the project site, the increasing rate of diversion through recycling and other methods would result in a decreasing share of total waste that requires deposition into the landfill.

Based on the existing disposal rates and continued waste diversion by residents and employees at the project site, the project would continue to be in compliance with San Francisco Ordinance No. 27-06, CALGreen, and AB 939. Given the above, construction and operation of the project would not exceed available permitted landfill capacity; the impact would be *less than significant*.

Mitigation: None required.

Impact UT-6: The construction and operation of the proposed project would comply with all applicable statutes and regulations related to solid waste. (*Less than Significant*)

The California Integrated Waste Management Act of 1989 requires municipalities to adopt an Integrated Waste Management Plan to establish objectives, policies, and programs relative to waste disposal, management, source reduction, and recycling. Reports filed by the San Francisco Department of the Environment showed that the City generated approximately 873,000 tons of waste material in 2000. By 2016 that figure was decreased to approximately 600,000 tons, despite growth in population and employment.⁵² Waste diverted from landfills is defined as recycled or composted. San Francisco has a goal of 75 percent landfill diversion by 2010 and 100 percent by 2020. As of 2010, 80 percent of San Francisco's solid waste was being diverted from landfills, having met the 2010 diversion target.⁵³

San Francisco Ordinance 27-06 requires a minimum of 65 percent of all construction and demolition debris to be recycled and diverted from landfills. The San Francisco Green Building Code also requires certain projects to submit a recovery plan to the Department of the Environment demonstrating recovery or diversion of at least 75 percent of all demolition debris. Furthermore, the project would be required to comply with City Ordinance 100-09, the Mandatory Recycling and Composting Ordinance, which requires everyone in San Francisco to separate their refuse into recyclables, compostables, and trash.

⁵² CalRecycle, Disposal Reporting System (DRS): Jurisdiction Disposal and Alternative Daily Cover Tons by Facility, Information for San Francisco, years: 2000, 2010, and 2016 (updated 2016), <http://www.calrecycle.ca.gov/lgcentral/Reports/DRS/Destination/JurDspFa.aspx>, accessed March 1, 2018.

Note that per EIR Section 4.C Population and Housing, the City population increased from 776,733 people to 845,600 in 2015, roughly a 9 percent increase since 2000.

⁵³ San Francisco Department of the Environment, Zero Waste Program, San Francisco Sets North American Record for Recycling and Composting with 80 Percent Diversion Rate, <http://www.sfdenvironment.org/news/press-release/mayor-lee-announces-san-francisco-reaches-80-percent-landfill-waste-diversion-leads-all-cities-in-north-america>, accessed March 1, 2018.

The Recology Hay Road and Potrero Hills landfills, along with the other facilities serving the city are required to meet federal, state, and local solid waste regulations. The proposed project would comply with the solid waste disposal policies and regulations identified above and the project would have a *less-than-significant* impact with respect to solid waste statutes and regulations, and no mitigation measures are necessary.

Mitigation: None required.

Impact C-UT-1: The proposed project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on utilities and service systems. (*Less than Significant*)

Water Supply

As described above in Impact UT-1, the SFPUC approved and adopted a Water Supply Assessment for the proposed project. This assessment is a cumulative analysis of the project's water supply demand within the overall context of the City's overall cumulative water demand through 2040 based on current water supply planning. The SFPUC's approval of the water supply assessment for the proposed project indicates that cumulative impacts on water supply would be *less than significant*.

Wastewater

As described above in Impacts UT-2 and UT-3, the project's average dry-weather wastewater demand of up to 0.31 mgd represents about 1 percent of the available dry weather treatment capacity of the Southeast Plant of 33.1 mgd. As shown in Table 4.A-2, the total estimated increase in residents and employees for all cumulative projects listed would be 35,434. Using the same ratio of people to estimate increase in dry-weather wastewater demand as identified for the proposed project, this cumulative increase in residents and employees would generate an estimated 1.6 mgd of wastewater demand. This amount in combination with the project's demand would be less than 2 mgd, an amount well within the currently available wastewater treatment capacity, and would not trigger the construction of new or expanded wastewater treatment facilities. Thus, cumulative impacts on wastewater treatment capacity associated with the proposed project in combination with reasonably foreseeable future projects listed in EIR Section 4A, Table 4.A-2 would be less than significant.

As discussed above in Impact UT-2, the peak wastewater flows under the proposed project would be 0.93 mgd. San Francisco Public Works has evaluated the current capacity of the existing sewer lines beneath 23rd and Illinois streets to accommodate contributing flows from the project site as well as upstream flows from Potrero Hill, Mission Bay, Pier 70, and other developments.⁵⁴ The analysis concludes that with upsizing of the sewer lines beneath 23rd and Illinois streets, as currently planned by public works, the combined sewer system will have sufficient capacity to accommodate wastewater flows from the proposed project and these cumulative projects.

⁵⁴ San Francisco Public Works, Hydraulic Study for 23rd Street Sewer East of Illinois Street (2710J).

Therefore, cumulative impacts related to exceeding the capacity of the combined sewer system would be *less than significant*.

Stormwater

As described above in Impact UT-4, under either of the project's options for stormwater management, the project would be required to comply with the City's Subdivision Regulations regarding sufficient capacity to accommodate stormwater runoff from the entire tributary area within which the project is located. These same regulations apply to stormwater management for all of the cumulative projects listed in EIR Section 4A, Table 4.A-2. Therefore, with compliance with applicable regulations, the proposed project, in conjunction with other development, would not have a significant cumulative impact associated with the City's storm drainage system, and cumulative impacts would be *less than significant*.

Solid Waste

The City is currently contracted with its landfill providers through 2025. The City's current contract has sufficient capacity to accommodate landfill demand for all past, present, and foreseeable future projects through 2025. Citywide cumulative development—including the proposed project—have been and would be required to comply with the recycling and reuse measures and reduced diversion rate targets established by the same local and state requirements for construction and operational waste. It should be noted that San Francisco has a landfill diversion goal of 100 percent by 2020. For the purpose of this analysis, it is reasonable to assume that prior to 2025, the City will update its contract to maintain solid waste disposal services beyond 2025 and to ensure adequate landfill capacity will be available to serve the updated diversion rates and projected growth at that time. Therefore, the proposed project, in conjunction with other development, would not have a significant cumulative impact associated with solid waste, and cumulative impacts would be *less than significant*.

For the reasons described above, the project in combination with past, present, and reasonably foreseeable future development would not result in significant cumulative impacts related to available water supply; the construction of new or expanded water, wastewater, or stormwater systems; exceeding the wastewater treatment requirements of the regional board or the wastewater capacity of the combined sewer system; solid waste disposal; or compliance with solid waste laws, and the cumulative impacts on these utilities and service systems would be *less than significant*.

Mitigation: None required.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
11. PUBLIC SERVICES— Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of, or the need for, new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any public services such as fire protection, police protection, schools, parks, or other services?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The proposed project's impacts to parks and open spaces are discussed above under Topic E.10, Recreation. Impacts on other public services are discussed below.

Impact PS-1: Construction of the project would not result in an increase in demand for police protection, fire protection, schools, or other services to an extent that would result in substantial adverse physical impacts associated with the construction or alteration of governmental facilities. (*Less than Significant*)

Fire Protection

Construction activities have the potential to result in accidental onsite fires from such sources as the operation of mechanical equipment and the use of flammable construction materials. However, in compliance with Occupational Safety and Health Administration and fire and building code requirements, construction managers and personnel would be trained in emergency response and fire safety operations, which include the monitoring and management of life safety systems and facilities. Additionally, fire suppression equipment (e.g., fire extinguishers) would be maintained onsite throughout the construction duration. Furthermore, construction would occur in compliance with all applicable federal, state, and local requirements concerning the handling, disposal, use, storage, and management of hazardous waste. Thus, impacts to fire protection during construction would be temporary and *less than significant*.

Police Protection

Construction sites can attract theft and vandalism if not properly secured and contribute to a temporary increase in demand for police protection services. The construction contractor would implement temporary security measures including security fencing, lighting, and locked entry to secure the project site during construction, in accordance with standard construction practices. Impacts to police protection during construction would, therefore, be temporary and *less than significant*.

Schools and Other Services

Impacts to public services during construction phases of the project would result in *no impact* to schools or other public services such as libraries, as it is assumed construction would be temporary and employees related to construction would be sourced from the existing labor pool, thereby not resulting in an increase in use of nearby schools or library services.

For the reasons described above, construction of the project would result in a *less-than-significant* impact on public services.

Mitigation: None required.

Impact PS-2: The operation of the proposed project would not result in an increase in demand for police protection, fire protection, schools, or other services to an extent that would result in substantial adverse physical impacts associated with the construction or alteration of governmental facilities. (*Less than Significant*)

Fire Protection and Emergency Response Services

The project would be constructed in a fully developed area of San Francisco. However, the project site is underutilized and implementation of the project would result in more intensive use of the project site than currently exists. The project's increase in development, use, and service population at the project site would therefore increase demand for public fire protection and emergency medical services.

The San Francisco Fire Department, Port of San Francisco, and San Francisco Department of Building Inspection would review building plans to ensure that proposed buildings comply with the latest California Building Code requirements for fire and life safety measures as specified in the San Francisco Fire Code. These requirements include measures related to emergency access and egress; sprinkler systems; fire-rated design, construction, and materials; restrictions on occupant loads; emergency lighting; smoke alarms; and mechanical smoke control and emergency notification systems. Adherence to San Francisco Fire Code requirements as part of the project design would minimize demand for future fire protection services.

Requirements pertaining to the water volume and pressure needed for fire suppression onsite, as well as flow volume and duration, would vary depending on the specific area of the project site in question. As part of the proposed project, and as described in EIR Chapter 2, Project Description, new fire hydrants and extension of the high pressure auxiliary water supply system (distribution lines that would serve the project primarily for firefighting) would be provided and located in accordance with City requirements. The proposed project would be required to comply with applicable fire codes and include fire safety measures and equipment (e.g., fire hydrants and sprinkler systems), installation of smoke detectors and fire extinguishers, and provision of emergency access ways for emergency vehicles. The project sponsor would work with the Fire Department to determine utility and access requirements for fire protection and emergency services at the project site during construction and operation.

Emergency vehicles would continue to access the project site from 23rd Street, and in addition from new connections from Humboldt Street at Illinois, and from 22nd Street. The project also includes proposed connections of street improvements to the planned development in the Pier 70 Mixed-Use District project that would create a more continuous street network in the Central Waterfront area. Ultimately, the proposed new streets would provide access for emergency vehicles and

would be accessible for all modes of transportation via 23rd, Humboldt, Georgia, Maryland, Michigan, Louisiana, and Delaware streets. The adequacy of emergency access is discussed in EIR Section 4.E, Transportation and Circulation.

Fire Station No. 37, located at 798 Wisconsin Street at 22nd Street, less than 0.75 mile west of the project site, would typically be the first responder to the project site. This station currently operates under Battalion 10 along with stations, 9, 17, 25, 42, and 44. Should Fire Station 37 be unable to provide immediate assistance, Fire Station No. 35, at 3305 3rd Street, approximately 1 mile south of the project site, or Fire Station No. 4 at 449 Mission Rock Street, approximately 1 mile north of the project site would provide service.

The project would result in an increase in fire and medical emergency incidents attributable to the increase in the residential and employment population at the project site. The introduction of additional residents and employees to the project site could require additional fire protection personnel and medical emergency responders. However, the number of additional personnel or equipment, that would be attributable to the proposed project, is unknown at this time. The San Francisco Fire Department has indicated that it is in the process of identifying citywide service and facility needs, however no new facilities are currently proposed.⁵⁵ Demand is calculated based on citywide growth, and is not generally based on a project level basis.⁵⁶ In the absence of a citywide analysis, it cannot be determined if the proposed project and associated increase in local population would by itself indirectly require the construction of new or expanded fire protection facilities, or if the existing facilities could accommodate the incremental increase in fire and medical emergency incidents attributable to the project, or where such facilities, if required, would be located.

Therefore, at this time, it would be too speculative to evaluate whether or not operation of the project would result in substantial adverse physical impacts associated with construction or alteration of fire protection facilities indirectly triggered by the project. Even assuming construction of such facilities were to be warranted, construction would be subject to the City's permitting procedures, including environmental review under CEQA, which would require any substantial adverse physical impacts of such construction to be mitigated to less than significant levels, if feasible. Fire stations are generally limited in size, with limited construction disturbance and duration. Construction impacts such as those described in this EIR for the proposed project would occur at a much smaller scale, and construction activities would be required to comply with the same existing regulations designed to reduce physical impacts of construction as described under the various resource topics in this EIR. This would include for example the San Francisco Noise Ordinance (Article 29 of the Police Code), the San Francisco Building Code, the San Francisco Construction Dust Control Ordinance (San Francisco Health Code Article 22B, and San Francisco Building Code section 106.3.2.6), the San Francisco Construction and Demolition Ordinance, the Green Building Ordinance, San Francisco Public Works Code, and the Construction Site Runoff Control Ordinance, and the Maher Ordinance (Article 22A of the San Francisco Health Code and Article 106A.3.4.2 of the San Francisco Building Code). Therefore, with the possible exception of potential effects on historical architectural resources, it is not anticipated that construction or

⁵⁵ Olivia Scanlon, Communications Outreach Coordinator, San Francisco Fire Department personal communication with Rachel Schuett, San Francisco Planning Department. May 24, 2018.

⁵⁶ Ibid.

expansion of a typical fire station in the project vicinity would result in significant secondary impacts. Potential impacts on historical architectural resources would be dependent on the location of such facilities; without additional information regarding possible locations for a new facility, such impacts would be speculative.

Therefore, because it is unknown whether additional fire facilities would be required, and because indirect impacts from construction of any potentially required new facilities would be too speculative to evaluate, such impacts would be considered *less than significant*.

Police Protection

The proposed project would result in more intensive use of the project site than currently exists and would increase the service population on the site, and thus would incrementally increase police service calls in the project area. The project site is located within the Bayview Police District. The existing population in the district is approximately 80,000.⁵⁷ The maximum residential scenario would add up to 6,842 residents, which would increase the number of people residing in the Bayview Police District by about 8.5 percent.⁵⁸ The addition of residents at the project site would incrementally increase demand for police protection services.

The San Francisco Police Department's 2015 *District Station Boundary Analysis Report* includes housing and population projections for each respective police district. This report indicates that there would be 15,206 new residential units added to the Bayview Police District as part of its projected district growth; however, the housing projections do not include the proposed new residential units associated with the proposed project.⁵⁹ A recent patrol workload analysis prepared by the Controller's Office indicates that Bayview Station under current conditions is in need of approximately six more officers, and additional development, including the project would result in additional police service needs.⁶⁰

By considering the Controller's Office's 2017 *Citywide Benchmarking Report*,⁶¹ which cites that San Francisco currently operates under a ratio of 190 officers per 100,000 daytime population, the police department identifies that district growth, including that generated by the proposed project, would require 20 additional officers to staff this district.⁶² The police department indicates that the addition of sworn personnel would require additional equipment, though there is no specific need for new or modified facilities. While, there are no current plans in place to increase personnel or

⁵⁷ San Francisco Police Department, San Francisco Police Department 2014 Annual Report, <https://www.dropbox.com/s/mpfjb7eoy54vsrb/2014%20Annual%20Report.pdf?dl=0>, accessed February 2, 2018.

⁵⁸ Calculation: $6,842/80,000$ [existing Bayview Police District population] = 8.5 percent increase.

⁵⁹ City and County of San Francisco Controller's Office, District Station Boundaries Analysis, publish March 3, 2015, p. 65, <http://sfcontroller.org/sites/default/files/FileCenter/Documents/6273-SFPD%20District%20Station%20Boundary%20Analysis%20Report.pdf>, accessed February 2, 2018.

⁶⁰ Lt. Kathryn Waaland, Officer in Charge, Legal Division City and County of San Francisco Police Department, email correspondence with Jennifer Brown, Senior Associate, Environmental Science Associates, March 14, 2018.

⁶¹ City and County of San Francisco, Office of the Controller, *Citywide Benchmarking Report*, published February 16, 2017, sfcontroller.org/sites/default/files/Documents/Auditing/Citywide_Benchmarking_Report_consolidated.pdf, accessed May 14, 2018.

⁶² Lt. Kathryn Waaland, Officer in Charge, Legal Division City and County of San Francisco Police Department, email correspondence with Jennifer Brown, Senior Associate, Environmental Science Associates, March 14, 2018.

equipment to accommodate the future growth, such an increase would be requested through the City's budget process.⁶³

In addition to specific need within the Bayview Police District, police staffing increases are expected to occur over the next several years to meet the City Charter mandate of 1,971 sworn police officers, citywide.⁶⁴ The increases in staff police department-wide would further alleviate any demand for additional staff as a result of the project. However, the provision of additional police services, including those requiring additional patrol vehicles, would not require the need for new or physically altered facilities in order to maintain acceptable service ratios, response times, or other performance objectives for police protection.⁶⁵

Given all the above factors, increases in development by the project under the highest demand scenario (maximum residential scenario with approximately 6,842 residents and 4,747 employees), would increase demand for police protection services, requiring additional police officers. However, this increase in demand would not be to the extent that would require the construction of additional police protection facilities or the expansion of existing facilities to maintain acceptable service ratios, or other performance objectives.⁶⁶ Therefore, operation of the proposed project would have a *less-than-significant* impact related to the provision of police services, and no mitigation measures are necessary.

Schools

A decade-long decline in San Francisco Unified School District enrollment ended in the 2008–2009 school year, and total enrollment in the district has increased to about 57,531 in the 2016–2017 school year, an increase of approximately 1,415 students since 2010.⁶⁷ According to a 2015 enrollment study, the projected student generation rates for the project area through 2040 are 0.25 kindergarten through 12th grade students per unit for inclusionary affordable housing and 0.05 students per unit for market-rate housing.⁶⁸

The maximum residential scenario would increase the project site population by an estimated 6,842 residents of which a portion would be school-aged children who would be anticipated to attend public schools in San Francisco. The maximum residential scenario would add a total of 3,014 residential units to the project site. The percentage of onsite affordable housing has not been determined for the proposed project at this time, though it would be no less than 18 percent.

⁶³ Lt. Kathryn Waaland, Officer in Charge, Legal Division City and County of San Francisco Police Department, email correspondence with Jennifer Brown, Senior Associate, Environmental Science Associates, March 14, 2018.

⁶⁴ SFPD, Annual Report 2014, pp. 61–62, <https://www.dropbox.com/s/mpfjb7eoy54vsrb/2014%20Annual%20Report.pdf?dl=0>, accessed February 2, 2018.

⁶⁵ Lt. Kathryn Waaland, Officer in Charge, Legal Division City and County of San Francisco Police Department, email correspondence with Jennifer Brown, Senior Associate, Environmental Science Associates, March 14, 2018.

⁶⁶ Lt. Kathryn Waaland, Officer in Charge, Legal Division City and County of San Francisco Police Department, email correspondence with Jennifer Brown, Senior Associate, Environmental Science Associates, March 14, 2018.

⁶⁷ San Francisco Unified School District, Growing Population, Growing Schools. SPUR Forum Presentation, Slide 14, dated August 31, 2016, https://www.spur.org/sites/default/files/events_pdfs/SPUR%20Forum_August%2031%202016.pptx.pdf, accessed May 23, 2018.

⁶⁸ Lapkoff & Goblat Demographic Research, Inc., *Demographic Analyses and Enrollment Forecasts for the San Francisco Unified School District*, published February 16, 2018, p. 33, Table II-9, <http://www.sfusd.edu/en/assets/sfusd-staff/about-SFUSD/files/demographic-analyses-enrollment-forecast.pdf>, accessed March 2, 2018.

Therefore, because affordable housing generates more students per household than market rate housing, this initial study assumes 40 percent of the residential units would be affordable. This assumption provides a conservative (worst-case) analysis of potential project-generated demand for public schools. Under this assumption, the project would result in approximately 392 students at buildout under the maximum residential scenario.⁶⁹

According to a recent facilities survey, the San Francisco Unified School District has capacity for almost 64,000 students.^{70,71,72} Student enrollment as of fall 2016 was approximately 57,500 students, with an expected enrollment increase to 64,000-73,000 by 2030. Given the district's overall capacity, the increase of 392 students associated with the project would not substantially change the demand for schools, nor would it result in the need for new facilities.⁷³

The Leroy F. Greene School Facilities Act of 1998, or SB 50, restricts the ability of local agencies to deny land use approvals on the basis that public school facilities are inadequate. SB 50, however, permits the levying of developer fees to address local school facility needs resulting from new development. Local jurisdictions are precluded under state law from imposing school-enrollment-related mitigation beyond the school development fees. The San Francisco Unified School District collects these fees, which are used in conjunction with other school district funds, to support efforts to complete capital improvement projects within the city. The school impact fees to be collected for residential, commercial, and retail developments are currently set at \$3.48 per square foot for new residential construction, \$0.192 per square foot for hotel/motel, \$0.388 per square foot for retail space, \$0.54 per square foot for office space, and \$0.536 per square foot for research and development.⁷⁴ The proposed project would be subject to the School Impact Fees.

Ultimately, given the San Francisco Unified School District's overall capacity of almost 64,000 students, the estimated increase of up to 392 students under the project would not substantially change the demand for schools.⁷⁵ Project generated growth would be within the existing available capacity of the San Francisco Unified School District system. Therefore, implementation of the

⁶⁹ Student generation rates are calculated based on the following: of 3,014 units, 1,206 units would be affordable and 1,808 would be market-rate, therefore $(1,206 \text{ units} \times 0.25 \text{ students/unit}) + (1,808 \text{ units} \times 0.05 \text{ students/unit}) = 392 \text{ students}$. This is based on data provided by: Lapkoff & Goblat Demographic Research, Inc., *Demographic Analyses and Enrollment Forecasts for the San Francisco Unified School District*, February 16, 2018, p. 33, table II-9, <http://www.sfusd.edu/en/assets/sfusd-staff/about-SFUSD/files/demographic-analyses-enrollment-forecast.pdf>, accessed March 2, 2018.

⁷⁰ This analysis was informed, in part, by a Target Enrollment Survey the San Francisco Unified School District performed of all schools in 2010.

⁷¹ Karissa Yee Findley, San Francisco Unified School District. Email to Rachel A. Schuett, San Francisco Planning Department. June 28, 2018.

⁷² San Francisco Unified School District. *Growing Population, Growing Schools*. SPUR Forum Presentation, Slide 14. August 31, 2016. https://www.spur.org/sites/default/files/events_pdfs/SPUR%20Forum_August%2031%202016.pptx_.pdf Accessed May 23, 2018.

⁷³ San Francisco Unified School District. *Growing Population, Growing Schools*. SPUR Forum Presentation, Slide 14. August 31, 2016. https://www.spur.org/sites/default/files/events_pdfs/SPUR%20Forum_August%2031%202016.pptx_.pdf Accessed May 23, 2018.

⁷⁴ San Francisco Planning Department, San Francisco Citywide Development Impact Fee Register, Updated December 1, 2017, Effective January 1, 2018, http://forms.sfplanning.org/Impact_Fee_Schedule_2018.pdf, accessed on February 2, 2018.

⁷⁵ San Francisco Unified School District. *Growing Population, Growing Schools*. SPUR Forum Presentation, Slide 14. August 31, 2016. https://www.spur.org/sites/default/files/events_pdfs/SPUR%20Forum_August%2031%202016.pptx_.pdf Accessed May 23, 2018.

proposed project would not necessitate the need for new school facilities or the expansion of existing school facilities and the impacts would be *less than significant*.

Libraries

The number of new residents at the project site under the maximum residential scenario would represent approximately 2.4 percent of the total citywide population growth from 2010 to 2040 (refer to EIR Section 4.C, Impact PH-2). Residential and nonresidential development associated with the project would increase demand for local library services. However, the existing library branches near the project site have been either recently renovated or newly constructed following the passage of the Branch Library Improvement Program in 2000 and in accordance with the Branch Facilities Plan (the Mission Bay Branch was constructed in July 2006, the Potrero Branch was renovated in 2010, and the Bayview Branch was constructed in 2013). These resources would satisfy the demand for library services generated by the 6,842 residents and 4,153 employees at the project site under the maximum residential scenario. Therefore, the project would not require construction of new or expanded library facilities beyond those already proposed or under construction under the project. Therefore, impacts on library services would be *less than significant*, and no mitigation measures are necessary.

For the reasons described above, the project's operational impacts on public services, including fire protection, emergency medical services, police protection, schools, and libraries, would not result in an increase in demand to an extent that would warrant construction or alteration of governmental facilities that could result in substantial adverse physical impacts. Therefore, this impact is *less than significant*.

Mitigation: None required.

Impact C-PS-1: The proposed project, combined with past, present, and reasonably foreseeable future projects in the vicinity, would not have a substantial cumulative impact to public services. (*Less than Significant*)

Fire Protection and Emergency Response Services

The project would add to a cumulative increase in demand for fire response and emergency medical services within Battalion 10, when combined with that of the reasonably foreseeable development projects (see EIR Section 4.A, Table 4.A-2). The San Francisco Fire Department has indicated that it is in the process of identifying citywide service and facility needs, however no new facilities are currently proposed. To provide a conservative analysis, it is assumed that the demand for fire and emergency medical services from the proposed project, reasonably foreseeable projects in the area, and citywide growth would increase to an extent as to eventually require the construction of additional service facilities.

Construction of such facilities would be subject to the City's permitting procedures, including environmental review under CEQA, which would require any substantial adverse physical impacts of such construction to be mitigated to a less than significant level, as feasible. Fire stations

are generally limited in size (a modest scale development relative to other San Francisco projects, and substantially smaller than the proposed project), with limited construction disturbance and duration. Construction impacts such as those described in this EIR for the proposed would occur at a much smaller scale, but construction activities would be required to comply with the same existing regulations designed to reduce physical impacts of construction as described under the various resource topics in this EIR. This would include for example the San Francisco Noise Ordinance (Article 29 of the Police Code), the San Francisco Building Code, the San Francisco Construction Dust Control Ordinance (San Francisco Health Code Article 22B, and San Francisco Building Code Section 106.3.2.6), the San Francisco Construction and Demolition Ordinance, the Green Building Ordinance, San Francisco Public Works Code, and the Construction Site Runoff Control Ordinance, and the Maher Ordinance (Article 22A of the San Francisco Health Code and Article 106A.3.4.2 of the San Francisco Building Code). While it is possible that construction of new facilities could result in significant impacts, such as impacts on historical architectural resources, it would be speculative to determine in the absence of a specific project or plan that construction or expansion of new or expanded fire protection or emergency medical service facilities would result in significant secondary impacts. Therefore, secondary impacts related to the construction of new or expanded fire protection and emergency medical services required to serve increased demand generated by the proposed project in combination with the cumulative projects would be *less than significant*.

Police Services

The project combined with that of the reasonably foreseeable development projects (see EIR Section 4.A, Table 4.A-2 would add to the demand for police services in the Bayview Police District,). Redistricting efforts in June 2015 anticipated and planned for population growth of 15,205 households, or an increase of 26.5 percent, in the Bayview Police District. Although the proposed project was not considered in the *District Station Boundary Analysis*, other reasonably foreseeable projects included in the cumulative analysis for this project were within the scope of that analysis. By considering the Controller's Office's 2017 *Citywide Benchmarking Report*,⁷⁶ which cites that San Francisco currently operates under a ratio of 190 officers per 100,000 daytime population, the police department identifies that district growth, including that generated by the proposed project would require 20 additional officers to staff this district.⁷⁷ In addition to specific needs within the Bayview Police District, the department indicated that police staffing increases are expected to occur over the next several years to meet the City Charter mandate for the 1,971 of sworn police officers.⁷⁸ As discussed under Impact PS-2 above, the police department has indicated a need for these additional sworn personnel and additional equipment, but no specific need for new or modified facilities has been identified.

Therefore, the estimated increase in residents, employees, and visitors as a result of the project (under the maximum residential scenario) combined with increases associated with reasonably

⁷⁶ City and County of San Francisco, Office of the Controller, February 16, 2017, *Citywide Benchmarking Report*, sfcontroller.org/sites/default/files/Documents/Auditing/Citywide_Benchmarking_Report_consolidated.pdf, accessed on May 14, 2018.

⁷⁷ Lt. Kathryn Waaland, Officer in Charge, Legal Division City and County of San Francisco Police Department, email correspondence with Jennifer Brown, Senior Associate, Environmental Science Associates, March 14, 2018.

⁷⁸ San Francisco Police Department, Annual Report 2014, pp. 61-62, <https://www.dropbox.com/s/mpfjb7eoy54vsrb/2014%20Annual%20Report.pdf?dl=0>, accessed February 2, 2018.

foreseeable future projects would not result in the need for construction of new facilities and cumulative impacts would be *less than significant*.

School Services

Development of cumulative projects within the city would result in increased population and employment-generating uses, which would result in an associated increase in the number of students to be served by the San Francisco Unified School District. Based on the projections for new housing units, population growth, birth rates, and resulting school enrollment, the district estimates that San Francisco public schools will reach capacity by the year 2025.⁷⁹

Given the need for expanded capacity, the district has identified three local sites for new schools, one in Mission Bay, one at Candlestick Point, and one at the Hunters Point Shipyard.^{80,81} The Mission Bay site is located on Block 14 and the parcel is 2.45 acres. The Candlestick Point site is located on Lot 1A and the parcel is 1.5 acres. The construction of two new schools will be funded by the 2016 facilities bond, which includes \$50 million for each school. The school district has not yet determined the programming for these schools.^{82,83,84}

SFUSD recently hired a Director of School Portfolio Planning who is responsible for creating a process for new school development at Mission Bay and Candlestick Point. The Mission Bay site will be the focus of this year's work. A community engagement process is expected to begin in the summer/fall of 2018 to influence the design for this facility. A similar process for the Candlestick site is expected to begin in 2019.^{85,86}

The construction of new school facilities is subject to environmental review under the California Environmental Quality Act (CEQA). A new 500-student public school was evaluated as part of the Mission Bay EIR.⁸⁷ Community facilities, including educational facilities were evaluated at the Candlestick Point and Hunters Point Shipyard locations, as part of the Candlestick Point-Hunters Point Shipyard Phase II Development Plan Project EIR, and schools were analyzed in more detail in Addendum 5.⁸⁸

⁷⁹ San Francisco Unified School District. *Growing Population, Growing Schools*. SPUR Forum Presentation, Slide 14. August 31, 2016. https://www.spur.org/sites/default/files/events_pdfs/SPUR%20Forum_August%2031%.pptx_.pdf accessed May 23, 2018.

⁸⁰ Myong Lee, San Francisco Unified School District. Meeting with San Francisco Planning Department regarding SFUSD planned facilities. August 16, 2018.

⁸¹ Lila Hussain, Office of Community Investment and Infrastructure. Meeting with San Francisco Planning Department regarding Hunter's Point/Candlestick Point community facilities. April 24, 2018.

⁸² Myong Lee, San Francisco Unified School District. Meeting with San Francisco Planning Department regarding SFUSD planned facilities. August 16, 2018.

⁸³ Waziuddin Chowdhury, San Francisco Unified School District. Email to Lily Langlois, San Francisco Planning Department. December 13, 2017.

⁸⁴ City and County of San Francisco. *The City and County of San Francisco Capital Plan, Fiscal Years 2018-2027*. Page 41. http://onesanfrancisco.org/sites/default/files/2017-05/Capital-Plan-FINAL_digital_170504.pdf accessed May 23, 2018.

⁸⁵ Karissa Yee-Findley, San Francisco Unified School District. Meeting with San Francisco Planning Department regarding SFUSD school portfolio planning. May 9, 2018.

⁸⁶ San Francisco Unified School District. *Ad Hoc Committee on Student Assignment*. Slide 12. May 3, 2018. http://www.sfusd.edu/en/assets/sfusd-staff/enroll/files/Presentation_May_3_2018_Final.pdf accessed May 23, 2018.

⁸⁷ City and County of San Francisco Planning Department, Final Mission Bay Subsequent Environmental Impact Report, Volume I, 96.771E Mission Bay, September 17, 1998, p. II.33.

⁸⁸ Office of Investment and Infrastructure, Addendum 5 to the CP-HPS2 2010 FEIR, April 9, 2018. http://sfmea.sfplanning.org/!CP-HPS2_Addm5_2018-04-09.pdf, accessed August 17, 2018, p. 18.

The construction of new or expanded schools could have significant impacts on the environment such as construction-period noise and air quality impacts. However, any such impacts would be limited in both duration and magnitude, similar to other development projects in San Francisco, and would be required to comply with existing regulations such as those listed in this EIR. This would include for example the San Francisco Noise Ordinance (Article 29 of the Police Code), the San Francisco Building Code, the San Francisco Construction Dust Control Ordinance (San Francisco Health Code Article 22B, and San Francisco Building Code Section 106.3.2.6), the San Francisco Construction and Demolition Ordinance, the Green Building Ordinance, San Francisco Public Works Code, and the Construction Site Runoff Control Ordinance, and the Maher Ordinance (Article 22A of the San Francisco Health Code and Article 106A.3.4.2 of the San Francisco Building Code). Construction of such facilities would be subject to the City's permitting procedures, including environmental review under CEQA, which would require any substantial adverse physical impacts of such construction to be mitigated to a less than significant level, as feasible. Therefore, implementation of the project, in combination with past, present, and reasonably foreseeable future projects, would not require the construction of new school facilities, and cumulative impacts to schools would be *less than significant*.

Libraries

As stated in the *San Francisco Public Library Strategic Plan*, there is no national standard for library service, and each library must evaluate how it may best meet the needs of the community. To this end, the strategic plan provides every library facility and program with a unifying organizational vision and system-wide goals. Development of reasonably foreseeable future projects within the city, in conjunction with past and present development, would increase resident population as well as generate new employment, which could increase demand on public library resources. The strategic plan is based, in part, on population projections for build-out of the San Francisco General Plan, which includes the development anticipated at the project site. All cumulative projects (past, present, and reasonably foreseeable) that are within the identified population projections are understood to have been considered during development of the strategic plan. Therefore, it is not anticipated that cumulative development would result in a significant increase in demand on library services and resources, requiring the construction of new library facilities, and impacts would be *less than significant*.

In conclusion, the proposed project, in combination with past, present, and reasonably foreseeable future projects, would result in *less-than-significant* cumulative impacts related to the construction of new facilities required for provision of public services. No mitigation measures are necessary.

Mitigation: None required.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
12. BIOLOGICAL RESOURCES—Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project has the potential to result in a significant impact on both terrestrial and marine biological resources related to disruption to special status species and/or their habitats; all biological resources topics are addressed in EIR Section 4.I.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
13. GEOLOGY AND SOILS—Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
13. GEOLOGY AND SOILS—Would the project:					
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Be located on geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Change substantially the topography or any unique geologic or physical features of the site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Due to the nature of the project, there would be no impact related to soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems, because sanitary sewer flows generated by the project would be conveyed to the City's combined sewer system. The project would not use septic tanks or other on-site land disposal systems for sanitary sewage. Stormwater flows would either be collected by a new separate stormwater system draining to San Francisco Bay or would drain to the combined sewer system. For this reason, topic 14(e) is not applicable.

In the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015,⁸⁹ the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing hazards or conditions might impact a project's users or residents, except where the project would significantly exacerbate an existing environmental hazard. Accordingly, hazards resulting from a project that places development in an existing seismic hazard area or an area with unstable soils are not considered impacts under CEQA unless the project would significantly exacerbate the seismic hazard or unstable soil conditions. Thus, the following analysis evaluates whether the proposed project would exacerbate future seismic hazards or unstable soils at the project site and result in a substantial risk of loss, injury, or death. The impact is considered significant if the proposed project would exacerbate existing or future

⁸⁹ *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal.4th 369. Opinion Filed December 17, 2015.

seismic hazards or unstable soils by increasing the severity of these hazards that would occur or be present without the project.

Geology

The proposed project is located along the eastern shoreline of San Francisco at Potrero Point. The site moderately slopes from west to east, from about 40 feet above mean sea level in the west to 20 feet above mean sea level in the east.^{90,91} The site geology can generally be divided into two different areas, which are roughly delineated by the historic 1851 shoreline (illustrated in Chapter 2, Figure 2-1).⁹² The site to the north and west of the historical shoreline is a shallow bedrock zone; the site to the south and east of the historical shoreline is a deep fill zone as described below.

The shallow bedrock area of the site generally comprises relatively thin layers of artificial fill underlain by Jurassic-age serpentinite bedrock of the Franciscan Complex. This bedrock also outcrops in select locations on the western part of the site and forms part of a gentle northwest-southeast trending ridge that was quarried and covered by fill during development of the eastern San Francisco waterfront. The serpentinite component of the Franciscan Complex is mostly sheared and highly fractured rock. Inclusions of sandstone, shale, and chert are known to occur within the serpentinite component in the vicinity of the project site.⁹³ Serpentinite was mapped as the predominant rock type in the site bedrock.⁹⁴

The deep fill portion of the site generally comprises artificial fill underlain by Young Bay Mud (compressible mud deposited recently in the San Francisco Bay) and Franciscan bedrock; in some locations Old Bay Mud or Pleistocene alluvium (stream and hillslope sediments) was deposited between the Young Bay Mud and serpentinite bedrock.⁹⁵ The majority of the fill consists of crushed Franciscan bedrock, intermixed with building debris, industrial waste, and a mixture of various soil types. The fill extends to depths of up to 42 feet below ground surface according to the most recent geotechnical explorations. The Young Bay Mud thickness underlying the artificial fill generally increases away from the historic shoreline, to depths of up to 77 feet below ground surface below the eastern portion of the site. Depth to bedrock is mapped as varying between approximately 50 to 100 feet below the existing grade along the eastern limits of the project site.

Groundwater

A northwest- to southeast-trending serpentinite bedrock ridge (the subsurface extent of the historical Irish Hill) extends across the western portion of the project site and acts as a groundwater divide. In general, depth to groundwater ranges from 7 to 9 feet below ground surface south-southwest of the bedrock ridge and from 5 to 13 feet below ground surface east of the ridge.⁹⁶ Groundwater flow is to the south-southwest on the western side of the bedrock ridge and the gradient is relatively steep. On the eastern side of the bedrock ridge, groundwater flow is primarily

⁹⁰ Geosyntec, *Phase I Environmental Site Assessment, 1201B Illinois Street, San Francisco California*, September 8, 2017.

⁹¹ Geosyntec, *Phase I Environmental Site Assessment, Former Potrero Power Plant, San Francisco, California*, August 19, 2016.

⁹² ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

⁹³ Treadwell & Rollo, *Pier 70 Preliminary Geotechnical Investigation, Pier 70, San Francisco, California*, December 19, 2012.

⁹⁴ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

⁹⁵ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017, p. 8.

⁹⁶ Geosyntec, *Phase I Environmental Site Assessment, Former Potrero Power Plant, San Francisco, California*, August 19, 2016.

to the east-southeast, and the gradient is relatively shallow. In areas of shallow bedrock, such as areas overlying the ridge itself, groundwater is likely perched atop the bedrock. Within the bedrock, groundwater could be encountered at any depth because it is typical for groundwater to seep through seams and fractures of the rock, which are unpredictable in sheared rock such as serpentinite. Groundwater monitoring data suggest that tidal effects, if any, are not significant within the site.

Impact GE-1: The proposed project would not exacerbate the potential for the project to expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture, seismic ground shaking, seismically induced ground failure, or seismically induced landslides. (*Less than Significant*)

Fault Rupture

Fault rupture almost always follows pre-existing faults, which are zones of weakness. Surface rupture occurs when movement on a fault deep within the earth breaks through to the ground surface. There is a very low potential for fault rupture within the project site because no active faults cross the site.⁹⁷ The project site is not located within an Alquist-Priolo Earthquake Fault Zone or traversed by an active fault; therefore, impacts related to fault rupture would be *less than significant*.

Ground Shaking

Based on regional shaking hazard maps in the Community Safety Element of the San Francisco General Plan, which are derived from shaking hazard mapping done by the Association of Bay Area Governments in 2003, the project site could experience very strong to violent ground shaking due to an earthquake along the Hayward Fault or the Peninsula segment of the San Andreas Fault. More recent mapping developed by the Association of Bay Area Governments in 2013 in conjunction with the U. S. Geological Survey and California Geological Survey indicates the project site could be subjected to very strong to violent ground shaking.⁹⁸ The mapped Risk-Targeted Maximum Credible Earthquake geometric mean peak ground acceleration at the site is 0.53 times gravitational acceleration.⁹⁹ However, construction of the proposed project would not expose people or structures to substantial adverse effects related to ground shaking because the proposed structures would be designed and constructed in accordance with the most current San Francisco and Port of San Francisco building codes, which consist of the state building code with local amendments.

Under section 1803 of the building codes, a site-specific geotechnical investigation, where required, must provide information about geotechnical hazards to be addressed in the project's design¹⁰⁰ In accordance with section 1803.6, the geotechnical report shall include, but need not be limited to, the following information:

⁹⁷ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

⁹⁸ Association of Bay Area Governments, Resilience Program. *South Francisco County Earthquake Hazard*, <http://resilience.abag.ca.gov/earthquakes/sanfrancisco/>, accessed December 27, 2017.

⁹⁹ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

¹⁰⁰ City and County of San Francisco Department of Building Inspection, Information Sheet S-05, Geotechnical Report Requirements, January 1, 2017.

- A plot showing the location of the soil investigations
- A complete record of the soil boring and penetration test logs and soil samples
- A record of the soil profile
- Elevation of the water table, if encountered
- Recommendations for foundation type and design criteria, including but not limited to: bearing capacity of natural or compacted soil; provisions to mitigate the effects of expansive soils; mitigation of the effects of liquefaction, differential settlement and varying soils strengths; and the effects of adjacent loads.
- Expected total and differential settlement
- Deep foundation information in accordance with section 1803.5.5.
- Special design and construction provisions for foundations of structures founded on expansive soils, as necessary
- Compacted fill material properties in accordance with section 1803.5.8.
- Controlled low-strength material properties in accordance with section 1803.5.9.

Recommendations must be included in the geotechnical investigation report for the appropriate foundation type, structural systems, ground stabilization, or any combination of these to address the effects of liquefaction and related phenomena. The recommendations of the geotechnical report that address such hazards must be incorporated into the design of proposed structures.

The structural design of the buildings and their foundations would be developed using information obtained from the site-specific geotechnical investigation reports in accordance with chapters 16 and 18 of the San Francisco and Port of San Francisco building codes, which specify that every structure “shall be designed and constructed to resist the effects of earthquake motions.” The structural design requirements for the buildings would be based on the seismic design category and site class of each building, and determined in accordance with the procedures specified in chapter 16 of the building codes, *structural design*. The San Francisco Department of Building Inspection (for all project buildings since they would not be located on Port property) or Port of San Francisco (for the project pier structure) permit review process would ensure that the project’s structural and foundation designs comply with applicable building or Port code provisions and are in conformance with the measures recommended in the project-specific geotechnical reports.

The department of building inspection would review site permit submittals based on initial conceptual design drawings to ensure that new structures can be designed and constructed to comply with current building code requirements, as discussed in the building department’s Administrative Bulletin AB-032 (Site Permit Processing).¹⁰¹ The first step of the site permit process is submittal of a site permit submittal package that includes preliminary drawings and documentation. Structural design criteria documents are required if the proposed design is

¹⁰¹ City and County of San Francisco Department of Building Inspection, *Administrative Bulletin AB-032, Site Permit Processing*, published November 16, 2016 and updated for code references January 1, 2017, <http://sfdbi.org/sites/default/files/AB-032.pdf>, accessed December 29, 2017.

performance based as noted in the building department's Administrative Bulletin AB-082. The site permit is not issued until the department of building inspection is satisfied that the submittal package is capable of meeting all code requirements.

Actual construction authorization of specific elements of a project are addressed through more detailed addenda submittals to the site permit, and these more detailed drawings are checked for code compliance before issuance. Addenda to the site permit are required for each specific phase of construction, including grading, foundation design, and superstructure design (basic building and structural frame), and for mechanical and electrical systems, and any work excluded from the superstructure and mechanical and electrical system addenda (a final addendum). Each addendum must be approved separately by department of building inspection for that phase of the construction process to proceed; only work shown on approved addenda bearing the department *stamp of approval* may proceed in accordance with the site permit process. Once an addendum is approved, the building department is responsible for conducting inspections to insure compliance with the approved addenda plans and the local building code as well as the mechanical, electrical, plumbing, energy and green building codes.

With respect to grading, foundation design, and superstructure design for buildings 240 feet or taller, the above procedures are also subject to interim guidance. On December 27, 2017, the building department issued information sheet S-18, *Interim Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review for New Tall Buildings (interim guidelines)*.¹⁰² The interim guidelines supplement and clarify the information in Administrative Bulletin 082 (Guidelines and Procedures for Structural Design Review)¹⁰³ as well as Administrative Bulletin 083 (Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures).^{104,105} Tall buildings are defined as those 240 feet or taller. The interim guidelines specify requirements for the scope of geotechnical and structural review conducted by qualified geotechnical reviewers as part of a *geotechnical engineering design review team*.¹⁰⁶

For the recreational pier, a component of the proposed project under Port of San Francisco jurisdiction, the applicant must submit a building permit application and required drawings and documents to the Port's Building Permit Group. The permit application is reviewed by the Port to confirm compliance with the Port's building code and applicable design requirements. As part of

¹⁰² San Francisco Department of Building Inspection, Information Sheet No. S-18, Interim Guidelines and Procedures for Structural, Geotechnical, and Seismic Hazard Engineering Design Review for New Tall Buildings, published December 27, 2017, <http://sfdbi.org/sites/default/files/IS%20S-18.pdf>, accessed March 21, 2018.

¹⁰³ San Francisco Department of Building Inspection, December 19, 2016, Administrative Bulletin 082, *Guidelines and Procedures for Structural Design Review*, <http://sfdbi.org/sites/default/files/AB-082.pdf>, accessed March 27, 2018.

¹⁰⁴ San Francisco Department of Building Inspection, March 25, 2008 (Updated January 1, 2014 for code references), Administrative Bulletin 083, *Requirements and Guidelines for the Seismic Design of New Tall Buildings using Non-Prescriptive Seismic-Design Procedures*, http://sfdbi.org/sites/default/files/Documents/Administrative_Bulletins/2013_AB/AB_083_updated_010114.pdf, accessed March 27, 2018.

¹⁰⁵ As stated in IS-18, SEAONC experts are reviewing the information and procedures in Administrative Bulletin 082 and Administrative Bulletin 083 and may recommend to the director of the building department and to the building inspection commission the adoption of modified guidelines for future tall building safety in San Francisco.

¹⁰⁶ A qualified geotechnical reviewer for Engineering Design Review Teams shall be a geotechnical engineer registered in California or a Civil Engineer registered in California with substantially demonstrated geotechnical experience.

this process, the building permit group reviews structural and/or civil engineering calculations for the planned structure. Depending on the scope, the application may also be routed to other Port and City divisions for approval. Once a permit application has been approved, the building permit group is responsible for conducting inspections to ensure compliance with the Port's building code as well as other applicable codes as determined by the building permit group.

Under the proposed project, incorporation of the appropriate engineering and design features in accordance with geotechnical recommendations prepared by a qualified professional and the building codes would ensure that the new structures would not suffer substantial damage; that substantial debris such as building exterior finishes or windows would not separate from the building; that building occupants would be able to safely vacate the building following an earthquake; and that pedestrians and other bystanders would not be injured. Therefore, impacts related to ground shaking would be *less than significant*.

Liquefaction and Earthquake-Induced Settlement

The deep fill portions on the eastern half of the project site are mapped as a potential liquefaction hazard zone identified by the California Geological Survey.¹⁰⁷ The preliminary geotechnical evaluations for the project concluded that loose to medium-dense sand, silty sand, clay, and silty clay layers in the upper 20 to 42 feet below ground surface could liquefy during a major earthquake on a nearby active fault and up to 7 inches of vertical ground settlement may occur, depending on the thickness and relative density of the geologic materials.¹⁰⁸ The anticipated settlement is expected to be variable across the site due to the heterogeneity of the underlying fill materials.

Section 1803.6 of the San Francisco and Port of San Francisco building codes (discussed above) as well as the state Seismic Hazards Mapping Act of 1990 (seismic hazards act) would require that the site-specific geotechnical reports prepared for the proposed project address the potential for liquefaction in accordance with the guidelines provided in Special Publication 117A of the California Department of Conservation.¹⁰⁹ Building codes section 1803.5.12 provides further specifications for determining the potential for liquefaction and related hazards and assessing the potential consequences such as total and differential settlement, lateral soil movement, lateral soil loads on foundations, and reductions in the load-bearing capacity of the soil. Measures to address the effects of liquefaction must be recommended in the site-specific geotechnical reports and incorporated into the conditions of permit(s) issued for the sites. Such measures must address the appropriate foundation type and depths and selection of the appropriate structural systems to accommodate anticipated ground displacements and forces. If ground stabilization is used, the foundation and structural design would be based on stabilized conditions.

The preliminary geotechnical evaluation concluded that the appropriate foundation design for individual buildings and structures constructed for the proposed project would depend primarily

¹⁰⁷ California Department of Conservation, Division of Mines and Geology, *State of California Seismic Hazard Zones, City and County of San Francisco, Official Map*, published November 17, 2000, http://gmw.conservacion.ca.gov/SHP/EZRIM/Maps/SAN_FRANCISCO_NORTH_EZRIM.pdf, accessed December 27, 2017.

¹⁰⁸ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

¹⁰⁹ California Department of Conservation, *Guidelines for Evaluating and Mitigating Seismic Hazards in California, Special Publication 117A*, 2008. Note that Special Publication 117 is an update of the 1997 Special Publication 117 that is referenced in section 1803.7 of the San Francisco Building Code.

on the depth to bedrock and presence of liquefiable material. Existing fill would be replaced by reengineered fill in the shallow bedrock area, after which structures in this area would be founded on shallow foundations. The existing fill in the deep fill area could be improved in place to reduce the effects of liquefaction settlement through vibratory methods such as vibro-compaction or vibro-replacement. Structures within the deep fill area (the potential liquefaction area) could also be supported on deep foundation systems using piles founded on the underlying bedrock.

Use of foundations supported by the underlying bedrock and other ground improvement treatments would ensure that the proposed structures throughout the site would withstand differential settlement that could result from liquefaction. In addition, the site-specific geotechnical reports that are required by the building codes should include additional recommendations to address the effects of liquefaction, including appropriate design of new utilities. The recommendations must be incorporated into the project design. The foundation addenda to the site permits would be subject to review for conformance with the site-specific recommendations in the geotechnical reports as part of the building permit approval process. Appropriate design of the building foundation, site utilities, and superstructure systems in accordance with the recommendations of the site-specific geotechnical reports and in compliance with requirements of applicable building codes would ensure that impacts related to liquefaction and earthquake-induced settlement would be *less than significant*.

Lateral Spreading

The preliminary geotechnical investigation for the project site concluded that fill materials placed east of the historic shoreline could move laterally towards the bay in the event of a major earthquake on one of the regional faults.¹¹⁰ The shoreline in these areas could act as a steep slope that is potentially susceptible to lateral spreading. Seismically-induced permanent displacements could be on the order of 2 to 4 feet, laterally, across the entire area between the historic shoreline (area of shallow bedrock) and the existing shoreline.¹¹¹

As part of the building permit approval process, the project sponsor would be required to implement measures to control the amount of lateral displacement that could occur at the locations of the habitable structures and proposed dock and pier. Examples of measures that could be implemented are included in the preliminary geotechnical report, such as reinforcing the existing slope with a structural wall or a deep soil mix buttress structure. Structural wall solutions may include, but are not limited to, tied-back sheet pile walls (interlocking sheets of steel), rows of secant piles (interlocking piles), and king-pile walls (wider piles connected by sheeting). Deep soil mixing adds a cement slurry to strengthen the existing soil. The site-specific geotechnical reports for the proposed project that would be prepared in accordance with the building codes and Special Publication 117A of the California Department of Conservation would address the potential for lateral displacement to occur in regard to the proposed design of specific buildings and structures and would provide recommendations to address the potential effects of lateral displacement. The department of building inspection and the Port would review the design of the proposed improvements to address potential lateral spreading for conformance with the recommendations

¹¹⁰ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

¹¹¹ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

in the geotechnical reports as part of the building permit approval process. Therefore, impacts related to lateral spreading would be *less than significant*.

Earthquake Induced Landslides

The project site and vicinity are relatively flat except for Irish Hill and nearby bedrock cuts; no landslides occurred on the project site as a result of the Loma Prieta earthquake in 1989, and there are no mapped zones of potential earthquake-induced landslides on or immediately adjacent to the project site.¹¹² The landslide susceptibility map in the San Francisco General Plan Community Safety Element also indicates that the project site is not located within a potential landslide hazard area. Therefore, there would be *no impact* related to earthquake-induced landslides.

Conclusion

Because project design would incorporate recommendations identified in site-specific geotechnical investigations required in accordance with chapter 16 and section 1803.7 of both the San Francisco and Port of San Francisco building codes, as described above, the proposed project would not exacerbate the potential for people or structures to be exposed to substantial adverse effects associated with seismic hazards, including fault rupture, seismic ground shaking, liquefaction and seismically-induced ground failure, seismically-induced lateral spreading, or seismically-induced landslides. In addition, the project would not exacerbate existing or future seismic hazards. Therefore, this impact would be *less than significant* and no mitigation is required.

Mitigation: None required.

Impact GE-2: The proposed project would not result in substantial erosion or loss of topsoil. (Less than Significant)

In urbanized areas like the project site, native soils usually have been removed or reworked and combined with imported fill materials as a result of earthwork activities associated with land development. Soils are mapped on the project site as Urban land (to the west) and Urban land-Orthents, reclaimed complex, 0 to 2 percent slopes (to the east).¹¹³ The areas mapped as Urban land-Orthents are comprised of artificial fill overlying historic tidal flats. Previous development at the project site would have removed any topsoil (a fertile soil horizon that typically contains a seed base) during construction. Therefore, there would be *no impact* related to loss of topsoil.

Soil movement for foundation and basement excavation, placement of fill to raise the site grade, soil remediation activities, and construction of shoreline improvements could create the potential for wind- and water-borne soil erosion. However, future development of roadways, utilities, open space improvements, and the individual parcels and building sites, and further remediation activities would be required to implement an erosion and sediment control plan for construction

¹¹² California Department of Conservation, Division of Mines and Geology, *State of California Seismic Hazard Zones, City and County of San Francisco, Official Map*, published November 17, 2000, http://gmw.conservacion.ca.gov/SHP/EZRIM/Maps/SAN_FRANCISCO_NORTH_EZRIM.pdf, accessed December 27, 2017.

¹¹³ Natural Resources Conservation Service, *Soil Map – San Mateo County, Eastern Part, and San Francisco County, California*, Version 13, September 11, 2017, accessed December 27, 2017.

activities in accordance with article 4.2 of the San Francisco Public Works Code and the General Construction Stormwater Permit (discussed in more detail in EIR Section 4.J, Hydrology and Water Quality) to reduce the impact of runoff from the construction site. Additional requirements applicable to remediation activities are discussed in EIR Section 4.K, Hazards and Hazardous Materials. The SFPUC must review and approve the erosion and sediment control plan completed in accordance with article 4.2 prior to implementation, and would conduct periodic inspections throughout construction to ensure compliance with the plan. Once development occurs, the project site would be occupied by buildings or covered with pavement or landscaped areas, and runoff would drain to either the existing combined sewer system or through a separate storm sewer system, or infiltrate in landscaped areas or other features designed for stormwater runoff control pursuant to the City's stormwater management ordinance (discussed in EIR Section 4.J, Hydrology and Water Quality). Therefore, with compliance with stormwater management requirements during construction and remediation activities, and with appropriate project design, impacts related to soil erosion would be *less than significant* during construction and remediation activities, and operation of the proposed project.

Mitigation: None required.

Impact GE-3: The project site would not be located on a geologic unit or soil that is unstable, or that could become unstable as a result of the proposed project. (*Less than Significant*)

Settlement During Construction

The proposed project could induce ground settlement during construction as a result of excavation for construction of utilities, building foundations, and basement levels; construction dewatering; and ground heave that could occur during pile installation. These potential effects are described below.

Settlement Related to Excavation. Construction of individual buildings under the proposed project would require excavation to 25 feet below ground surface, and further for the installation of piles. Excavation also would be required for installation of underground utilities. During excavation, the bedrock, artificial fill, and Young Bay Mud could become unstable, potentially causing settlement of adjacent structures, including adjacent streets and utilities, historic structures retained on the project site, and nearby historic structures, and newly constructed buildings on the project site.

Temporary shoring would be required during construction to maintain stable sidewalls in the excavations and to protect the adjacent public streets/sidewalks and nearby buildings. Examples of temporary shoring methods include installation of soldier piles and lagging or secant pile retaining walls secured with tie back anchors. The final shoring requirements would be identified in the site-specific geotechnical reports required by section 1803 of the San Francisco Building Code. In accordance with building code requirements, the contractor would submit shoring drawings and calculations, subject to review and approval by department of building inspection as part of the building permit approval process.

Settlement Related to Construction Dewatering. Groundwater is relatively shallow at the site (encountered at depths of 5 to 13 feet below ground surface). Therefore, there is the potential for substantial water inflow into excavations during construction of buildings and infrastructure. Where unconsolidated soils such as the artificial fill and Young Bay Mud are present, dewatering could result in settlement of adjacent structures, including streets, utilities infrastructure, and buildings. However, as discussed in greater detail under “Settlement and Unstable Conditions During Project Operation,” below, the geotechnical report includes recommendations to address settlement across the site that would be implemented prior to construction. With implementation of the geotechnical report recommendations, post-consolidation settlement would be limited and the impact of construction dewatering would be less than significant. Note that water quality impacts associated with construction-related dewatering are discussed in EIR Sections 4.J, Hydrology and Water Quality, and 4.K, Hazards and Hazardous Materials.

Settlement Related to Heave as a Result of Pile Driving. The proposed project could include driving of displacement piles during construction of individual buildings; for protection against lateral spreading; and during construction of the pier. This pile driving may cause the ground to heave up to several inches, and the heave could adversely affect structures adjacent to the pile driving work, such as existing utilities, streets and onsite historic and newly constructed buildings. Recommendations regarding the potential for heave would be reviewed by department of building inspection or the Port of San Francisco as part of the building permit approval process. The department of building inspection or the Port would determine subsequent monitoring required to address the potential for heave as part of the building permit review and approval process.

San Francisco and Port of San Francisco Requirements. The department of building inspection or the Port would require site-specific geotechnical reports for the specific development to be constructed under the proposed project in accordance with section 1803 of the building codes. The department of building inspection or the Port would review the structural and foundation addenda for conformance with recommendations in the geotechnical reports to ensure that the potential settlement effects of excavation and pile driving are adequately addressed.

With the required review of the permit and plans for conformance with recommendations in the site-specific geotechnical reports, and approval of the permits by the department of building inspection or the Port, as well as monitoring provided by the project sponsor (if required), impacts related to the settlement due to construction on soil that is unstable, or that could become unstable as a result of excavation and pile driving, would be *less than significant*.

Settlement and Unstable Conditions During Operation

Young Bay Mud (which underlies much of the project site south and east of the historic 1851 shoreline) is saturated, soft, and compressible. When loads such as buildings are placed on it, the soft mud can compress and settle. Placement of the loads could also result in plastic deformation and lateral movement, sometimes accompanied by upthrusting in adjacent areas (creating so-called “mud waves”). Young Bay Mud has low shear strength (i.e., low resistance to downslope movement due to gravity and differential pressures). For these reasons, Young Bay Mud is not considered suitable material for bearing foundations of anything but very light structures and usually is not relied upon to support vertical loads. Further, the artificial fill which overlies the

Young Bay Mud is nonengineered and heterogenous in nature; as a result, introduction of loads on top of the unimproved artificial fill (and underlying Young Bay Mud) would likely lead to nonuniform settlement behavior.

The preliminary geotechnical evaluation for the proposed project estimated that the placement of fill throughout the site and loads associated with new buildings could generate large amounts of total and differential settlement in areas south and east of the historic 1851 shoreline that are underlain by artificial fill and Young Bay Mud. The bedrock near the surface in the remainder of the site consists of hard rock, and placement of structures on this rock would not result in significant settlement.

The geotechnical report includes recommendations to address settlement across the project site. Under buildings and major structures, installation of deep foundations (piles) extending to the bedrock is recommended to ensure these structures do not experience unacceptable levels of settlement. In areas where grades will be raised or relatively light structures (such as utilities) are planned, wick drains and surcharging could be used to consolidate the underlying fill and Young Bay Mud prior to construction (a process called consolidation). Consolidation causes the soil to settle in advance of construction, avoiding unacceptable levels of soil settlement during project operations. Wick draining is accomplished by installing closely spaced artificial vertical drainage paths which would allow water to flow from the Young Bay Mud layer to the surface, thus consolidating the soil within a matter of months. These artificial drainage paths are typically 4 inches wide and consist of a central plastic core surrounded by a thin geotextile filter jacket. The pore water that is conveyed to the surface is not anticipated to generate surface runoff, but rather would saturate the existing fill zone above the groundwater table. As discussed in in EIR Section 4K, Hazards and Hazardous Materials, all construction activities would be conducted consistent with the requirements of the risk management plan approved by the Regional Water Quality Control Board to ensure appropriate handling of any contaminated materials. Once complete, wick drains would be removed from the site. Surcharging is accomplished by temporarily adding soil or rock placed in lifts above the proposed site grade. Once the target design consolidation is achieved, the additional surcharge material would be removed.

For structures in the vicinity of the historic shoreline, the existing fill in the deep fill area could also be improved in place to reduce differential settlements due to the introduction of new loads through vibratory methods such as vibro-compaction or vibro-replacement. Vibro-compaction would improve the soil in place by densifying soil in lifts. Clean sand backfill is typically added at the ground surface to compensate for the decrease in soil volume from the densification process. Vibro-replacement would comprise construction of dense stone columns. Upon improvement of the artificial fill and subsequent improvement of the Young Bay Mud with surcharging and wick drains (described above), subsequent settlement would likely be tolerable upon introduction of moderately loaded structures.

The specific interventions employed to reduce settlement would be further refined in the site-specific geotechnical reports and the plans would be subject to review for conformance with recommendations in the geotechnical reports and approval by the department of building inspection or the Port as part of the building permit approval process. Therefore, with implementation of the

required site-specific recommendations impacts related to settlement during operation of the proposed buildings would be *less than significant*.

Mitigation: None required.

Impact GE-4: The proposed project would not create substantial risks to life or property as a result of locating buildings or other features on expansive or corrosive soils. (*Less than Significant*)

Much of the project site is underlain directly by bedrock, which is not expansive. The artificial fill beneath the project site is crushed Franciscan bedrock, intermixed with building debris, industrial waste, and various soil types which could include some expansive clay.¹¹⁴ The Young Bay Mud is below the water table and is permanently saturated; therefore, it would not be subject to moisture changes that would cause expansion and contraction. Further, any backfill materials used for the proposed project would have a low expansion potential and would be adequately compacted in accordance with the recommendations of the geotechnical reports prepared for the proposed project.

Corrosive soils can damage buried metal and concrete structures such as pipelines and foundations that are in direct contact with soil or bedrock. Corrosivity testing of similar fill materials immediately north of the project site as part of the preliminary geotechnical investigation conducted in 2012 found that the fill material is moderately corrosive.¹¹⁵ Although corrosive soils are anticipated to be present at the project site, buried features of the proposed project would be constructed to resist corrosion in accordance with the San Francisco and Port of San Francisco building codes. Therefore, impacts related to expansive and corrosive soils would be *less than significant*.

Mitigation: None required.

Impact GE-5: The proposed project would not substantially change the topography or any unique geologic or physical features of the site. (*Less than Significant*)

The project site is relatively flat, and there are no unique geologic or physical features on site. As described in Chapter 2, Project Description, site elevations would be increased by up to 7 feet to prevent inundation due to sea level rise. However, this grading would not result in a substantial change in topography because no existing slopes would be eliminated and no new slopes would be created as a result of raising the site elevation. Project grading would maintain the existing drainage patterns of the site, with elevations sloping gently west to east toward the waterfront. Therefore, impacts related to alteration of topography and unique geologic or physical features of the site would be *less than significant*.

¹¹⁴ ENGEO, *Potrero Power Plant, San Francisco, California, Preliminary Geotechnical Report*, September 14, 2017.

¹¹⁵ Treadwell & Rollo, *Pier 70 Preliminary Geotechnical Investigation*, p. 11.

Mitigation: None required.

Impact GE-6: The proposed project could directly or indirectly destroy a unique paleontological resource or site. (*Less than Significant with Mitigation*)

The preliminary geotechnical evaluation for the project site indicates that serpentinite bedrock of the Franciscan Complex is present as shallow bedrock in areas along the western portion of the project site. Serpentinite is a highly metamorphosed rock type that does not commonly contain fossilized remains. Sedimentary rocks of a similar age are intermixed with serpentinite in the Franciscan Complex, and while the Franciscan sedimentary rocks have produced significant fossils important for understanding the age, depositional environments, and tectonic history of the San Francisco area, this complex has low potential for fossil yield given the extent of deformation of the rocks and scattered locations of fossils.^{116,117} Pleistocene sediments situated over the Franciscan Complex bedrock have moderate paleontological potential as they have contained fossil remains of mammoth and horse in other parts of San Francisco.¹¹⁸ Although plant and invertebrate remains have been found in Young Bay Mud, which occurs at variable depths throughout the project site, these fossils are ubiquitous and their occurrence would not be noteworthy. Therefore, the Young Bay Mud is considered to have a low paleontological potential. The remainder of the project site is underlain by artificial fill that would have a low probability of containing paleontological resources due to its age and origin.

Given the moderate paleontological potential of the Pleistocene sediments, paleontological resources could exist in the Pleistocene sediments that underlie portions of the project site. Proposed project construction activities, including excavation for the planned basement levels and anticipated pile-driving activities, could disturb significant paleontological resources if such resources are present within the project site. Site disturbance could impair the ability of the project site to yield important scientific information. Implementation of the proposed project could impair the significance of unknown paleontological resources on the project site; this would be considered a significant impact under CEQA.

Implementation of **Mitigation Measure M-GE-6: Paleontological Resources Monitoring and Mitigation Program** would ensure that the proposed project would not cause a substantial adverse change to the scientific significance of a paleontological resource and would reduce this impact to a less-than-significant level. This mitigation measure calls for a qualified paleontologist to implement an approved Paleontological Resources Monitoring and Mitigation Program during construction and earth-moving activities in deep fill areas where construction activities could disturb Pleistocene-aged sediments, which may include Colma Formation, bay mud, bay clay, and older beach deposits. Monitoring need not be conducted when construction activities would encounter artificial fill, Young

¹¹⁶ Clites, E., University of California Museum of Paleontology, Golden Gate National Recreation Area, California http://www.ucmp.berkeley.edu/science/parks/golden_gate.php, accessed February 12, 2018.

¹¹⁷ Paleontological potential is defined as the potential for a geologic unit to produce scientifically significant fossils. This potential is determined by rock type, past history of the rock unit in producing significant fossils, and fossil localities that are recorded from that unit.

¹¹⁸ University of California Museum of Paleontology, Specimen search for San Francisco County, <https://ucmpdb.berkeley.edu/>, accessed February 12, 2018.

Bay Mud, or rocks of the Franciscan Complex. Therefore, potential impacts of project construction on paleontological resources would be *less than significant with mitigation*.

Mitigation Measure M-GE-6: Paleontological Resources Monitoring and Mitigation Program

Prior to issuance of a building permit for construction activities that would disturb the deep fill area, where Pleistocene-aged sediments which may include Colma Formation, bay mud, bay clay, and older beach deposits (based on the site-specific geotechnical investigation or other available information) may be present, the project sponsor shall retain the services of a qualified paleontological consultant having expertise in California paleontology to design and implement a Paleontological Resources Monitoring and Mitigation Program. The program shall specify the timing and specific locations where construction monitoring would be required; inadvertent discovery procedures; sampling and data recovery procedures; procedures for the preparation, identification, analysis, and curation of fossil specimens and data recovered; preconstruction coordination procedures; and procedures for reporting the results of the monitoring program. The program shall be consistent with the Society for Vertebrate Paleontology Standard Guidelines for the mitigation of construction-related adverse impacts to paleontological resources and the requirements of the designated repository for any fossils collected.

During construction, earth-moving activities that have the potential to disturb previously undisturbed native sediment or sedimentary rocks shall be monitored by a qualified paleontological consultant having expertise in California paleontology. Monitoring need not be conducted when construction activities would encounter artificial fill, Young Bay Mud, or non-sedimentary rocks of the Franciscan Complex.

If a paleontological resource is discovered, construction activities in an appropriate buffer around the discovery site shall be suspended for a maximum of 4 weeks. At the direction of the Environmental Review Officer (ERO), the suspension of construction can be extended beyond four (4) weeks if needed to implement appropriate measures in accordance with the program, but only if such a suspension is the only feasible means to prevent an adverse impact on the paleontological resource.

The paleontological consultant's work shall be conducted at the direction of the City's ERO. Plans and reports prepared by the consultant 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.

Impact C-GE-1: The proposed project, in combination with past, present, and reasonably foreseeable future projects, would not result in significant cumulative impacts on geology and soils or paleontological resources. (*Less than Significant*)

Geology, soils, and paleontological resources impacts are generally site-specific and localized. Past, present, and reasonably foreseeable projects could require various levels of excavation and grading, which would affect local geologic conditions and may affect paleontological resources. However, the cumulative projects are also subject to the same building department requirements for geotechnical

review and would be required to comply with the state and local building codes. In addition, site-specific geotechnical review and monitoring for paleontological resources would reduce each individual project's impacts associated with geology, seismic safety, and paleontological resources, and that site-specific mitigation would be developed, when necessary, based on site conditions. Similar to the proposed project, all projects listed in Table 4.A-2, would be subject to these mandatory seismic safety standards and design review procedures. Compliance with these standards and procedures would ensure that the effects from nearby cumulative projects would be reduced to less-than-significant levels. Therefore, in combination with cumulative projects, the proposed project would result in a *less-than-significant* cumulative impact.

Mitigation: None required.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
14. HYDROLOGY AND WATER QUALITY— Would the project:					
a) Violate any water quality standards or waste discharge requirements?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
14. HYDROLOGY AND WATER QUALITY— Would the project:					
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project has the potential to result in significant water quality impacts related to waste discharge requirements, drainage, flooding, and degradation of bay water quality; all hydrology and water quality topics are addressed in EIR Section 4.J.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
15. HAZARDS AND HAZARDOUS MATERIALS— Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury or death involving fires?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The project has the potential to result in significant hazards to the public or the environment during construction and operation due to the presence of hazardous materials at the site, existing soil and groundwater contamination on the project site, ongoing remediation, proposed changes in land uses, and proposed future uses that could involve handling of hazardous materials; all hazards and hazardous materials topics are addressed in EIR Section 4.K.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
16. MINERAL AND ENERGY RESOURCES— Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Encourage activities which result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The United States Geological Survey has mapped mineral resources in the San Francisco Bay Area, including resources such as sand and gravel and other economically valuable resources.¹¹⁹ No resources are mapped within or near the project boundaries. Therefore, Topics 17a or 17b are not applicable.

Impact ME-1: The project would not result in the use of large amounts of fuel, water, or energy, or use these in a wasteful manner. (*Less than Significant*)

Construction Energy

Project construction would require the use of diesel for the operation of off road construction equipment and on-road trucks for the offsite transport of soil and other wastes; electricity for electrical construction equipment and the use of dust control water; and gasoline for worker commute trips. The amount of these resources used for construction of the proposed project would not be atypical of a normal construction project within the City and County of San Francisco. Therefore, the use of these resources during construction would not be wasteful, and impacts related to the use of energy resources during construction would be *less than significant*. No mitigation is necessary.

Operation Energy

The proposed developments would require the use of electricity, natural gas, and diesel during operation. In addition, increased traffic as a result of the proposed development would result in an increase in the use of transportation fuels. These energy uses are discussed below.

¹¹⁹ United States Geological Survey, *Map Showing Mineral Resources of the San Francisco Bay Region, California – Present Availability and Planning for the Future. Miscellaneous Investigation Series, Map I-909*. 1975.

Electricity. The proposed development would require the use of electricity for many purposes, including lighting, heating, cooling, ventilation, food storage and preparation, and equipment operation. The design of the buildings would need to meet or exceed the energy efficiency requirements of the 2016 San Francisco Green Building Code, which incorporates the 2016 California Green Building Code (California Code of Regulations, Title 24, Part 11) and Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6). In accordance with the San Francisco Green Building Code, new construction in San Francisco must meet all applicable California codes; install solar electric or solar thermal systems on new buildings 10 floors in height or less; have electrical infrastructure capable of supplying electricity for electric vehicle charging at 100 percent of new parking spaces; provide onsite facilities for recycling and composting; and meet the City's green building requirements. The project is proposed to be designed to Leadership in Energy and Environmental Design (LEED) Gold standards, consistent with the green building code. Buildings of 11 floors or more must install onsite renewable energy or purchase green energy credits. In lieu of this, these buildings may enhance energy efficiency beyond what is required by the California Energy Efficiency Standards.

As summarized in **Table 3, Summary of Operational Annual Energy Resource Use**,¹²⁰ the project buildings would consume approximately 53,632 megawatt-hours of electricity per year. Based on water usage estimates provided for the proposed project,¹²¹ the electricity required for water consumption would be 4,644 megawatt-hours per year. The total annual 58,276 megawatt-hours of electricity usage represents approximately 1percent of the electricity consumed from PG&E in San Francisco in 2016.¹²²

Energy efficiency requirements and features such as those described above generally seek to reduce energy use on a permanent and consistent basis through the installation of energy efficient technologies. However, it is also important to manage peak energy usage. This is achieved through load management, which focuses on either curtailing or shifting electrical demands away from peak demand periods when the power grid is under the most strain. Load management is important in maintaining a reliable electricity source and in avoiding the need to construct additional electricity, generation, or distribution facilities to meet peak demands that typically occur on the order of hours per year. The peak daily electricity demand of the project would reach approximately 15,000 kilowatts (kW). The project's contribution to peak energy demands would represent less than 0.06 percent of the peak load in PG&E's planning area.¹²³

¹²⁰ Ramboll Environ, Table 2, Summary of Operational Annual Energy Resource Use, Potrero Power Station Mixed Use Development Project, San Francisco, California. September 17, 2018.

¹²¹ CBG, *Potrero Power Station – Project Water Demand*, February 8, 2018.

¹²² In 2016, San Francisco customers purchased 5.76 million megawatt hours (MWh) of electricity from PG&E. California Energy Commission, *Electricity Consumption by County*, available online at <http://ecdms.energy.ca.gov/elecbycounty.aspx>, accessed March 3, 2018.

¹²³ The projected peak electricity demand in the PG&E planning area for 2020 is 25,620 megawatts (MW). (California Energy Commission. California Energy Demand, 2014 to 2024 Preliminary Forecast, Volume 2: Electricity Demand by Utility Planning Area. May 2013. Accessed at <http://www.energy.ca.gov/2013publications/CEC-200-2013-004/CEC-200-2013-004-SD-V2.pdf> on March 3, 2018.)

TABLE 3
SUMMARY OF OPERATIONAL ANNUAL ENERGY RESOURCE USE

Source	Resource Use
Building Electricity	
Building ¹	53,632 MWh/year
Water ¹	4,644 MWh/year
Total Electricity	58,276 MWh/year
Building Natural Gas	
Building ¹	736,620 therms/year
Building Diesel	
Backup Generators ²	37,000 gallons/year
Transportation Fuels	
Gasoline ³	814,000 gallons/year
Diesel ³	224,000 gallons/year

ABBREVIATIONS:

MWh= megawatt hour, which is equal to 1,000 kilowatt hours.

NOTES:

- ¹ The electricity, natural gas, and water usage are based on project-specific estimates and California Emission Estimation Model (CalEEMod®).
- ² Diesel use from backup generators was calculated from the horsepower provided by the project sponsor, assuming 50 hours/year/generator (consistent with the air quality analysis) and 0.05 gallons/horsepower-hour (consistent with construction equipment fuel use).
- ³ Calculated based on project-specific trip generation and CalEEMOD defaults for trip length to calculate vehicle miles traveled (VMT). Fleet-average fuel consumption (in gallons per mile) is from EMFAC2014 for operational year 2034. The fuel estimates include the effects of the additional transportation demand management measures that would occur under Mitigation Measure M-TR-5, which is anticipated to reduce trip generation by 11%, which in turn is expected to result in a proportional amount of reduction in fuel usage.

SOURCE: Ramboll Environ, 2018

Appliances used under the proposed project would also be required to comply with the appliance efficiency standards provided in Title 20 of the California Code of Regulations, which are expected to save consumers \$375 million per year after all existing products are replaced by efficient, compliant products.¹²⁴

Compliance with San Francisco Green Building Code (which incorporates the California Green Building Code and Energy Efficiency Standards) for the building design and with Title 20 regulations relating to appliance energy efficiency standards would ensure that the proposed project would not result in inefficient, wasteful, or unnecessary use of electricity during operation. Therefore, the project's operational impact on electricity resources would be *less than significant*.

Natural Gas. The proposed development would use natural gas primarily for cooking, clothes drying, and domestic hot water heating as well as cooling, commercial usage, and pools/spas. As summarized in Table 3, the proposed project would consume 736,620 therms of natural gas per

¹²⁴ California Energy Commission. 2016 Accomplishments, http://www.energy.ca.gov/commission/accomplishments/2016_energycommission_accomplishments.pdf, accessed March 4, 2018.

year. This represents less than 1 percent of the natural gas purchased in San Francisco.¹²⁵ As for the use of electricity, the gas appliances would conform to California's appliance energy standards provided in Title 20 of the California Code of Regulations. Compliance with these regulations would ensure that the proposed project would not result in inefficient, wasteful, or unnecessary use of natural gas during operation. Therefore, the project's operational impact on natural gas resources would be *less than significant*.

Diesel. The project would also utilize backup generators to provide electricity in the event of a power outage and the generators would be run intermittently for scheduled maintenance. The estimated diesel usage by the backup generators would be 37,000 gallons per year as summarized in Table 3. This represents approximately 0.001 percent of the statewide totals of diesel purchased annually.¹²⁶ Further, as discussed in EIR Section 4.G, Air Quality), Mitigation Measure M-AQ-2b would require the project sponsor to fuel the emergency generators with renewable diesel, if commercially available. Use of renewable diesel would reduce diesel usage overall. Therefore, the project would not result in the use of unusually large amounts of diesel during operation, nor would it result in the inefficient, wasteful, or unnecessary use of diesel because the generators would only be used in the event of an emergency electricity outage. The project's operational impact related to the use of diesel would be *less than significant*.

Transportation Energy. The gasoline and diesel usage at full buildout by residents, employees, and site visitors is calculated based on total vehicle miles traveled from the air quality analysis for the proposed project, average fuel efficiency from the EMFAC2014 model for the first full operational year of 2034, and implementation of Mitigation Measure M-TR-5, which would require the project sponsor to implement additional transportation demand management measures beyond those included in the proposed project and anticipates an 11 percent reduction in vehicle trips from what would otherwise be calculated for the proposed project (see EIR Section 4.E, Transportation and Circulation). As summarized in Table 3, the fuel consumption associated with these trips would be approximately 814,000 gallons of gasoline and 224,000 gallons of diesel per year. The project's annual transportation-related gasoline and diesel consumption would represent approximately 0.01 percent of the statewide totals for use of these fuels.¹²⁷ Therefore, the project would not result in the use of unusually large amounts of transportation fuels during operation, nor would it result in the inefficient, wasteful, or unnecessary use of these fuels. The project's operational impact related to the use of transportation fuels would be *less than significant*.

¹²⁵ In 2016, San Francisco customers purchased 227 million therms of natural gas. (California Energy Commission, *Gas Consumption by County*, available online at <http://ecdms.energy.ca.gov/gasbycounty.aspx>, accessed March 3, 2018.)

¹²⁶ In 2016, Californians used 2.9 billion gallons of diesel. (California State Board of Equalization. Taxable Diesel Gallons 10 Year Report, Net of Refunds. Accessed at https://www.cdtfa.ca.gov/taxes-and-fees/Diesel_10_Year_Report.pdf on March 3, 2018.)

¹²⁷ Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles. (California Energy Commission, *California Gasoline Data, Facts, and Statistics*, accessed at http://www.energy.ca.gov/almanac/transportation_data/gasoline/ on March 4, 2018.) In 2016, Californians used 15.3 billion gallons of gasoline, including aviation gasoline. (California State Board of Equalization. Net Taxable Gasoline Gallons (Including Aviation Gasoline). Accessed at https://www.cdtfa.ca.gov/taxes-and-fees/MVF_10_Year_Report.pdf on March 3, 2018.)

Water. As discussed above under Utilities and Service Systems, the water demand memorandum prepared by the sponsor for the proposed project indicates that estimated potable and non-potable water demand for the proposed project at full build out would be a maximum of 0.325 mgd.¹²⁸ This is a conservative estimate of the total potable water demand of the proposed project because it includes the 0.074 mgd of non-potable water that would be used in compliance with the City's Non-potable Water Program described in EIR section 4.J, Hydrology and Water Quality. This program requires new development projects of 250,000 square feet or more of gross floor area to install and operate an onsite non-potable water system to treat and reuse available graywater, rainwater, and foundation drainage for toilet and urinal flushing, clothes washing, and irrigation. Compliance with the Non-potable Water Program would reduce the potable water demand of the project and would ensure that the proposed project would not result in inefficient, wasteful, or unnecessary use of potable water during operation. Therefore, the project's operational impact on water resources would be *less than significant*.

For the reasons described above, neither construction nor operation of the project would result in the wasteful use of fuel, water, or energy, and this impact would be *less than significant*.

Mitigation: None required.

Impact C-ME-1: The project, in combination with other past, present, and reasonably foreseeable future projects, would not result in significant adverse cumulative impacts on energy resources. (*Less than Significant*)

The proposed project would use electricity, natural gas, diesel, gasoline, and water as discussed in Impact ME-1. Although many projects in the region would also use these resources, cumulative impacts would be less than significant because the project and all of the regional projects would be required to comply with the California Green Building Standards and Energy Efficiency Standards at a minimum and many would also be subject to local green building requirements such as those of the City and County of San Francisco, which must be as stringent as the state requirements and are often more stringent. These building codes encourage sustainable construction and operational practices related to planning and design, energy efficiency, water efficiency, and conservation. Further, all new appliances would comply with California's appliance energy standards provided in Title 20 of the California Code of Regulations. Therefore, cumulative impacts related to wasteful use of fuel, energy, and water resources would be *less than significant*.

Mitigation: None required.

¹²⁸ CBG, *Potrero Power Station – Project Water Demand*, February 8, 2018.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
17. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.— Would the project...					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)) or timberland (as defined by Public Resources Code Section 4526)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The project site is located within an urbanized area of San Francisco. No land in San Francisco County has been designated by the California Department of Conservation's Farmland Mapping and Monitoring Program as agricultural land. Because the project site does not contain agricultural uses and is not zoned for such uses, the proposed project would not require the conversion of any land designated as prime farmland, unique farmland, or Farmland of Statewide Importance to non-agricultural use. The proposed project would not conflict with any existing agricultural zoning or Williamson Act contracts.¹²⁹ No land in San Francisco is designated as forest land or timberland by the State Public Resource Code. Therefore, the proposed project would not conflict with zoning for forest land, cause a loss of forest land, or convert forest land to a different use. For these reasons, criteria 17(a), 17(b), 17(c), 17(d), and 17(e) are *not applicable* to the proposed project.

Mitigation: None required.

¹²⁹ California Department of Conservation, *California Important Farmland: 1984–2014*, updated 2015, <http://maps.conservation.ca.gov/dlrp/ciftimeseries/>, accessed February 15, 2018; San Francisco is identified as "Urban and Built-Up Land" according to this map.

Topics:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact	Not Applicable
18. MANDATORY FINDINGS OF SIGNIFICANCE— Would the project:					
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Have impacts that would be individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a) This initial study and the EIR together provide a comprehensive discussion of the potential for the project to affect the quality of the environment. Specifically, EIR Section 4I, Biological Resources, discusses the potential for the project to substantially affect habitats, fish/wildlife populations, and sensitive natural communities. EIR Section 4D, Cultural Resources discusses the potential for the project to affect important examples of California history.					
b) The proposed project in combination with the past, present and reasonably foreseeable projects as described in Section E, Evaluation of Environmental Effects, would not result in significant cumulative impacts to cultural resources (archeological resources, human remains, and tribal cultural resources), greenhouse gas emissions, recreation, utilities and service systems, public services, geology and soils, mineral and energy resources, and agricultural and forest resources with implementation of identified mitigation. However, the proposed project could result in significant cumulative impacts to historic architectural resources, transportation and circulation, noise, and air quality, which are further analyzed in Chapter 4 of the EIR.					
c) This initial study and the EIR together provide a comprehensive discussion of the potential for the project to cause substantial adverse effects on human beings, either directly or indirectly.					

F. Mitigation Measures

The following mitigation measures have been identified in this initial study to reduce potentially significant impacts resulting from the proposed project to less-than-significant levels. Other potentially significant impacts are fully analyzed in Chapter 4 of the EIR, and mitigation measures are identified for significant impacts. The project sponsor has agreed to implement all mitigation measures identified in the initial study.

Mitigation Measure M-CR-1: Archeological Testing

Based on a reasonable presumption that archeological resources may be present within the project site in locations determined to have moderate or high archeological sensitivity, the following measures shall be undertaken to avoid any potentially significant adverse effect from the proposed project on buried or submerged historical resources. The project sponsor shall retain the services of an archeological consultant from the San Francisco rotational Department Qualified Archeological Consultants List maintained by the San Francisco Planning Department archeologist. The project sponsor shall contact the department archeologist to obtain the names and contact information for the next three archeological consultants on the list. The archeological consultant shall undertake an archeological testing program as specified herein. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required pursuant to this measure. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the City's appointed project Environmental Review Officer (ERO). All plans and reports prepared by the consultant as specified herein shall be submitted first and directly to the ERO for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the project for up to a maximum of four weeks. At the direction of the review officer, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines section 15064.5 (a) and (c).

Consultation with Descendant Communities: On discovery of an *archeological site*¹³⁰ associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group an *appropriate representative*¹³¹ of the descendant group and the review officer shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the review officer regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of

¹³⁰ The term archeological site is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

¹³¹ An appropriate representative of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist.

the associated archeological site. A copy of the Final Archeological Resources Report shall be provided to the representative of the descendant group.

Archeological Testing Program. The archeological consultant shall prepare and submit to the review officer for review and approval an archeological testing plan. The archeological testing program shall be conducted in accordance with the approved archeological testing plan. The archeological testing plan shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.

At the completion of the archeological testing program, the archeological consultant shall submit a written report of the findings to the review officer. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the review officer in consultation with the archeological consultant shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. No archeological data recovery shall be undertaken without the prior approval of the review officer or the planning department archeologist. If the review officer determines that a significant archeological resource is present and that the resource could be adversely affected by the proposed project, at the discretion of the project sponsor either:

- C. The proposed project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or
- D. A data recovery program shall be implemented, unless the review officer determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.

Archeological Monitoring Program. If the review officer in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented the archeological monitoring program shall minimally include the following provisions:

- The archeological consultant, project sponsor, and review officer shall meet and consult on the scope of the archeological monitoring plan reasonably prior to any project-related soils disturbing activities commencing. The review officer in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored. In most cases, any soils- disturbing activities, such as demolition, foundation removal, excavation, grading, utilities installation, foundation work, driving of piles (foundation, shoring, etc.), site remediation, etc., shall require archeological monitoring because of the risk these activities pose to potential archeological resources and to their depositional context;

- The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of apparent discovery of an archeological resource;
- The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO until the review officer has, in consultation with project archeological consultant, determined that project construction activities could have no effects on significant archeological deposits;
- The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis;
- If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/pile driving/construction activities and equipment until the deposit is evaluated. If in the case of pile driving or deep foundation activities (foundation, shoring, etc.), the archeological monitor has cause to believe that the pile driving or deep foundation activities may affect an archeological resource, the pile driving or deep foundation activities shall be terminated until an appropriate evaluation of the resource has been made in consultation with the review officer. The archeological consultant shall immediately notify the review officer of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO.

Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO.

Archeological Data Recovery Program. The archeological data recovery program shall be conducted in accord with an archeological data recovery plan. The archeological consultant, project sponsor, and ERO shall meet and consult on the scope of the archeological data recovery plan prior to preparation of a draft plan. The archeological consultant shall submit a draft plan to the ERO. The archeological data recovery plan shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the archeological data recovery plan will identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resources if nondestructive methods are practical.

The scope of the archeological data recovery plan shall include the following elements:

- *Field Methods and Procedures.* Descriptions of proposed field strategies, procedures, and operations.
- *Cataloguing and Laboratory Analysis.* Description of selected cataloguing system and artifact analysis procedures.

- *Discard and Deaccession Policy.* Description of and rationale for field and post-field discard and deaccession policies.
- *Interpretive Program.* Consideration of an onsite/offsite public interpretive program during the course of the archeological data recovery program.
- *Security Measures.* Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities.
- *Final Report.* Description of proposed report format and distribution of results.
- *Curation.* Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.

Human Remains, 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, including immediate notification of the Office of the Chief Medical Examiner of the City and County of San Francisco and in the event of the medical examiner'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 (Public Resource Code section 5097.98). The ERO shall also be immediately notified upon discovery of human remains. The archeological consultant, project sponsor, review officer, and a most likely descendant shall have up to but not beyond six days after the discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, curation, possession, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing state regulations or in this mitigation measure compels the project sponsor and the ERO to accept recommendations of a most likely descendant. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such as agreement has been made or, otherwise, as determined by the archeological consultant and the ERO. If no agreement is reached, state regulations shall be followed including the reburial of the human remains and associated burial objects with appropriate dignity on the property in a location not subject to further subsurface disturbance (Public Resource Code section 5097.98).

Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report to the ERO that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the Final Archeological Resources Report shall be distributed as follows: California Historical Resource Information System Northwest Information Center shall receive one (1) copy and the ERO shall receive a copy of the

transmittal of the report to the Northwest Information Center. The San Francisco Planning Department Environmental Planning Division shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the report along with copies of any formal site recordation forms (California Department of Parks and Recreation 523 form) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Mitigation Measure M-CR-3: Tribal Cultural Resources Interpretive Program

If the Environmental Review Officer (ERO) determines that a significant archeological resource is present, and if in consultation with the affiliated Native American tribal representatives, the review officer determines that the resource constitutes a tribal cultural resource and that the resource could be adversely affected by the proposed project, the proposed project shall be redesigned so as to avoid any adverse effect on the significant tribal cultural resource, if feasible.

If the ERO, in consultation with the affiliated Native American tribal representatives, determines that preservation-in-place of the tribal cultural resources is not a sufficient or feasible option, the project sponsor shall implement an interpretive program of the tribal cultural resource in consultation with affiliated tribal representatives. An interpretive plan produced in consultation with the ERO and affiliated tribal representatives, at a minimum, and approved by the review officer would be required to guide the interpretive program. The plan shall identify, as appropriate, proposed locations for installations or displays, the proposed content and materials of those displays or installation, the producers or artists of the displays or installation, and a long-term maintenance program. The interpretive program may include artist installations, preferably by local Native American artists, oral histories with local Native Americans, artifacts displays and interpretation, and educational panels or other informational displays.

Mitigation Measure M-GE-6: Paleontological Resources Monitoring and Mitigation Program

Prior to issuance of a building permit for construction activities that would disturb the deep fill area, where Pleistocene-aged sediments, which may include Colma Formation, bay mud, bay clay, and older beach deposits (based on the site-specific geotechnical investigation or other available information) may be present, the project sponsor shall retain the services of a qualified paleontological consultant having expertise in California paleontology to design and implement a Paleontological Resources Monitoring and Mitigation Program. The program shall specify the timing and specific locations where construction monitoring would be required; inadvertent discovery procedures; sampling and data recovery procedures; procedures for the preparation, identification, analysis, and curation of fossil specimens and data recovered; preconstruction coordination procedures; and procedures for reporting the results of the monitoring program. The program shall be

consistent with the Society for Vertebrate Paleontology Standard Guidelines for the mitigation of construction-related adverse impacts to paleontological resources and the requirements of the designated repository for any fossils collected.

During construction, earth-moving activities that have the potential to disturb previously undisturbed native sediment or sedimentary rocks shall be monitored by a qualified paleontological consultant having expertise in California paleontology. Monitoring need not be conducted when construction activities would encounter artificial fill, Young Bay Mud, or non-sedimentary rocks of the Franciscan Complex.

If a paleontological resource is discovered, construction activities in an appropriate buffer around the discovery site shall be suspended for a maximum of 4 weeks. At the direction of the Environmental Review Officer (ERO), the suspension of construction can be extended beyond four (4) weeks if needed to implement appropriate measures in accordance with the program, but only if such a suspension is the only feasible means to prevent an adverse impact on the paleontological resource.

The paleontological consultant's work shall be conducted at the direction of the City's ERO. Plans and reports prepared by the consultant 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.

G. Public Notice and Comment

On November 1, 2017, the Planning Department mailed a Notice of Preparation of an Environmental Impact Report and Notice of Public Scoping Meeting to property owners within 300 feet of the project site, tenants, and other potentially interested parties. In addition, the Planning Department held a public scoping meeting on November 15, 2017 to receive input on the scope of the environmental review for this project. During the scoping period, a total of seven comment letters and emails were submitted to the Planning Department and one speaker provided oral comments at the public scoping session. The topics raised in the comment letters are addressed in this initial study and in the EIR to which this initial study is attached, as appropriate (refer to EIR Chapter 1, Introduction, for additional detail on the public noticing and comments). The Notice of Preparation and copies of the public scoping comments are included as Appendix A in this EIR.

H. Determination

On the basis of this Initial study:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☒ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, no further environmental documentation is required.

DATE

October 3, 2018

Lisa Gibson

Lisa Gibson
Environmental Review Officer
for
John Rahaim
Director of Planning

I. Initial Study Preparers

San Francisco Planning Department

Environmental Planning Division

1650 Mission Street, Suite 400
San Francisco, CA 94103

- Environmental Review Officer: Lisa Gibson
- Principal Environmental Planner: Chris Kern
- Senior Environmental Planner: Rachel Schuett
- Archeologist/Preservation Planner: Allison Vanderslice and Pilar LaValley
- Transportation Planner(s): Manoj Madhavan and Jenny Delumo
- Air Quality: Jessica Range and Josh Pollak, AICP
- Water Supply Assessment: Chris Thomas

Environmental Consultant

Environmental Science Associates (ESA) (Prime Environmental Consultant)

550 Kearny Street, Suite 800
San Francisco, CA 94108

- Paul Mitchell, Project Manager
- Terri Avila, Principal-In-Charge
- Jennifer Brown, Deputy Project Manager
- Karl Heisler
- Chris Sanchez
- Brian Pittman
- Matthew Russell
- Heidi Koenig
- Logan Sakai
- Lisa Laxamana

Orion Environmental Associates (Sub Consultant)

550 Kearny Street, #800A
San Francisco, CA 94108

- Joyce Hsiao, Project Director
- Mary McDonald

Project Sponsor/Architect

California Barrel Company LLC

1201-A Illinois Street
San Francisco, CA 94107

- Enrique Landa
- Erin Epperson
- Charles Thornton

Perkins + Will Architects

2 Bryant Street, Suite 300
San Francisco, CA 94105

- Kristen Hall
- Greg Johnson

J. Abrams Law, P.C.

One Maritime Plaza
Suite 1900
San Francisco, CA 94111

- James Abrams
- Dana Lovisolo

Paul Hastings LLP

101 California Street, 48th Floor
San Francisco, CA 94111

- Gordon Hart