Draft Environmental Impact Report

Islais Creek Bridge Project

San Francisco Planning
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San Francisco Planning

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Acronyms and Abbreviations

AB	Assembly Bill
air district	Bay Area Air Quality Management District
APN	Assessor's Parcel Number
AWSS	auxiliary water supply system
BCDC	San Francisco Bay Conservation and Development Commission
board of supervisors	San Francisco Board of Supervisors
California Register	California Register of Historical Resources
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CGS	California Geological Survey
city	City and County of San Francisco
coast guard	United States Coast Guard
dBA	A-weighted decibels
DPR	California Department of Parks and Recreation
EIR	environmental impact report
ERO	Environmental Compliance Officer
general plan	San Francisco General Plan
HABS	Historic American Buildings Survey
HAER	Historic American Engineering Record
HALS	Historic American Landscapes Survey
HPC	San Francisco Historic Preservation Commission
I-280	Interstate 280
Muni	San Francisco Municipal Transportation Agency (SFMTA)
NAHC	Native American Heritage Commission
National Register	National Register of Historic Places
NOP	notice of preparation
planning commission	San Francisco Planning Commission
planning department	San Francisco Planning Department
proposed project	Islais Creek Bridge Project
Public Works	San Francisco Public Works
Secretary's Standards	Secretary of the Interior's Standards for the Treatment of Historic Properties
SFFD	San Francisco Fire Department

SFMTA blue book	San Francisco Regulations for Working in San Francisco Streets
SFMTA	San Francisco Municipal Transportation Agency (Muni)
SFPUC	San Francisco Public Utilities Commission
SHPO	State Historic Preservation Officer
the channel	Islais Creek channel
U.S. 101	U.S. Highway 101
VMT	vehicle miles traveled
WEAP	Worker Environmental Awareness Program

SUMMARY

S.1 Introduction

This document is a draft environmental impact report (EIR) for the Islais Creek Bridge Project (proposed project). This chapter of the EIR provides an overview of:

- the proposed project;
- the anticipated environmental impacts of the proposed project and identified mitigation measures;
- alternatives to the proposed project, including identification of the environmentally superior alternative; and
- areas of controversy to be resolved.

The San Francisco Planning Department (planning department) is the lead agency responsible for preparing this EIR in compliance with the California Environmental Quality Act (CEQA). This is a focused EIR prepared pursuant to CEQA Guidelines section 15063(c)(3).

S.2 Project Summary

The proposed project is in the Bayview Hunters Point neighborhood on the Islais Creek Bridge (officially named the Levon Hagop Nishkian Bridge) along Third Street in San Francisco. San Francisco Public Works (Public Works) is proposing to demolish the existing bridge and construct a new bridge. The existing Islais Creek Bridge is structurally deteriorated and seismically deficient. The proposed replacement bridge would meet current structural and seismic standards, and would be resilient to predicted sea-level rise impacts up to the year 2100. The bridge is designed at a compatible elevation to align with future shoreline armoring measures on the Islais Creek channel banks adjacent to the bridge without requiring further modification of the bridge. For more discussion on sea-level rise, see Section 17, Hydrology and Water Quality, in Appendix B.

The existing drawbridge would be replaced with a fixed bridge that would accommodate a center 26-foot-wide dedicated light rail transit (light rail) tracks, two 11-foot travel lanes in each direction, a 12-foot-wide Class I shared pedestrian/bicycle path on the eastern side of the bridge, and a 16-foot-wide Class I shared pedestrian/bicycle path on the western side of the bridge.

S.3 Summary of Impacts and Mitigation Measures

This EIR analyzes the potential environmental effects of the proposed project. The Initial Study (Appendix B) determined that the following topics would have either no significant impacts or impacts that can be reduced to less than significant with mitigation:

- Land Use and Planning
- Aesthetics
- Population and Housing
- Noise
- Air Quality
- Greenhouse Gas Emissions
- Wind
- Shadow

- Recreation
- Utilities and Service Systems
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Mineral Resources
- Energy
- Agriculture and Forestry Resources
- Wildfire

Discussion and analysis of impacts in these resource areas are presented in the Initial Study.

The proposed project could result in significant impacts associated with historic architectural resources and transportation and circulation (construction-related transit delay). Chapter 4 of this EIR presents detailed discussion and analysis of historic architectural resources and transportation and circulation. Tables S-1 and S-2 (on the following pages) summarize all of the impacts of the proposed project, identify the significance of each impact, and present the full text of the recommended mitigation measures. Mitigation measures are feasible measures that would avoid, lessen, or reduce significant impacts, and would be required to be implemented if the project is approved. The summary tables include all impacts and mitigation measures applicable to the proposed project, with the EIR topics presented in Table S-1, and the Initial Study topics presented in Table S-2.

As indicated in Tables S-1 and S-2, the EIR determined that the proposed project would result in significant and unavoidable impacts to historic architectural resources and transportation and circulation (construction-related transit delay), even with the implementation of mitigation measures.

Table S-1 Summary of Impacts of the Islais Creek Bridge Project Identified in the EIR

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
EIR SECTION 4.B, HISTORIC ARCHITECTURAL RESOURCES			
Impact CR-1: The proposed project would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Significant (S)	**Mitigation Measure M-CR-1a: Islais Creek Bridge Documentation** Prior to approval of the proposed project by the Public Works Commission, the project sponsor shall submit to the department for review photographic and narrative documentation of the bridge. The documentation shall be funded by the project sponsor and undertaken by a qualified professional who meets the standards for history, architectural history, or architecture (as deemed appropriate by the department's preservation staff), as set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, Part 61). The scope of the documentation should focus on the bridge's character-defining features and significance under Criterion 3 as an outstanding example of an Art Moderne style drawbridge. The documentation scope shall be reviewed and approved by the department prior to any work on the documentation. The types and level of documentation shall include the following formats: *HAER-Like Measured Drawings* – A set of Historic American Engineering Survey-like (HAER-like) measured drawings that depict the existing size, scale, and dimension of the subject property. The department's preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (plan, section, elevation, etc.). The department's preservation staff will assist the consultant in determining the appropriate level of measured drawings. A cover sheet may be required that describes the historic significance of the property. *HAER-Like Photographs* – Digital photographs of the subject property. Large-format negatives are not required. The scope of the digital photographs shall be reviewed by the department's preservation staff for concurrence, and all digital photography shall be conducted according to current National Park Service standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HAER or Historic American Building Survey (HABS) photography. *HAER-Like Historical Report* – If the department determines that existing survey information or historic resource evaluations of a property do not sufficiently document the historic resources' significant associations, a written historical narrative and report shall be provided in accordance with the HAER Historical Report Guidelines. The written history shall follow an outline format that begins with a statement of significance supported by the development of the architectural and historical context in which the structure was built and subsequently evolved. The report shall also include architectural description and bibliographic information.	Significant and Unavoidable with Mitigation (SUM)

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		Print-on-Demand Book – The Print-on-Demand book shall be made available to the public for distribution by the project sponsor by uploading the book onto a website so the public can access and download and or print out the book. The project sponsor shall make the content from the historical report, historical photographs, HAER photography, measured drawings, and field notes available to the public through a digital book that will contain all the content in a format that is easy to read and or download and print out. The project sponsor shall be required to keep the book up for public access digitally but is not responsible for the physical print-out of the book for the public. *Video Recordation* – In coordination with the department's preservation staff, the project sponsor shall prepare video documentation of the historic resource. The purpose of this video documentation is to supplement other recordation and interpretive measures and enhance the collection of reference materials that would be available to the public and inform future research. This video recordation should also document the raising of the drawbridge, as required by Mitigation Measure M-CR-1d, Community Memorial Event, as detailed below. Video recordation shall be conducted by a professional videographer with experience recording architectural resources or experience with the Bayview community. The professional videographer shall provide a storyboard of the proposed video recordation for review and approval by the department's preservation staff. The project sponsor, in consultation with the department, shall conduct outreach to determine which repositories may be interested in receiving copies of the above documentation—either digital or physical copies. Potential repositories include, but are not limited to the San Francisco Public Library, the Environmental Design Library at the University of California, Berkeley, the Northwest Information Center, San Francisco Architectural Heritage, the California Historical Society, and Archive.org. The final approved documentation shall be provided in electronic or printed form to the interested repositories. The department requires one printed copy of the print-on-demand book and digital copies of the print-on-demand book and all other materials. Additionally, the department will make electronic versions of the documentation available to the public for their use at no charge. The professional(s) shall submit the completed documentation for review and approval by the department's preservation staff. All documentation must be reviewed and approved by the department prior to Public Works Commission approval. **Mitigation Measure M-CR-1b: Salvage Plan** Prior to approval of the proposed project by the Public Works Commission, the project sponsor shall consult with the department's preservation staff as to whether any such features may be salvaged, in whole or in part, during demolition or	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		alteration. The project sponsor shall make a good faith effort to salvage character-defining features or materials of historical interest to be used as part of the interpretative program, incorporated into the architecture of the new bridge, or offered to other city agencies, non-profit or culturally affiliated groups, or other educational or artistic groups. The project sponsor shall prepare a salvage plan for review and approval by the department's preservation staff prior to Public Works Commission approval. **Mitigation Measure M-CR-1c: Public Interpretive Plan** The project sponsor shall facilitate the development of a public interpretive program focused on the history of the project site, the identified historic resource, and its significant historic context. The interpretive program should be developed and implemented by a qualified design professional with demonstrated experience in displaying information and graphics to the public in a visually interesting manner, as well as a professionally qualified historian or architectural historian, or community group approved by the department. Through consultation with department preservation staff, coordination with local Native American tribal representatives should occur to ensure that a holistic history of the bridge and Islais Creek area is presented to the public. The primary goal of the program is to educate visitors and future residents about the property's historical themes, associations, and lost contributing features within broader historical, social, and physical landscape contexts. The interpretive program shall be initially outlined in an interpretive plan subject to review and approval by the department's preservation staff prior to Public Works Commission approval. The plan shall include the general parameters of the interpretive program, including the substance, media, and other elements of the interpretative program. The interpretive program shall include—in publicly accessible areas of the project site—permanent display(s) of interpretive materials concerning the history and design features of the affected historic resource, including both the site as a whole and the individual contributing buildings and features. The display shall be placed in a prominent public setting near the new bridge such as the proposed public observation platform. The interpretive material(s) shall be made of durable all-weather materials and may also include digital media in addition to a permanent display. The interpretive material(s) shall be of high quality and installed to allow for high public visibility. Content developed for other mitigation measures, as applicable, including the documentation programs, may be used to inform and provide content for the interpretive program. The interpretive program may also incorporate video documentation completed under M-CR-1a, Islais Creek Bridge Documentation, as applicable to provide a narrated video that describes the materials, construction methods, current	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		condition, historical use, historic context, and cultural significance of the historic resource. The detailed content, media, and other characteristics of such an interpretive program shall be coordinated and approved by the department's preservation staff. The final components of the public interpretation program shall be constructed and installed and a plan for their maintenance shall be finalized prior to completion of the new bridge. The interpretive program shall be developed in coordination with the other interpretative programs as relevant, such as interpretation under archeological mitigation measure, if required. In particular, this interpretive program shall present the full and holistic history of the Islais Creek Bridge and Islais Creek area, and should be developed in consultation with the local Native American representatives as requested during tribal cultural resources consultation. **Mitigation Measure M-CR-1d: Community Memorial Event** Prior to commencement of demolition activities on the bridge, the project sponsor shall host a community memorial event with the intent of raising and lowering the drawbridge to demonstrate the bridge's character-defining feature as a drawbridge. The project sponsor shall reach out to relevant community groups associated with the historic resource, and other neighborhood groups that may be interested in cosponsoring or attending the commemorative event. The purpose of the event would be to commemorate the site's history, but it would also be an opportunity to provide information about the bridge's construction schedule, logistics of the bus bridge while the bridge is under construction, and general information about how the new bridge fits within the city's overall approach to addressing sea-level rise around Islais Creek. The event shall be coordinated with department staff and may take on a variety of forms, but the preferred location of the event would be at the site of the Islais Creek Bridge. The community memorial event and raising and lowering of the drawbridge should be documented by video and photographs in coordination with the requirements of Mitigation Measure M-CR-1a: Islais Creek Bridge Documentation. Additionally, the video documentation should incorporate the actions of or an interview with current or former staff responsible for operating the drawbridge or a drawbridge engineer familiar with the Islais Creek Bridge, to understand what actions must take place when raising and lowering the drawbridge. The project sponsor will make efforts to ready the draw-span for a successful raising and lowering, but this will depend on the condition of the drawbridge and whether it can be raised and lowered practically and safely at the time of the community memorial event.	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact CR-2: The proposed project would not result in a substantial adverse change in the significance of any adjacent historical resources pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-CR-1: The proposed project, in combination with cumulative projects, would not result in cumulative impacts to historic architectural resources and would not result in a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Less Than Significant (LTS)	No mitigation required	NA
EIR SECTION 4.C, TRANSPORTATION AND CIRCULATION			
Impact TR-1: Construction of the proposed project would result in intensive and disruptive activities that would not create potentially hazardous conditions for people driving, walking, or bicycling, or for public transit operations, but could substantially delay public transit.	Significant (S)	**Mitigation Measure M-TR-1: Reduce Transit Travel Times for T-Third Street Riders** San Francisco Public Works is working with the San Francisco Municipal Transportation Agency to provide a bus bridge service plan (plan). The plan shall identify measures, to the degree feasible, that would meet a performance standard of limiting travel times to the T-Third vehicle to less than four minutes between the Third Street/Evans Street Intersection on the south and the Third Street/Mariposa Street intersection to the north above conditions that existed in September 2023. The plan may include, but not be limited, the following temporary measures during construction: • private vehicle restrictions on certain routes (e.g., Illinois Street Bridge) or reallocating roadway space to prioritize transit (e.g., Evans Avenue); • transit signal priority or signal timing optimization; • providing transit capacity consistent with customer demand to minimize waits for riders; • providing new safe pedestrian crossings and paths, clear directions, and wayfinding signs for any new transfers between the light rail and bus services; and • or other measures to achieve the performance standard.	Significant and Unavoidable with Mitigation (SUM)

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact TR-2: Operation of the proposed project would not create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional vehicle miles traveled (VMT), substantially induce automobile travel, or result in substantial loading or parking deficits.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-TR-1: The construction of the proposed project, in combination with cumulative projects, would have cumulative impacts related to traffic delays during project construction. The proposed project, in combination with cumulative projects, would not contribute to potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations; or interfere with emergency access or accessibility for people walking or bicycling.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-TR-2: The operation of the proposed project, in combination with cumulative projects, would not: create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional VMT or substantially induce automobile travel, or result in substantial loading or parking impacts.	No impact (NI)	No mitigation required.	NA

Significance Definitions:

NA = Not Applicable
NI = No Impact
LTS = Less than Significant
LTSM = Less than Significant with Mitigation
S = Significant
SUM = Significant and Unavoidable with Mitigation

Table S-2 Summary of Impacts of the Islais Creek Bridge Project Identified in the Initial Study

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
INITIAL STUDY SECTION E.1, LAND USE AND PLANNING (see Appendix B)			
Impact LU-1: The proposed project would not physically divide an established community.	Less Than Significant (LTS)	No mitigation required	NA
Impact LU-2: The proposed project would not cause a significant physical environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-LU-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to land use and planning.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.2, AESTHETICS (see Appendix B)			
Impact AE-1: The proposed project would not have a substantial adverse effect on a scenic vista.	Less Than Significant (LTS)	No mitigation required	NA
Impact AE-2: The proposed project would not substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings on a state scenic highway.	No impact (NI)	No mitigation required	NA
Impact AE-3: The proposed project would not conflict with applicable zoning and other regulations governing scenic quality.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact AE-4: The proposed project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-AE-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative aesthetic impact.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.3, POPULATION AND HOUSING (see Appendix B)			
Impact PH-1: The proposed project would not induce substantial unplanned population growth, either directly or indirectly.	No impact (NI)	No mitigation required	NA
Impact PH-2: The proposed project would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing.	No impact (NI)	No mitigation required	NA
Impact C-PH-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to population and housing.	No impact (NI)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
INITIAL STUDY SECTION E.4, CULTURAL RESOURCES (see Appendix B)			
Impact CR-3-: The proposed project could cause a substantial adverse change in the significance of an archeological resources pursuant to California Environmental Quality Act (CEQA) Guidelines section 15064.5 and could disturb human remains, including those interred outside of formal cemeteries.	Significant (S)	**Mitigation Measure M-CR-3-: Accidental Discovery** ***Construction Crew Archeological Awareness.*** Prior to any soils-disturbing activities being undertaken, a qualified archeologist shall conduct a brief on-site archeological awareness training that describes the types of resources that might be encountered and how they might be recognized, and requirements and procedures for work stoppage, resource protection and notification in the event of a potential archeological discovery. The archeologist or the project sponsor also shall distribute the department's "Alert" wallet card and the department's "ALERT" sheet, that summarizes stop work requirements and provides necessary contact information for the planning department's archeological staff and project sponsor to all field personnel involved in soil disturbing activities, including machine operators, field crew, pile drivers, supervisory personnel, etc., have received. The qualified archeologist shall repeat the training at intervals during construction, as determined necessary by the environmental review officer (ERO), including when new construction personnel start work and prior to periods of soil disturbing work when the project archeologist will not be on site. ***Tribal Cultural Resources Sensitivity Training.*** In addition to and concurrently with the archeological awareness training, the project sponsor shall ensure that a local Native American representative is afforded the opportunity to provide a Native American cultural resources sensitivity training to all construction personnel. ***Procedures Upon Discovery of a Suspected Archeological Resource.*** The following measures shall be implemented in the event of a suspected archeological discovery during project soil-disturbing activities: ***Discovery Stop Work and Environmental Review Officer Notification.*** Should any indication of an archeological resource be encountered during any soils-disturbing activity of the project, the project sponsor shall immediately notify the ERO and shall immediately suspend any soils-disturbing activities in the vicinity of the discovery and protect the find in place until the significance of the find has been evaluated and the ERO has determined whether and what additional measures are warranted, and these measures have been implemented, as detailed below. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions. ***Archeological Consultant Identification.*** If an archeological discovery during construction occurs and the ERO determines that the discovery may represent a significant archeological resource, the project sponsor shall retain the services of an archeological consultant (hereinafter "project archeologist") from a firm listed	Less Than Significant with Mitigation (LTSM)

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		on the Qualified Archeological Consultant list maintained by the department to identify, document, and evaluate the resource, under the direction of the ERO. The project sponsor shall ensure that the project archeologist or designee is empowered, for the remainder of soil-disturbing project activity, to halt soil disturbing activity in the vicinity of potential archeological finds, and that work remains halted until the discovery has been assessed and a treatment determination made, as detailed below. ***Resource Evaluation and Treatment Determination.*** Initial documentation and assessment. The project archeologist shall document the find and make a reasonable effort to assess its identity, integrity, and significance of the encountered archeological deposit through sampling or testing, as needed. The project sponsor shall make provisions to ensure that the project archeologist can safely enter the excavation, if feasible. The project sponsor shall ensure that the find is protected until the ERO has been consulted and has determined appropriate subsequent treatment in consultation with the project archeologist, and the treatment has been implemented, as detailed below. The project archeologist shall make a preliminary assessment of the significant and physical integrity of the archeological resource and shall present the findings to the ERO. If, based on this information, the ERO determines that construction would result in impacts to a significant resource, the ERO shall consult with the project sponsor and other parties regarding the feasibility and effectiveness of preservation-in-place of the resource, as detailed below. Native American Archeological Deposits and Tribal Notification. All Native American archeological deposits shall be assumed to be significant unless determined otherwise in consultation with the ERO. If a Native American archeological deposit is encountered, soil disturbing work shall be halted as detailed above. In addition, the ERO shall notify any tribal representatives who, in response to the project tribal cultural resource notification, requested to be notified of discovery of Native American archeological resources in order to coordinate on the treatment of archeological and tribal cultural resources. Further the project archeologist shall offer a Native American representative the opportunity to monitor any subsequent soil disturbing activity that could affect the find. Paleosols. Should a paleosol be identified, the project archeologist shall extract and process samples for dating, paleobotanical analysis, and other applicable special analyses pertinent to identification of possible cultural soils and for environmental reconstruction. Archeological Site Records. After assessment of any discovered resources, the project archeologist shall prepare an archeological site record or primary record (DPR 523 series) for each documented resource. In addition, a primary record shall	

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		be prepared for any prehistoric isolate. Each such record shall be accompanied by a map and GIS location file. Records shall be submitted to the planning department for review as attachments to the archeological resources report (see below) and once approved by the ERO, to the Northwest Information Center. Plans and Reports. All archeological plans and reports identified herein and in the subsequent measures, shall be submitted by the project archeologist directly to the ERO for review and comment and shall be considered draft reports subject to revision until final approval by the ERO. The project archeologist may submit draft reports to the project sponsor simultaneously with submittal to ERO. Limit on Construction Delays for Archeological Treatment. Archeological testing and as applicable data recovery programs required to address archeological discoveries, pursuant to this measure, could suspend construction of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less than significant level potential effects on a significant archeological resource as defined in CEQA Guidelines. Preservation-in-Place Consideration. Should an archeological resource that meets California register significance criteria be discovered during construction, archeological testing, or monitoring, preservation-in-place (i.e., permanently protect the resource from further disturbance and take actions, as needed, to preserve depositional and physical integrity) of the entire deposit or feature is the preferred treatment option. The ERO shall consult with the project sponsor and, for Native American archeological resources, with tribal representatives, if requested, to consider 1) the feasibility of permanently preserving the resource in place, feasible and effective, the project archeologist, in consultation with the ERO, shall prepare a Cultural Resources Preservation Plan. For Native American archeological resources, the project archeologist shall also consult with the tribal representatives, and the Cultural Resources Preservation Plan shall take into consideration the cultural significance of the tribal cultural resource to the tribes. Preservation options may include measures such as design of the project layout to place open space over the resource location; foundation design to avoid the use of pilings or deep excavations in the sensitive area; a plan to expose and conserve the resource and include it in an on-site interpretive exhibit; tribal representatives for review and for ERO approval. The project sponsor shall ensure that the approved plan is implemented and shall coordinate with the department to ensure that disturbance of the resource will not occur in future, such as establishing a preservation easement. If, based on this consultation, the ERO determines that preservation-in-place is infeasible or would be ineffective in preserving the significance of the resource, archeological data recovery and public interpretation of the resource shall be	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		carried out, as detailed below. The ERO in consultation with the project archeologist shall also determine whether and what additional treatment is warranted, which may include additional testing, construction monitoring, and public interpretation of the resource, as detailed below. Coordination with Descendant Communities. On discovery of an archeological site associated with descendant Native Americans, Chinese, or other identified descendant cultural group, the project archeologist shall contact an appropriate representative of the descendant group and the ERO. The representative of the descendant group shall be offered the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO regarding appropriate archeological treatment of the site and data recovered from the site, and, if applicable, any interpretative treatment of the site. The project archeologist shall provide a copy of the Archeological Resources Report (ARR) to the representative of the descendant group. Compensation. Following on the initial tribal consultation, the ERO, project sponsor and project archeologist, as appropriate, shall work with the tribal representative or other descendant or descendant community representatives to identify the scope of work for a representative to fulfill the requirements of this mitigation measure, which may include participation in archeological monitoring, preparation and review of deliverables (e.g., plans, interpretive materials, art work). Tribal representatives or other descendant community representatives for archeological resources or tribal cultural resources, who complete tasks in the agreed upon scope of work project, shall be compensated for their work as identified in the agreed upon scope of work. ***Archeological Data Recovery Program.*** The project archeologist shall prepare an archeological data recovery plan if all three of the following apply: (1) a potentially significant resource is discovered, (2) preservation-in-place is not feasible, as determined by the ERO after implementation of the Preservation-in-Place Consideration procedures, and (3) the ERO determines that archeological data recovery is warranted. When the ERO makes such a determination, the project archeologist, project sponsor, ERO and, for tribal cultural archeological resources, the tribal representative, if requested by a tribe, shall consult on the scope of the data recovery program. The project archeologist shall prepare a draft archeological data recovery plan and submit it to the ERO for review and approval. If the time needed for preparation and review of a comprehensive archeological data recovery plan would result in a significant construction delay, the scope of data recovery may instead by agreed upon in consultation between the project archeologist and the ERO and documented by the project archeologist in a memo to the ERO. The archeological data recovery plan/memo shall identify how the proposed data recovery program will preserve the significant information the	

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		archeological resource is expected to contain. That is, the archeological data recovery plan/memo 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 property that could be adversely affected by the proposed project. Destructive data recovery methods shall not be applied to portions of the archeological resource that would not otherwise be disturbed by construction if nondestructive methods are practical. 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 Policy: Description of and rationale for field and post-field discard and deaccession policies • Security Measures: Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities • Report of Data Recovery Results: Description of proposed report format and distribution of results • Public Interpretation: Description of potential types of interpretive products and locations of interpretive exhibits based on consultation with project sponsor • 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 The project archeologist shall implement the archeological data recovery program upon approval of the archeological data recovery plan/memo by the ERO. ***Coordination of Archeological Data Recovery Investigations.*** In cases in which the same resource has been or is being affected by another project for which data recovery has been conducted, is in progress, or is planned, the following measures shall be implemented to maximize the scientific and interpretive value of the data recovered from both archeological investigations: • In cases where an investigation has not yet begun, project archeologists for each project impacting the same resource and the ERO, as applicable, shall consult on coordinating and collaborating on archeological research design, data recovery	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		methods, analytical methods, reporting, curation and interpretation to ensure consistent data recovery and treatment of the resource. • In cases where archeological data recovery investigation is under way or has been completed for a project, the project archeologist for the subsequent project shall consult with the prior project archeologist, if available; review prior treatment plans, findings and reporting; and inspect and assess existing archeological collections/inventories from the site prior to preparation of the archeological treatment plan for the subsequent discovery, and shall incorporate prior findings in the final report for the subsequent investigation. The objectives of this coordination and review of prior methods and findings shall be to identify refined research questions; determine appropriate data recovery methods and analyses; assess new findings relative to prior research findings; and integrate prior findings into subsequent reporting and interpretation. ***Treatment of Human Remains and Funerary Objects.*** If human remains or suspected human remains are encountered during construction, the contractor and project sponsor shall ensure that ground-disturbing work within 50 feet of the remains is halted immediately and shall arrange for the protection in place of the remains until appropriate treatment and disposition have been agreed upon and implemented in accordance with this measure. The treatment of any human remains and funerary objects discovered during any soil- disturbing activity shall comply with applicable state laws, including Health and Safety Code section 7050.5 and Public Resources Code section 5097.98. Upon determining that the remains are human, the project archeologist shall immediately notify the Medical Examiner of the City and County of San Francisco, the ERO, and the project sponsor of the find. If the remains cannot be permanently preserved in place, the landowner or designee shall consult with the most likely descendant and may consult with the project archeologist, project sponsor and the ERO on recovery of the remains and any scientific treatment alternatives. The landowner shall then make all reasonable efforts to develop a burial agreement (agreement) with the most likely descendant, as expeditiously as possible, for the treatment and disposition, with appropriate dignity, of human remains and funerary objects (as detailed in CEQA Guidelines section 15064.5(d)). Per Public Resources Code section 5097.98(c)(1), the agreement shall address, as applicable and to the degree consistent with the wishes of the most likely descendant, the appropriate excavation, removal, recordation, scientific analysis, custodianship prior to reinternment or curation, and final disposition of the human remains and funerary objects. If the most likely descendant agrees to scientific analyses of the remains and/or funerary objects, the project archeologist shall retain possession of the remains and funerary objects until completion of any such analyses, after which the remains and funerary objects shall be reinterred or curated as specified in the agreement.	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		If the landowner or designee and the most likely descendant are unable to reach an agreement on scientific treatment of the remains and/or funerary objects, the ERO, in consultation with the project sponsor shall ensure that the remains and/or funerary objects are stored securely and respectfully until they can be reinterred on the project site, with appropriate dignity, in a location not subject to further or future subsurface disturbance, in accordance with the provisions of state law. Treatment of historic-period human remains and/or funerary objects discovered during any soil-disturbing activity shall be in accordance with protocols laid out in the research design in the project archeological monitoring plan, archeological testing plan, archeological data recovery plan, and other relevant agreements established between the project sponsor, medical examiner, and the ERO. The project archeologist shall retain custody of the remains and associated materials while any scientific study scoped in the treatment document is conducted and the remains shall then be curated or respectfully reinterred by arrangement on a case-by case-basis. ***Cultural Resources Public Interpretation Plan and Land Acknowledgement.*** If a significant archeological resource (i.e., a historical resource or unique archeological resources as defined by CEQA Guidelines section 15064.5) is identified and the ERO determines that public interpretation is warranted, the project archeologist shall prepare a Cultural Resources Public Interpretation Plan. The Cultural Resources Public Interpretation Plan shall describe the interpretive products, locations or distribution of interpretive materials or displays, the proposed content and materials, the producers or artists of the displays or installation, and a long-term maintenance program. If the resource to be interpreted is a tribal cultural resource, the department shall notify Native American tribal representatives that public interpretation is being planned. If requested by tribal representatives, the Cultural Resources Public Interpretation Plan shall be prepared in consultation with and developed with the participation of Native American tribal representatives. For public projects or projects that include dedicated public spaces, the interpretive materials may include an acknowledgement that the project is located upon traditional Ohlone lands. For interpretation of a tribal cultural resource, the interpretive program may include a combination of artwork, preferably by local Native American artists, educational panels or other informational displays, a plaque, or other interpretative elements including digital products that address Native American experience and the layers of history. As feasible, and where landscaping is proposed, the interpretive effort may include the use and the interpretation of native and traditional plants incorporated into the proposed landscaping. The project archeologist shall submit the cultural resources public interpretation plan and drafts of any interpretive materials that are subsequently prepared to the	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		ERO for review and approval. The project sponsor shall ensure that the cultural resources public interpretation plan is implemented prior to occupancy of the project. ***Archeological Resources Report.*** If significant archeological resources, as defined by CEQA Guidelines section 15064.5, are encountered, the project archeologist shall submit a confidential draft Archeological Resources Report to the ERO. This report shall evaluate the significance of any discovered archeological resource, describe the archeological and historical research methods employed in the archeological programs undertaken, the results and interpretation of analyses, and discuss curation arrangements. Once approved by the ERO, the project archeologist shall distribute the approved Archeological Resources Report as follows: copies that meet current information center requirements at the time the report is completed to the California Archeological Site Survey Northwest Information Center, and a copy of the transmittal of the approved Archeological Resources Report to the Northwest Information Center to the ERO; one bound hardcopy of the Archeological Resources Report, along with digital files that include an unlocked, searchable PDF version of the Archeological Resources Report, GIS shapefiles of the site and feature locations, any formal site recordation forms (CA DPR 523 series), and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources, via USB or other stable storage device, to the environmental planning division of the planning department; and, if a descendant group was consulted, a digital or hard copy of the Archeological Resources Report to the descendant group, depending on their preference ***Curation.*** If archeological data recovery is undertaken, the project archeologist and the project sponsor shall ensure that any significant archeological collections and paleoenvironmental samples of future research value shall be permanently curated at an established curatorial facility. The facility shall be selected in consultation with the ERO. Upon submittal of the collection for curation the project sponsor or archeologist shall provide a copy of the signed curatorial agreement to the ERO.	
Impact C-CR-2: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts to cultural resources.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
INITIAL STUDY SECTION E.5, TRIBAL CULTURAL RESOURCES (see Appendix B)			
Impact TCR-1: The proposed project could result in a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant.	Significant (S)	**Mitigation Measure M-CR-3: Accidental Discovery**, as defined above	Less Than Significant with Mitigation (LTSM)
Impact C-TCR-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on tribal cultural resources.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.7, NOISE (see Appendix B)			
Impact NO-1: Construction of the proposed project would not generate a substantial temporary increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less Than Significant (LTS)	No mitigation required	NA
Impact NO-2: The proposed project would not generate excessive groundborne vibration or groundborne noise levels.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact NO-3: Operation of the proposed project would not generate noise levels in excess of standards in the local general plan or noise ordinance, and would not result in a substantial increase in ambient noise levels in the project vicinity.	No impact (NI)	No mitigation required	NA
Impact C-NO-1: The proposed project, in combination with cumulative projects, would not result in any significant cumulative noise or vibration impacts.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.8, AIR QUALITY (see Appendix B)			
Impact AQ-1: The proposed project could conflict with or obstruct implementation of the applicable air quality plan.	Less Than Significant (LTS)	No mitigation required	NA
Impact AQ-2: The proposed project would not result in a cumulatively considerable net increase in nonattainment criteria air pollutants.	Less Than Significant (LTS)	No mitigation required	NA
Impact AQ-3: The proposed project would generate toxic air contaminates, including diesel particulate matter, and could expose sensitive receptors to substantial pollutant concentrations.	Significant (S)	**Mitigation Measure M-AQ-3: Requirements for Off-Road Construction Equipment.** The contractor shall comply with the following: A. Engine Requirements 1. All off-road equipment greater than 25 horsepower shall have engines that meet or exceed either the United States Environmental Protection Agency's or the California Air Resources Board's Tier 4 final off-road emission standards. 2. Diesel engines, whether for off-road or on-road equipment, shall not be left idling for more than two minutes at any location, except as provided in exceptions to the applicable state regulations regarding idling for off-road and on-road equipment (e.g., traffic conditions and safe operating conditions). The contractor shall post legible and visible signs in English, Spanish, and Chinese in designated queuing areas and at the construction site to remind operators of the two-minute idling limit.	Less Than Significant with Mitigation (LTSM)

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		3. The contractor shall instruct construction workers and equipment operators in the maintenance and tuning of construction equipment, and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications. B. Construction Emissions Minimization Plan Before starting onsite construction activities, the contractor shall submit a construction emissions minimization plan to the ERO or designee for review and approval. The plan shall state, in reasonable detail, how the contractor will meet the engine requirements listed above. 1. The plan shall include estimates of the construction timeline by phase, with a description of each piece of off-road equipment required for every construction phase. The description may include but is not limited to equipment type, equipment manufacturer, equipment identification number, engine model year, engine certification (tier rating), horsepower, engine serial number, and expected fuel use and hours of operation. For off-road equipment using alternative fuels, the description shall also specify the type of alternative fuel being used. 2. Public Works shall ensure that all applicable requirements of the plan have been incorporated into the contract specifications. The plan shall include a certification statement that Public Works agrees to comply fully with the plan. 3. Public Works shall make the plan available to the public for review on site during working hours. Public Works shall post at the construction site a legible and visible sign summarizing the plan. The sign shall also state that the public may ask to inspect the plan for the proposed project at any time during working hours and shall explain how to request to inspect the plan. The project sponsor shall post at least one copy of the sign in a visible location on each side of the construction site facing a public right-of-way. C. Monitoring After start of construction activities, the contractor shall submit reports every six months to the ERO or designee, documenting compliance with the plan.	
Impact AQ-4: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact C-AQ-1: The proposed project, in combination with cumulative projects, could result in a significant cumulative impact on air quality.	Significant (S)	**Mitigation Measure M-AQ-3: Requirements for Off-Road Construction Equipment** as defined above	Less Than Significant with Mitigation (LTSM)
INITIAL STUDY SECTION E.9, GREENHOUSE GAS EMISSIONS (see Appendix B)			
Impacts C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.10, WIND (see Appendix B)			
Impact WI-1: The proposed project would not create wind hazards in publicly accessible areas of substantial pedestrian use.	No impact (NI)	No mitigation required	NA
Impact C-WI-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to wind.	No impact (NI)	No mitigation required	NA
INITIAL STUDY SECTION E.11, SHADOW (see Appendix B)			
Impact SH-1: The proposed project would not create new shadow that substantially and adversely affects the use and enjoyment of publicly accessible open spaces.	No impact (NI)	No mitigation required	NA
Impact C-SH-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to shadow.	No impact (NI)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
INITIAL STUDY SECTION E.12, RECREATION (see Appendix B)			
Impact RE-1: The proposed project would not increase the use of existing neighborhood and regional parks and other recreational facilities to such an extent that substantial physical deterioration of the facilities would occur or be accelerated.	Less Than Significant (LTS)	No mitigation required	NA
Impact RE-2: The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	No impact (NI)	No mitigation required	NA
Impact C-RE-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to recreation.	No impact (NI)	No mitigation required	NA
INITIAL STUDY SECTION E.13, UTILITIES AND SERVICE SYSTEMS (see Appendix B)			
Impact UT-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Less Than Significant (LTS)	No mitigation required	NA
Impact UT-2: The proposed project would have sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact UT-3: The proposed project would not result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has inadequate capacity to serve the proposed project's projected demand in addition to the provider's existing commitments.	Less Than Significant (LTS)	No mitigation required	NA
Impact UT-4: The proposed project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-UT-1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts on utilities and service systems.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.14, PUBLIC SERVICES (see Appendix B)			
Impact PS-1: The proposed project would not increase the demand for public services, and the construction of new or physically altered facilities would not be required.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact C-PS-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts on police, fire, and school district services such that new or physically altered facilities, the construction of which could cause significant environmental impacts, would be required to maintain acceptable levels of service.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.15, BIOLOGICAL RESOURCES (see Appendix B)			
Impact BI-1: Project construction could have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service.	Significant (S)	**Mitigation Measure M-BI-1: Special-Status Species and Jurisdictional Waters Impact Avoidance.** Construction activities shall avoid or minimize adverse effects to special-status species and their habitats, and on jurisdictional waters to the full extent feasible. Specifically: 1. A materials management disposal plan shall be prepared by the selected contractor to prevent any debris from falling into the bay during construction to the maximum extent practicable. This plan shall be submitted to the Regional Water Quality Control Board (RWQCB) for review and approval. The measures identified in this plan shall be based on the best available technology, and shall include, but not be limited to, the following measures: ■ During construction, the barges performing the work shall be moored in a position to capture and contain the debris generated during any substructure or in-water work. In the event that debris does reach the bay, personnel in workboats in the work area shall immediately retrieve the debris for proper handling and disposal. All debris shall be disposed of at an authorized upland disposal site. ■ Debris containment systems shall be implemented for work over water to prevent airborne or falling debris from entering the waters below. An encapsulation containment system shall be used to contain debris for rust, lead paint, and asbestos. ■ Measures shall be taken to ensure that fresh cement or concrete shall not be allowed to enter the bay. Construction materials, stockpiles, debris, and all grindings and asphaltic-concrete waste shall be stored in previously disturbed areas absent of habitat and at a minimum of 150 feet from any aquatic habitat, culvert, or drainage feature.	Less Than Significant with Mitigation (LTSM)

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		■ All equipment and vehicles shall be fueled only in designated areas away from catchbasins and at least 150 feet from the shoreline, fitted with functional, appropriate leak-containment best management practices (BMPs), including drip pans or other containment beneath each connection point to capture all spills and drips. For small equipment on barges, secondary containment shall also be provided during fueling. ■ All hazardous material shall be stored upland in storage trailers and/or shipping containers designed to provide adequate containment. Short-term laydown of hazardous materials for immediate use shall be permitted with the same antispill precautions. **Mitigation Measure M-BI-2: Fish and Marine Mammal Protection during Pile Removal.** Pile extraction shall be restricted to a work window of June 1 to November 30. Existing fenders and piling would be cut off just below the mudline and removed from the site. When piles or other debris from the existing fender system are removed from the channel, they shall be promptly removed from the water and placed on a barge. The barge shall be configured to contain all sediment that may be adhering to the removed piles to ensure that sediment does not fall into the water. **Mitigation Measure M-BI-3: Avoidance and Minimization Measures for Bats.** A qualified biologist (as defined by the CDFW[1]) who is experienced with bat surveying techniques (including auditory sampling methods), behavior, roosting habitat, and identification of local bat species shall be consulted prior to demolition activities or tree work to conduct a preconstruction habitat assessment of the project area to characterize potential bat habitat and identify potentially active roost sites. No further action is required should the preconstruction habitat assessment not identify bat habitat or signs of potentially active bat roosts in the project area (e.g., guano, urine staining, or dead bats). The following measures shall be implemented should potential roosting habitat or potentially active bat roosts be identified during the habitat assessment: 1. In areas identified as potential roosting habitat during the habitat assessment, initial structure demolition and any tree work (trimming or removal) shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15, to the extent feasible. These dates avoid the bat maternity roosting season and period of winter torpor.[2] 2. Depending on temporal guidance, as defined below, the qualified biologist shall conduct preconstruction surveys of potential bat roost sites identified during the initial habitat assessment no more than 14 days prior to demolition activities, tree trimming, or tree removal.	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		3. If active bat roosts or evidence of roosting is identified during preconstruction surveys for demolition, the qualified biologist shall determine, if possible, the type of roost and species. A no-disturbance buffer shall be established around roost sites until the qualified biologist determines that they are no longer active. The size of the no-disturbance buffer would be determined by the qualified biologist and would depend on the species present, roost type, existing screening around the roost site (such as dense vegetation or a building), as well as the type of construction activity that would occur around the roost site. 4. If special-status bat species or maternity or hibernation roosts are detected during these surveys, appropriate species- and roost-specific avoidance and protection measures shall be developed by the qualified biologist in coordination with CDFW. Such measures may include postponing the demolition of structures, establishing exclusionary work buffers while the roost is active (e.g., 100-foot no-disturbance buffer), or other compensatory mitigation. 5. The qualified biologist shall be present during demolition if potential bat roosting habitat or active bat roosts are present. Structures with active roosts shall be disturbed only under clear weather conditions when precipitation is not forecast for three days and when daytime temperatures are at least 50 degrees Fahrenheit. 6. Demolition of structures containing or suspected to contain bat roosting habitat or active bat roosts shall be performed under the supervision of the qualified biologist. When appropriate, structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost, likely in the evening and after bats have emerged from the roost to forage. Under no circumstances shall active maternity roosts be disturbed until the roost disbands at the completion of the maternity roosting season or otherwise becomes inactive, as determined by the qualified biologist. **Mitigation Measure M-BI-4: Worker Environmental Awareness Program Training.** Prior to the start of work, project-specific Worker Environmental Awareness Program (WEAP) training shall be developed specific to aquatic resources and onsite trees, and implemented by a qualified biologist and attended by all project personnel performing demolition or ground-disturbing work where landscaping/street trees, natural vegetation, or shoreline habitats are present. The WEAP shall include environmental permit and CEQA mitigation requirements related to biological resources for all stages of the project and shall be repeated as necessary to ensure that all personnel on the construction crew receive the training (i.e., when new personnel are added to the crew). The WEAP training shall generally include, but not be limited to, education about the following:	

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
		• applicable local, state and federal laws, environmental regulations, project permit conditions, and penalties for noncompliance; • special-status animal species with the potential to be encountered on or in the vicinity of the project area during construction; • avoidance measures and a protocol for encountering special-status species, including a communication chain; • pre-construction surveys and biological monitoring requirements associated with each phase of work and at specific locations in the project area (e.g., shoreline work) because biological resources and protection measures will vary depending on where work is occurring in the site, time of year, and construction activity; • known sensitive resource areas in the project vicinity that are to be avoided and/or protected, as well as approved project work areas, access roads, and staging areas; and • BMPs (e.g., straw wattles or spill kits) and their location around the project area for erosion control and species exclusion, in addition to general housekeeping requirements. **Mitigation Measure M-BI-5: Protection of Herring Spawn.** To ensure the protection of herring spawn, biological monitoring to identify spawn events shall occur during the herring spawning season, from December 1 through February 28. If herring spawning is observed, in-water work shall be suspended within 500 meters of spawning activity, and the work shall not resume until spawning has ended and eggs have hatched (up to 21 days).	
Impact BI-2: The proposed project could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the CDFW or United States Fish and Wildlife Service.	Significant (S)	**Mitigation Measure M-BI-1: Special-Status Species and Jurisdictional Waters Impact Avoidance, Mitigation Measure M-BI-2: Fish and Marine Mammal Protection during Pile Removal, Mitigation Measure M-BI-4: Worker Environmental Awareness Program Training, and Mitigation Measure M-BI-5: Protection of Herring Spawn.**	Less Than Significant with Mitigation (LTSM)
Impact BI-3: The proposed project would not have a substantial adverse effect on federally protected wetlands (including but not limited to marsh, vernal pool, coastal) through direct removal,	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
filling, hydrological interruption, or other means.			
Impact BI-4: The proposed project could 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.	Significant (S)	**Mitigation Measure M-BI-3: Avoidance and Minimization Measures for Bats.**	Less Than Significant with Mitigation (LTSM)
Impact BI-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-BI-1: The proposed project, in combination with cumulative projects, could result in significant cumulative impacts on biological resources.	Significant (S)	**Mitigation Measure M-BI-1: Special-Status Species and Jurisdictional Waters Impact Avoidance, Mitigation Measure M-BI-2: Fish and Marine Mammal Protection during Pile Removal, Mitigation Measure M-BI-3: Avoidance and Minimization Measures for Bats, Mitigation Measure M-BI-4: Nesting Bird Protection Measures, Mitigation Measure M-BI-4: Worker Environmental Awareness Program Training, and Mitigation Measure M-BI-5: Protection of Herring Spawn.**	Less Than Significant with Mitigation (LTSM)
INITIAL STUDY SECTION E.16, GEOLOGY AND SOILS (see Appendix B)			
Impact GE-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture; strong seismic ground shaking; seismically induced ground failure, including liquefaction; or landslides.	Less Than Significant (LTS)	No mitigation required	NA
Impact GE-2: The proposed project would not result in substantial erosion or loss of topsoil.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact GE-3: The proposed project would not result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse by being on a geologic unit or soil that is unstable, or that could become unstable.	Less Than Significant (LTS)	No mitigation required	NA
Impact GE-4: The proposed project would not create substantial risks to life or property by being located on expansive soils.	Less Than Significant (LTS)	No mitigation required	NA
Impact GE-5: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-GE-1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts on geology, soils, or paleontological resources.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.17, HYDROLOGY AND WATER QUALITY (see Appendix B)			
Impact HY-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact HY-2: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would result in substantial erosion, siltation, or flooding on- or offsite; that would create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or that would impede or redirect flood flows.	Less Than Significant (LTS)	No mitigation required	NA
Impact HY-3: The proposed project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.	Less Than Significant (LTS)	No mitigation required	NA
Impact HY-4: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-HY-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
INITIAL STUDY SECTION E.18, HAZARDS AND HAZARDOUS MATERIALS (see Appendix B)			
Impact HZ-1: The proposed project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials or be 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.	Less Than Significant (LTS)	No mitigation required	NA
Impact HZ-2: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant (LTS)	No mitigation required	NA
Impact C-HZ-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to hazards and hazardous materials.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.19, MINERAL RESOURCES (see Appendix B)			
San Francisco does not contain any mineral resources that are of value to the state, regional, or local level; therefore, mineral resources are not applicable to the Islais Creek Bridge Project.			
INITIAL STUDY SECTION E.20, ENERGY (see Appendix B)			
Impact EN-1: The proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.	Less Than Significant (LTS)	No mitigation required	NA
Impact EN-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant (LTS)	No mitigation required	NA

Environmental Impact	Level of Significance Prior to Mitigation	Improvement/Mitigation Measure	Level of Significance After Mitigation
Impact C-EN-1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts related to the wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant (LTS)	No mitigation required	NA
INITIAL STUDY SECTION E.21, AGRICULTURE AND FORESTRY RESOURCES (see Appendix B)			
San Francisco does not contain any prime farmland or other agricultural resources or forest resources; therefore, agriculture and forestry resources are not applicable to the Islais Creek Bridge Project.			
INITIAL STUDY SECTION E.22, WILDFIRE (see Appendix B)			
San Francisco is not located in a wildfire hazard zone; therefore, wildfire is not applicable to the Islais Creek Bridge Project.			

Notes:

1 CDFW defines credentials of a *qualified biologist* within permits or authorizations issued for a project. Typical qualifications include a minimum of four years of academic training leading to a degree and a minimum of 2 years of experience conducting surveys for each species that may be present in the project area.

2 *Torpor* refers to a state of decreased physiological activity with reduced body temperature and metabolic rate.

Significance Definitions:

NA = Not Applicable
NI = No Impact
LTS = Less than Significant
LTSM = Less than Significant with Mitigation
S = Significant
SUM = Significant and Unavoidable with Mitigation

S.3 Summary of Project Alternatives

CEQA guidelines section 15126.6(a) states that an EIR must describe and evaluate a reasonable range of alternatives to the proposed project that would feasibly attain most of the project's basic objectives, but that would avoid or substantially lessen any identified significant adverse environmental effects of the project. An EIR is not required to consider every conceivable alternative to a proposed project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

Chapter 6 of this EIR analyzes the No Project Alternative and Preservation Alternative to the proposed project that could attain project objectives and would avoid or lessen significant impacts to historic resources. These alternatives represent a reasonable range of potentially feasible alternatives to the proposed project that could attain project objectives and would avoid or substantially lessen the identified significant adverse environmental impacts to historic architectural resources. Alternatives that would lessen the transportation and circulation (construction-related transit delay) were considered, but rejected. Each alternative is summarized below.

S.3.1 No Project Alternative

The No Project Alternative would not demolish, replace, or improve the existing Islais Creek Bridge. The No Project Alternative would not meet most of the project objectives: the existing bridge's structural and seismic deficiencies would remain, the bridge's resilience to impacts of sea-level rise would not be improved, and multi-modal transportation safety and the operational utility of San Francisco Municipal Transportation Agency (SFMTA, or Muni) light rail operations would not be enhanced.

Impacts to historical architectural resources and transportation and circulation (construction-related transit delay) would not occur, because the existing Islais Creek Bridge would not be demolished or replaced. Similarly, the proposed project's less- than-significant impact to energy, hazardous materials, hydrology, geology and soils, public services, utilities/service systems, recreation, greenhouse gases, land use/land use planning, aesthetics, and air quality would be reduced to no impact under the No Project Alternative. Additionally, the proposed project's less-than-significant impact with mitigation to archeological resources, tribal cultural resources, air quality, and biological resources would be reduced to no impact under the No Project Alternative.

Therefore, the No Project Alternative would not have any project-level or cumulative impacts on any of the topics analyzed in the Initial Study (Appendix B).

S.3.2 Preservation Alternative

Under the Preservation Alternative, the bridge would be replaced at the same elevation as the proposed project, but would salvage, rehabilitate, and reinstall as many of the character-defining features of the original bridge as feasible. The Preservation Alternative would meet most of the project objectives of addressing the structural and seismic deficiencies of the existing bridge by replacing it with a new bridge. Similar to the proposed project, the Preservation Alternative would be resilient to predicted sea-level rise impacts up to 2100, and multi-modal transportation safety and the operational utility of Muni light rail operations would be enhanced. This alternative would result in a longer construction duration by approximately 3 to 4 months, compared to the proposed project.

Although the Preservation Alternative would retain some of the character-defining features of the project site, where feasible, it would cause material impairment to the bridge which would no longer convey its significance as an Art Moderne–style drawbridge. Therefore, the impact to historic resources would still be significant and unavoidable even with mitigation. Impacts to transportation and circulation would be similar under the Preservation Alternative but would extend the construction duration by approximately 3 to 4 months. In addition, the Preservation Alternative would have more intensive in-water work, resulting in greater archeological, tribal cultural resources, noise and vibration, and biological resources impacts. The significant effects to noise and vibration and biological resources would require implementation of Mitigation Measure M-ALT-NO-1: Protection of Utility Structures and Vibration Monitoring During Construction, and Mitigation Measure M-ALT-BI-1: Biological Monitoring of Dewatering and Cofferdam Activities. Finally, this alternative would result in impacts to the following resource topics: land use and land use planning, aesthetics, population and housing, air quality, greenhouse gas emissions, wind, shadow, recreation, utilities and service systems, public services, geology and soils, hydrology and water quality, hazards and hazardous materials, mineral resources, energy, agriculture and forestry resources, and wildfire.

S.4 Comparison of the Proposed Project and Alternatives

The proposed project and Preservation Alternative would be similar, with key differences in the preservation of character-defining features of the existing bridge. The No Project Alternative would not demolish the existing bridge, or make any improvements. The impacts of alternatives and the ability of each to meet the project objectives are discussed below and summarized in Table S-3 (on the following pages).

S.5 Environmentally Superior Alternative

The Preservation Alternative is considered the environmentally superior alternative because it would reduce impacts to historic architectural resources in comparison with the proposed project; however, the impact would still be significant and unavoidable, but to a lesser level, which would not occur with implementation of the proposed project. The Preservation Alternative meets most of the project sponsor's objectives.

Table S-3 Comparison of Environmental Impacts of the Islais Creek Bridge Project to Impacts of the Alternatives

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Cultural Resources			
Impact CR-1: The proposed project would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Significant and Unavoidable (SUM)	No impact (NI)	Less than the Proposed Project (SUM)
Impact CR-2: The proposed project would not result in a substantial adverse change in the significance of any adjacent historical resources pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact CR-3: The proposed project could cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines section 15064.5, and could disturb human remains, including those interred outside of formal cemeteries.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Slightly more than the Proposed Project (LTSM)
Impact C-CR-1: The proposed project, in combination with cumulative projects, would not result in cumulative impacts to historic architectural resources and would not result in a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-CR-2: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts to cultural resources.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Transportation and Circulation			
Impact TR-1: Construction of the proposed project would result in intensive and disruptive activities that would not create potentially hazardous conditions for people driving, walking, or bicycling, or for public transit operations, but could substantially delay public transit.	Significant and Unavoidable with Mitigation (SUM)	No impact (NI)	Slightly more than the Proposed Project (SUM)
Impact TR-2: Operation of the proposed project would not create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional vehicle miles traveled (VMT), substantially induce automobile travel, or result in substantial loading or parking deficits.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
I**mpact C-TR-1:** The construction of the proposed project, in combination with cumulative projects, would have cumulative impacts related to traffic delays during project construction. The proposed project, in combination with cumulative projects, would not contribute to potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations, or interfere with emergency access or accessibility for people walking or bicycling.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact C-TR-2: The operation of the proposed project, in combination with cumulative projects, would not create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional VMT or substantially induce automobile travel, or result in substantial loading or parking impacts.	No impact (NI)	No impact (NI)	Similar to Proposed Project (NI)
Land Use and Planning			
Impact LU-1: The proposed project would not physically divide an established community.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact LU-2: The proposed project would not cause a significant physical environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-LU-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to land use and planning.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Aesthetics			
Impact AE-1: The proposed project would not have a substantial adverse effect on a scenic vista.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AE-2: The proposed project would not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings on a state scenic highway.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact AE-3: The proposed project would not conflict with applicable zoning and other regulations governing scenic quality.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AE-4: The proposed project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-AE-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative aesthetic impact.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Population and Housing			
Impact PH-1: The proposed project would not induce substantial unplanned population growth, either directly or indirectly.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact PH-2: The proposed project would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-PH-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to population and housing.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Tribal Cultural Resources			
Impact TCR-1: The proposed project could result in a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Slightly more than the Proposed Project (LTSM)
Impact C-TCR-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on tribal cultural resources.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Noise			
Impact NO-1: Construction of the proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less Than Significant (LTS)	No impact (NI)	Greater impacts than the Proposed Project (LTS)
Impact NO-2: The proposed project would not generate excessive groundborne vibration or groundborne noise levels.	Less Than Significant (LTS)	No impact (NI)	Greater impacts than the Proposed Project (LTSM)
Impact NO-3: Operation of the proposed project would not generate noise levels in excess of standards in the local general plan or noise ordinance and would not result in a substantial increase in ambient noise levels in the project vicinity.	No impact (NI)	No impact (NI)	Similar to Proposed Project (NI)
Impact C-NO-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative noise or vibration impacts.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Air Quality			
Impact AQ-1: The proposed project could conflict with or obstruct implementation of the applicable air quality plan.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AQ-2: The proposed project would not result in a cumulatively considerable net increase in nonattainment criteria air pollutants.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AQ-3: The proposed project would generate toxic air contaminants, including diesel particulate matter, and could expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Similar to the Proposed Project (LTSM)
Impact AQ-4: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact C-AQ-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on air quality.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Similar to the Proposed Project (LTSM)
Greenhouse Gas Emissions			
Impacts C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Wind			
Impact WI-1: The proposed project would not create wind hazards in publicly accessible areas of substantial pedestrian use.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-WI-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to wind.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Shadow			
Impact SH-1: The proposed project would not create new shadow that substantially and adversely affects the use and enjoyment of publicly accessible open spaces.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-SH-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to shadow.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Recreation			
Impact RE-1: The proposed project would not increase the use of existing neighborhood and regional parks and other recreational facilities to such an extent that substantial physical deterioration of the facilities would occur or be accelerated.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact RE-2: The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-RE-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to recreation.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Utilities and Service Systems			
Impact UT-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact UT-2: The proposed project would have sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact UT-3: The proposed project would not result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has inadequate capacity to serve the proposed project's projected demand in addition to the provider's existing commitments.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
I**mpact UT-4:** The proposed project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-UT 1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts on utilities and service systems.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Public Services			
Impact PS-1: The proposed project would not increase the demand for public services, and the construction of new or physically altered facilities would not be required.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-PS-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts on police, fire, and school district services such that new or physically altered facilities, the construction of which could cause significant environmental impacts, would be required to maintain acceptable levels of service.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Biological Resources			
Impact BI-1: Project construction could have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or United States Fish and Wildlife Service.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Greater impacts than the Proposed Project (LTSM)
Impact BI-2: The proposed project could 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 CDFW or United States Fish and Wildlife Service.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Greater impacts than the Proposed Project (LTSM)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact BI-3: The proposed project would not have a substantial adverse effect on federally protected wetlands (including but not limited to marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact BI-4: The proposed project could 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.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact BI-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-BI-1: The proposed project, in combination with cumulative projects, could result in significant cumulative impacts on biological resources.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Greater impacts than the Proposed Project (LTSM)
Geology and Soils			
Impact GE-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture; strong seismic ground shaking; seismically induced ground failure, including liquefaction; or landslides.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-2: The proposed project would not result in substantial erosion or loss of topsoil.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-3: The proposed project would not result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse by being on a geologic unit or soil that is unstable or that could become unstable.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-4: The proposed project would not create substantial risks to life or property by being located on expansive soils.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-5: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-GE-1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts on geology, soils, or paleontological resources.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Hydrology and Water Quality			
Impact HY-1: The proposed project would not violate any water quality standards or waste discharge requirements and would result in less-than-significant impacts to water quality.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact HY-2: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion, siltation, or flooding on- or offsite; that would 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; or that would impede or redirect flood flows.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact HY-3: The proposed project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact HY-4: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-HY-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Hazards and Hazardous Materials			
Impact HZ-1: The proposed project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials or be 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.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact HZ-2: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-HZ-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to hazards and hazardous materials.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Mineral Resources			
San Francisco does not contain any mineral resources that are of value to the state, regional, or local level; therefore, mineral resources are not applicable to the Islais Creek Bridge Project.			
Energy			
Impact EN-1: The proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact EN-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact C-EN-1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts related to the wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Agriculture and Forestry Resources			
San Francisco does not contain any prime farmland or other agricultural resources or forest resources; therefore, agriculture and forestry resources are not applicable to the Islais Creek Bridge Project.			
Wildfire			
San Francisco is not located in a wildfire hazard zone; therefore, wildfire is not applicable to the Islais Creek Bridge Project.			

Significance Definitions:

NI = No Impact
NA = Not Applicable
LTS = Less than Significant
LTSM = Less than Significant with Mitigation
S = Significant
SUM = Significant and Unavoidable with Mitigation

S.6 Areas of Controversy and Issues to Be Resolved

Potential areas of controversy and issues to be resolved for the proposed project, as expressed by agencies and individuals, and the section(s) of the draft EIR in which each topic is addressed, are listed below:

- Project-related construction impacts affecting public transit and vehicle traffic rerouting (Section 4.C, Transportation and Circulation)
- Alternatives to minimize construction-related impacts (Chapter 6, Alternatives)
- Project construction impacts to San Francisco Public Utilities Commission's emergency bypass pipeline and infrastructure in the Islais Creek channel.

CHAPTER 1
INTRODUCTION

1.A Purpose of the Environmental Impact Report

The California Environmental Quality Act (CEQA) requires that state, regional, and local government agencies consider the environmental effects of projects over which they have discretionary authority before taking action on those projects (Public Resources Code section 21000 *et seq.*). An Environmental Impact Report (EIR) is an informational document used by a lead agency (in this case, the City and County of San Francisco [city]) when considering approval of a project. The purpose of an EIR is not to recommend either approval or denial of a project, but, in accordance with the CEQA guidelines (section 15064[f][1]), to disclose the potential environmental impacts of a project to public agency decision makers and the general public; identify possible ways to minimize the significant effects; and describe reasonable alternatives to the Islais Creek Bridge Project (the proposed project) that could feasibly attain most of the basic objectives of the proposed project, while substantially lessening or avoiding any of the significant environmental impacts.

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

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

Public agencies are required to consider the information presented in the EIR when determining whether to approve a project. This EIR for the proposed project has been prepared in accordance with, and complies with, all criteria, standards, and procedures of CEQA, as amended (Public Resources Code section 21000 et seq.); and state CEQA guidelines (California Code of Regulations, Title 14, section 15000 et seq.). This EIR has been prepared by the San Francisco Planning Department (planning department) as the lead agency under CEQA (section 21067 of CEQA and sections 15367 and 15050 through 15053 of the state CEQA guidelines).

1.B Project Summary

The city is proposing to demolish the existing bridge and construct a new Islais Creek Bridge (officially named the Levon Hagop Nishkian Bridge) along Third Street in San Francisco. The existing Islais Creek Bridge is structurally deteriorated and seismically deficient. The proposed replacement bridge would meet current structural and seismic standards, and would be resilient to predicted sea-level-rise impacts up to the year 2100. The existing drawbridge would be replaced with a fixed bridge that would accommodate a center 26-foot-wide dedicated light rail transit (light rail) tracks, two 11-foot travel lanes in each direction, a 12-foot-wide Class I shared pedestrian/bicycle path on the eastern side of the bridge, and a 16-foot-wide Class I shared pedestrian/bicycle path on the western side of the bridge.

1.C Environmental Review Process

The planning department, serving as lead agency responsible for administering the environmental review on behalf of the city, determined that an EIR must be prepared to evaluate potentially significant effects that

could result from implementation of the proposed project. An EIR is a public information document for use by government agencies and the public to identify and evaluate potential impacts of a project, identify mitigation measures to lessen or eliminate significant adverse impacts, and examine feasible alternatives to the project. The information contained in this EIR will be reviewed and considered by decision makers prior to a decision to approve, disapprove, or modify the proposed project. The environmental review process for an EIR includes the following steps: publication of a notice of availability of a notice of preparation (NOP) of an EIR and public scoping; publication of a draft EIR, including initial study, for public review and comment; preparation and publication of responses to public and agency comments on the draft EIR; and certification of the final EIR. These main steps are described in the following sections.

1.C.1 Notice of Preparation of an Environmental Impact Report and Public Scoping

Consistent with the requirements of CEQA guidelines sections 15063 and 15082, the planning department made a good-faith effort during the preparation of the draft EIR to contact all responsible and trustee agencies; organizations and persons who may have an interest in the proposed project; and applicable government agencies, including the Governor's Office of Planning and Research, State Clearinghouse. This outreach effort included the circulation of an NOP on May 31, 2023, which began a 30-day comment period that ended on June 30, 2023. The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the draft EIR. The NOP is included as Appendix A to this draft EIR.

The planning department mailed the Notice of Availability of the Notice of Preparation to tenants and property owners within 300 feet of either side of the Islais Creek Bridge project site, as well as emailed the notice to neighborhood groups in Potrero Hill, Bayview, and citywide organizations who expressed interest in projects citywide and requested project notifications from the planning department. In addition to physical mailings and e-mail notifications, the department physically posted posters on each side of the Islais Creek Bridge and posted notices in SFMTA buses and light rail vehicles for the duration of the NOP comment period. The department placed an advertisement in the San Francisco Examiner on May 31, 2023 to announce the opportunity for public input on the Islais Creek Bridge Project's environmental review. In addition to English, the planning department translated the notice of availability into Chinese, Spanish, Filipino, and Vietnamese. The planning department mailed the notice of availability in all four languages to tenants and property owners within 300 feet of the project site and posted these notices on the planning department's environmental review webpage.

During the scoping period, interested parties submitted comments to the planning department. The planning department considered the comments made by the public and agencies in preparation of this draft EIR, as summarized in Table 1.C-1. Comments on the NOP that pertain to environmental issues related to potential physical environmental impacts of the proposed project are addressed and analyzed throughout this draft EIR or were previously addressed in the project's initial study (circulated with the NOP). Table 1.C-1 lists the commenter and indicates the section(s) of the initial study or draft EIR where each comment is addressed.

Table 1.C-1 Summary of Scoping Comments

Commenter	Summary of Comment	Draft EIR and/or Initial Study Section
Agencies		
Native American Heritage Commission (*Cody Campagne, Cultural Resources Analyst*)	• Comply with Assembly Bill 52 for tribal cultural resources. • Consult with California Native American tribes that are traditionally and culturally affiliated with the area of the proposed project. • Evaluate impacts to tribal cultural resources in the environmental document.	Tribal Cultural Resources (Appendix B: Initial Study, Section E.4)
California Geological Survey (*Dr. Erik Frost, Senior Engineering Geologist*)	• Address the potential hazard of liquefaction with respect to the proposed project.	Geology and Soils (Appendix B: Initial Study, Section E.16)
San Francisco Public Utilities Commission (SFPUC) (*Clarissa Wong, Associate Engineer*)	• Evaluate project impacts to SFPUC's emergency bypass pipe and other cables in the vicinity of project.	Noise (Appendix B: Initial Study, Section E.7)
California Department of Fish and Wildlife (CDFW) (*Craig Shuman, Marine Regional Manager*)	• Acknowledge that certain aspects of the proposed project may require a California Endangered Species Act (CESA) Incidental Take Permit or a Lake and Streambed Alteration Notification, pursuant to Fish and Game Code section 1600 et seq. • Acknowledge that CDFW has authority over actions that may result in disturbance or destruction of active bird nest sites. • Analyze project impacts, including increased turbidity and elevated underwater sound levels from pile or driving activities, to state-listed species related to in-water work and piling driving, and include avoidance, minimization, and mitigation measures to avoid and/or lessen impacts to listed species. • Recommend early coordination with CDFW regarding the project's design.	Biological Resources (Appendix B: Initial Study, Section E.15)
Organizations		
None received		
Individuals		
Jack Sloop	• Evaluate the project's construction-related transportation impacts to the T-Third Street Muni light-rail line.	Transportation and Circulation (Draft EIR, Section 4.C)
Pixxi Campbell	• Evaluate the project's construction-related transportation impacts to the T-Third Street Muni light-rail line.	Transportation and Circulation (Draft EIR, Section 4.C)

Commenter	Summary of Comment	Draft EIR and/or Initial Study Section
Aaron Goodman	• Evaluate the project's construction-related transportation impacts and potential cumulative transportation impacts due to other projects in the area, such as the BioSolids Digester Project, other large construction projects in the Bayview neighborhood, and sporting events. • Expressed concerns and inquiry regarding community outreach efforts as well as coordination with United States Postal Service. • Expressed concerns about the project's aesthetics impacts. • Expressed concerns about access to nearby open spaces during construction. • Evaluate project-related construction impacts to hydrology and water quality with consideration of future sea-level rise impacts. • Evaluate alternatives with less impacts than the current project.	Environmental Review Process (Draft EIR, Section 1.C) Project Description (Draft EIR, Chapter 2) Historic Architectural Resources (Draft EIR, Section 4.B) Transportation and Circulation (Draft EIR, Section 4.C) Aesthetics (Appendix B: Initial Study, Section E.2) Recreation (Appendix B: Initial Study, Section E.12) Hydrology and Water Quality (Appendix B: Initial Study, Section E.17) Alternatives (Draft EIR, Chapter 6)
Larry (no last name provided)	• Evaluate project construction-related impacts to transit. • Evaluate a 24-hour, 7-day a week construction alternative.	Transportation and Circulation (Draft EIR, Section 4.C) Alternatives Considered but Rejected (Draft EIR, Section 6.E)

1.C.2 Draft EIR Public Review and Opportunities for Public Participation

The CEQA guidelines and San Francisco Administrative Code chapter 31 encourage public participation in the planning and environmental review processes. The city will provide opportunities for the public to present comments and concerns regarding this EIR and its CEQA process. These opportunities will occur during the public review and comment period as well as at a public hearing before the San Francisco Planning Commission (planning commission).

The draft EIR, including the initial study, is available for public review and comment on the planning department's "Environmental Review Documents" web page (https://sfplanning.org/environmental-review-documents). A USB or paper copy of the draft EIR will be mailed upon request. Please contact the EIR Coordinator, Elizabeth White, at CPC.IslaisCreekBridgeProject@sfgov.org or 628.652.7557 to make a request.

The public review period for the draft EIR and the initial study is from November 29, 2023, through January 22, 2024. The planning commission will hold a public hearing during the 54-day public review and comment period to solicit public comment on the information presented in the draft EIR and initial study. The planning commission public hearing will be held on January 4, 2024, beginning at 12 PM or later. Members of the public may attend this hearing in person at San Francisco City Hall or participate remotely using videoconferencing technology. Additional information may be found on the planning department's website at https://sfplanning.org/hearings-cpc-grid.

In addition, governmental agencies, interested organizations, and other members of the public are invited to submit written comments on the adequacy and accuracy of the draft EIR during the public review period. Written public comments may be submitted by mail to:

San Francisco Planning Department
Attention: Elizabeth White, Environmental Coordinator
49 South Van Ness Avenue, Suite 1400
San Francisco, CA 94103

Or by email to:

CPC.IslaisCreekBridgeProject@sfgov.org

Comments are most helpful when they address the environmental analysis itself or suggest specific alternatives and/or additional measures to mitigate the significant environmental impacts of the proposed project.

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

1.C.3 Responses to Comments Document and Final EIR

Following the close of the public review and comment period, the planning department will prepare and publish a document entitled "Responses to Comments on the draft EIR." This document will contain copies of all written, email, and recorded verbal comments received on the draft EIR; the planning department's written responses to substantive comments; and any necessary revisions to the draft EIR. The responses to comments document, together with the draft EIR, will constitute the final EIR.

Not less than 10 days prior to the planning commission hearing to consider certification of the final EIR, the final EIR will be made available to the public and any board(s), commission(s) or department(s) that will carry out or approve the proposed project. The planning commission, in a noticed public meeting, will consider the documents and will certify the final EIR, provided it (1) was completed in compliance with CEQA; (2) was presented to the planning commission, which reviewed and considered the information contained in the final EIR prior to approving the proposed project; and (3) reflects the lead agency's independent judgment and analysis.

CEQA requires agencies to neither approve nor implement a project unless the project's significant environmental impacts have been reduced to a less-than-significant level, thereby essentially eliminating, avoiding, or substantially lessening the potentially significant impacts of the proposed project, except when certain findings are made. If an agency approves a project that would result in the occurrence of significant adverse impacts that cannot feasibly be mitigated to less-than-significant levels (that is, significant and unavoidable impacts), the agency must state the reasons for its action in writing; demonstrate that mitigation is infeasible, based on the EIR or other information in the record; and adopt a Statement of Overriding Considerations explaining in writing the specific economic, social, or other considerations that it believes would make those significant effects acceptable.

1.C.4 Mitigation Monitoring and Reporting Program

At the time of project approval, CEQA and the CEQA guidelines require agencies to adopt a mitigation monitoring and reporting program and to make that program a condition of project approval, to mitigate or avoid significant impacts on the environment (CEQA section 21081.6; CEQA guidelines section 15097). This draft EIR identifies and presents mitigation measures that would form the basis of such a mitigation monitoring and reporting program. In addition, mitigation measures that are recommended in the initial study to reduce the environmental impacts of the proposed project will be included in the mitigation monitoring and reporting program.

1.D Scope of the Environmental Impact Report

1.D.1 Topics Addressed in this Environmental Impact Report

Pursuant to section 15143 of the state CEQA guidelines, a lead agency may focus an EIR's discussion on specific issue areas where significant impacts on the environment may occur: "[e]ffects dismissed in an initial study as clearly insignificant and unlikely to occur need not be discussed further in the EIR unless the Lead Agency subsequently receives information inconsistent with the finding in the initial study. A copy of the initial study may be attached to the EIR to provide the basis for limiting the impacts discussed." The initial study for the proposed project is included in Appendix B of this draft EIR.

Pursuant to CEQA guidelines section 15063(c)(3), and based on its review of existing information and the initial study completed for the proposed project, the city determined that the proposed project would have significant or potentially significant impacts in the following resource areas that require further analysis and are therefore discussed in this draft EIR:

- Historic Architectural Resources
- Transportation and Circulation

The environmental analysis for these topics is presented in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, of this draft EIR.

1.D.2 Topics Addressed in the Project's Initial Study

For all the issues listed below, the information and analysis presented in the initial study provides substantial evidence for the conclusions that 1) CEQA standards triggering preparation of further environmental review do not exist for these issues; and 2) impacts under these topics would be less than significant, or less than significant with incorporation of appropriate mitigation measures identified in the initial study. Topics addressed in the project's initial study are listed below by environmental topic, in accordance with San Francisco Administrative Code chapter 31. Chapter 31 directs the planning department to identify the environmental effects of a project using the environmental checklist form set forth in the CEQA guidelines, Appendix G, as modified by the department. These topics are, however, analyzed in the initial study for full disclosure of the environmental determination, and are included in Appendix B of this draft EIR.

- Land Use and Planning
- Aesthetics
- Population and Housing
- Cultural Resources (Archeological Resources and Human Remains)
- Tribal Cultural Resources
- Noise
- Air Quality
- Greenhouse Gas Emissions
- Wind
- Shadow
- Recreation
- Utilities and Service Systems
- Public Services
- Biological Resources
- Geology and Soils
- Hydrology and Water Quality
- Hazards and Hazardous Materials
- Mineral Resources
- Energy
- Agricultural and Forestry Resources
- Wildfire

1.E Organization of the Draft Environmental Impact Report

This draft EIR is divided into the following chapters and appendices:

- **Summary.** This chapter summarizes the draft EIR by providing a concise overview of the proposed project, including the project description and requisite approvals; the environmental impacts that would result from implementation of the proposed project; mitigation measures identified to reduce or avoid these impacts; alternatives to the proposed project; and areas of controversy and issues to be resolved.

- **Chapter 1, Introduction.** This chapter includes a discussion of the purpose of this EIR; the environmental review process; the comments received on the scope of the draft EIR; opportunities for public participation in the environmental review process; and the organization of the draft EIR.

- **Chapter 2, Project Description.** This chapter presents a detailed discussion of the location, setting, and characteristics of the project site; the project objectives; the project features; and environmental review requirements.

- **Chapter 3, Plans and Policies.** This chapter provides a summary of the plans, policies, and regulations of the city that are applicable to the proposed project.

- **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures.** This chapter describes the existing environmental setting and regulatory framework, as well as the direct, indirect, and cumulative impacts of the proposed project. Mitigation measures are identified, where feasible, to minimize significant environmental effects of the proposed project. Each environmental topic is discussed in a separate section of this chapter.

- **Chapter 5, Other CEQA Considerations.** This chapter describes the significant and unavoidable environmental impacts of the proposed project, as well as the significant irreversible environmental changes that would result from project implementation.

- **Chapter 6, Alternatives.** This chapter describes a reasonable range of alternatives to the proposed project; evaluates the extent to which those alternatives could substantially lessen the significant impacts of the proposed project while attaining most of the project's objectives; and compares the

effects of the alternatives to those of the proposed project. This section also identifies the environmentally superior alternative, as required by CEQA.

- **Chapter 7, Report Preparers.** This chapter lists the persons involved in preparing this document.

- **Appendices.** Appendices include:
  - Appendix A, Notice of Preparation
  - Appendix B, Initial Study
  - Appendix C, Historic Resource Status of Islais Creek Bridge Memorandum
  - Appendix D, Islais Creek Bridge Preservation Alternative Memorandum
  - Appendix E, Public Works Standard Construction Measures

CHAPTER 2
PROJECT DESCRIPTION

2.A Introduction

San Francisco Public Works (Public Works) is proposing to replace the Islais Creek Bridge (officially named the Levon Hagop Nishkian Bridge) along Third Street in San Francisco. The existing Islais Creek Bridge is structurally deteriorated and seismically deficient. The proposed replacement bridge would meet current structural and seismic standards, and would be resilient to predicted sea-level-rise impacts up to the year 2100. The existing drawbridge[1] would be replaced with a fixed bridge, and passage under the bridge to Islais Creek channel (the channel) west of the new bridge would be limited to small personal craft such as canoes, kayaks, and rowboats.

With the exception of a new pedestrian/bicycle path, the project would not change the existing lane configuration of the bridge. The new bridge would accommodate a center 26-foot-wide dedicated light rail trackway, two 11-foot travel lanes in each direction, a 12-foot-wide Class I shared pedestrian/bicycle path on the eastern side of the bridge, and a 16-foot-wide Class I shared pedestrian/bicycle path on the western side of the bridge.

The Islais Creek Bridge would be resilient to projected sea-level rise impacts up to 2100 and is consistent with future planning efforts as part of the Islais Creek Adaptation Strategy.[2] The bridge is designed at a compatible elevation to align with future shoreline armoring measures on the Islais Creek channel banks adjacent to the bridge without requiring further modification to the bridge. For more detail on the project's design and sea-level rise considerations, see Appendix B, Section 17, Hydrology and Water Quality.

2.B Project Overview and Location

Land uses surrounding the Islais Creek Bridge are primarily industrial or commercial. There is a SFMTA bus facility northwest of the bridge, San Francisco Fire Department – Station No. 25 to the southeast of the bridge, and a concrete batch plant and Port of San Francisco uses east of the bridge. There are light industrial and additional Port of San Francisco uses northeast of the bridge. Several wastewater treatment system assets are situated along the channel, including the SFPUC outfall from the southeast treatment plant and the booster pump station (southwest of the bridge) as well as outfall pipes that run below the creek adjacent to the bridge (below the channel) and along the northern side of the channel to San Francisco Bay (the bay).

The Islais Creek Bridge is on Third Street over the channel in San Francisco's Bayview neighborhood (Figure 2.B-1). The bridge is approximately 1,700 feet east of Interstate 280 (I-280), and approximately 3,300 feet west of the bay. There are various parks and open spaces within a quarter mile of the project site, including the Bayview Gateway (which includes the Rosa Parks Skate Plaza), Tulare Park, and the Islais

[1] The existing drawbridge has not been used for large ships since 1974.
[2] San Francisco Planning Department. Islais Creek Adaptation Strategy, *https://sfplanning.org/project/islais*, accessed July 24, 2023.

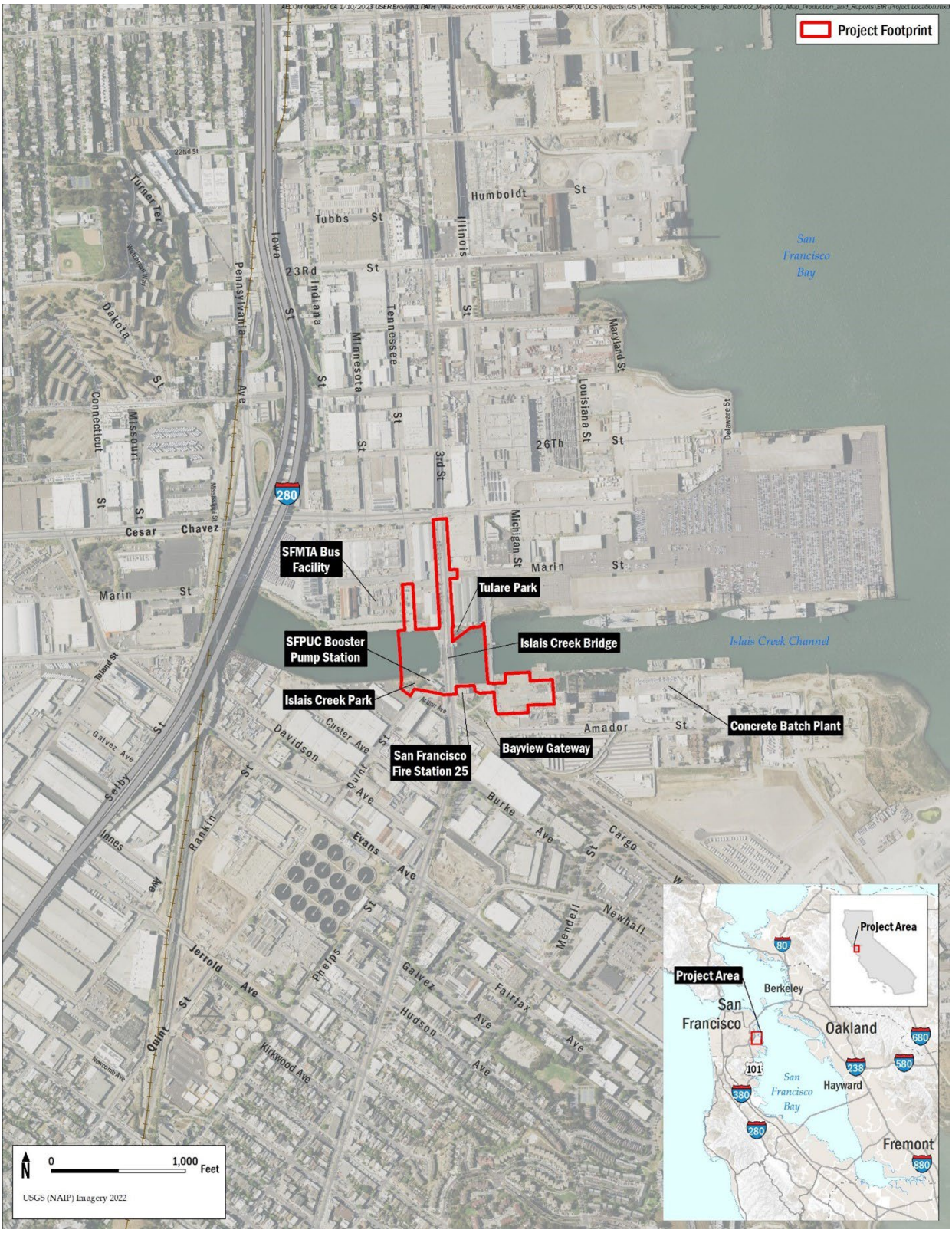

Figure 2.B-1 **Project Location**

Creek Park. Third Street is a major arterial,[3] connecting the downtown area to the industrial area of the southern San Francisco waterfront. The channel is a dredged, channelized, tidal body of water with predominantly armored shorelines. The channel extends from the bay to the site of the former outfall of the culverted and buried Islais Creek. The project area is underlain by artificial fill over Young Bay Mud[4] deposits to a depth of 60 feet. The channel is a navigable waterway regulated by the United States Coast Guard (coast guard). The channel receives relatively little freshwater input and is essentially an extension of the bay.

2.C Existing Bridge

Completed in 1950, the existing drawbridge (Figure 2.C-1) is made up of two separate sections that open in the middle, allowing boats access to the upper approximately 1,500-foot segment of the Islais Creek channel to the west of the bridge. The two bridge sections sit on separate concrete foundations called abutments, with one abutment on each side of the channel. Each of the two bridge sections consists of three through-girders. A girder is a horizontal, steel support beam that acts as the primary support for a bridge. The through-girders protrude both above and below the open-grid steel decking. An open steel grating extends between the girders, supporting Third Street. The existing bridge deck is approximately 114 feet long and approximately 100 feet wide.

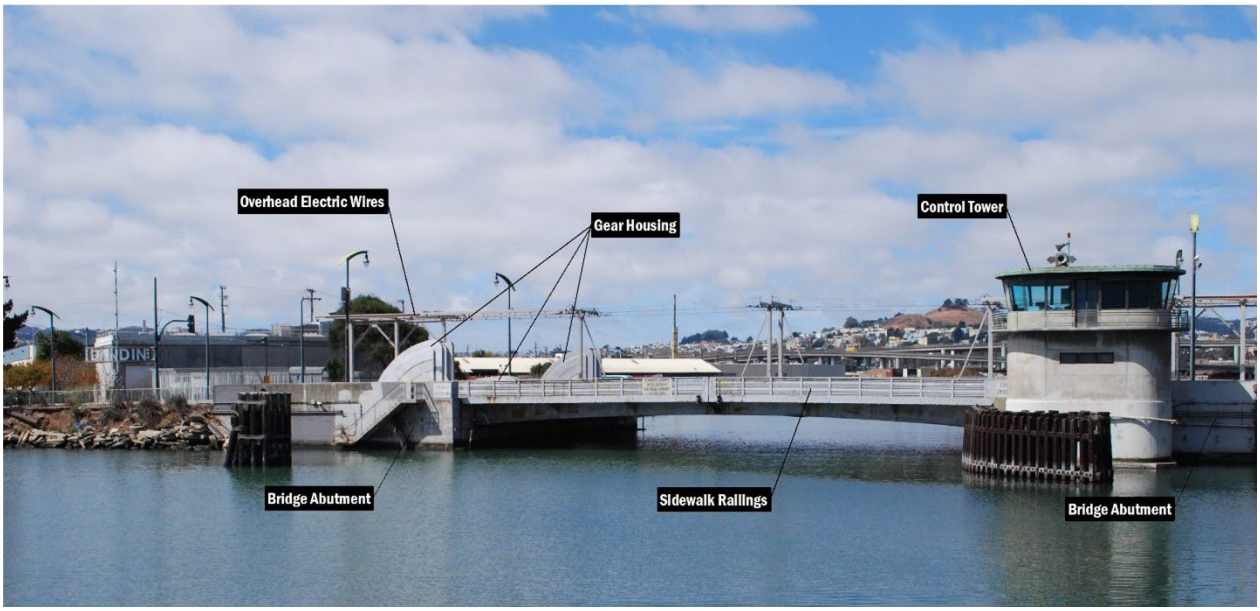

Figure 2.C-1 Islais Creek Bridge East Elevation

As originally designed in 1950, the bridge carried only vehicular traffic and pedestrians. In 2007, SFMTA retrofitted the bridge to carry two light rail tracks, with overhead electric wires and poles to provide power to light rail vehicles. The retrofit added five 48-inch cast-in-steel-shell piles at each abutment. The existing bridge now carries four lanes of vehicle traffic, two Muni light rail tracks, and two sidewalks. Light rail

[3] The San Francisco General Plan designates Third Street as a major arterial in the Congestion Management Program network, and as part of the Metropolitan Transportation System network. Third Street is also designated as a transit preferential street (transit important) street, a citywide pedestrian network street, a neighborhood commercial pedestrian street, and a freight traffic route.

[4] Young Bay Mud is a Holocene marine deposit of the San Francisco Bay. This deposit is distinguished from Old Bay Mud because sea-level changes interrupted deposition.

vehicles must slow to pass through the horizontal alignment reverse curve[5] at the bridge approaches, and as vehicles cross the gaps in the rails where the two bridge halves meet. The deteriorated condition of the bridge makes the bridge deck susceptible to vibration, which is created by heavy vehicles, trucks, and light rail vehicles crossing the bridge. The sidewalks and bridge deck are open-steel grates that discharge stormwater directly to the channel. Because it is a drawbridge, the bridge carries no utility connections across the channel.

The bridge control tower that houses the operator's controls is on the northeastern side and immediately adjacent to the bridge. The tower consists of two elevated concrete floors, a basement level, and a steel-and-wood roof supported by steel pipe columns.

In 2004, the California Department of Transportation (Caltrans) conducted an evaluation of the bridge's historic significance. It was determined that the bridge was significant as an example of the Art Moderne style applied to a bridge.[6] These features make the bridge eligible for the National Register of Historic Places (National Register) for its distinctive design qualities.

2.D Project Sponsor Objectives

Project objectives define the project's intent, explain the project's underlying purpose, and facilitate the formation of project alternatives evaluated in this draft EIR. As the project sponsor, Public Works seeks to achieve the following objectives:

- Increase the distance between the bridge's lowest point and the existing channel's water elevation to the maximum extent practicable. This will extend the useful life of the bridge by improving the bridge's resilience to the impacts of sea-level rise, avoiding the current recurring submersion of the bridge underdeck and flooding of the machine rooms, and reducing the bridge's exposure to seawater and sustained moisture.

- Address the existing bridge's seismic deficiencies by replacing it with a new bridge that is seismically adequate.

- Minimize the project's construction times to the maximum extent practicable to reduce impacts to Bayview Hunters Point residents. The Bayview Hunters point neighborhood has a substantially larger percentage of Black/African-American and Latinx residents when compared to the San Francisco as a whole, and the per capita income is less than half of San Francisco's average. The road and trackway over the bridge provides a vital connection between the San Francisco downtown and Mission Bay areas and Bayview Hunters Point, whose residents would disproportionately experience transit delays and detours during project construction.

- Increase the serviceability of the bridge to improve multi-modal transportation safety and increase operational utility to Muni light rail operations.

- Maintain current geometric, construction, and structural standards required for the types and volume of projected traffic on the bridge over its design life to ensure continued access from the Bayview Hunters

[5] The Islais Bridge Creek reverse curve is Muni's light rail track curving, which moves the track alignment to avoid the bridge's center girder.
[6] Caltrans, Department of Parks and Recreation Primary Record, Third Street Bridge over Islais Creek, June 2004.

point neighborhood to the rest of San Francisco and the region. This is intended to ensure that the bridge is operationally and structurally adequate for its entire design life.

- As part of the proposed project, provide a bicycle facility that could eventually be incorporated into the city's bicycle route planning.

2.E Project Location and Site Characteristics

The Islais Creek Bridge is on Third Street over the channel in San Francisco's Bayview neighborhood. The existing bridge deck is approximately 114 feet long and approximately 100 feet wide. San Francisco Fire Station #25 is adjacent to the project site to the southeast; Islais Creek Park is adjacent to the site to the southwest; the SFMTA bus facility is northwest of the site; and Tulare Park and commercial uses are to the northeast of the site. Adjacent areas outside of the bridge would be used during construction activities for staging, to modify Third Street, and to construct the new bridge. Figure 2.B-1 shows the project location and project footprint. The following sections describe the existing conditions of the surrounding area in more detail.

2.E.1 Land Use and Zoning

The areas adjacent to the project site are in the Production, Distribution, and Repairs (PDR-2) and Heavy Industrial (M-2) Zoning Use Districts. The PDR-2 district is primarily intended for a wide range of light and contemporary industrial uses. The M-2 Zoning Use District is intended for heavy industrial uses; these are the least restricted districts for industrial uses because they are on the eastern edge of San Francisco and separated from residential and commercial areas. Land uses in the project area are a mix of commercial and light industrial.

2.E.2 Existing Circulation

The Islais Creek Bridge serves as a major link between San Francisco's downtown and Mission Bay areas and the Bayview Hunters Point neighborhood. Third Street runs north and south between Bayshore Boulevard and Market Street. In the vicinity of the project site, Third Street has two travel lanes in each direction, with the T-Third light rail tracks in a center median. A Class 3 bicycle facility runs along Third Street south of Cargo Way. The segment of Third Street over the channel (i.e., Islais Creek Bridge) has 28-foot-wide light rail tracks in the center, one 10-foot and one-14-foot travel lane in each direction, and 7-foot sidewalks on each side (excluding railings).

The Islais Creek Bridge is approximately 1 mile northeast of the interchange of U.S. Highway 101 (U.S. 101) and I-280, and both I-280 and U.S. 101 provide freeway access to and from the project site. The project site can be directly accessed from the Bayshore Boulevard/Jerrold Avenue off-ramp in the northbound direction and the Cesar Chavez Street off-ramp in the southbound direction. Local streets surrounding the project area include Illinois Street, Marin Street, Amador Street, Cargo Way, Cesar Chavez Street, and Evans Avenue.

Three Muni routes operate across the Islais Creek Bridge, including the T-Third Street light rail, the 15-Bayview Hunters Point Express bus, and the 91-Third Street/19th Avenue Owl. The closest T-Third Street light rail station north of the bridge is at Marin Street. The closest T-Third Street light rail station south of the bridge is at Evans Avenue.

There are no on-street freight (yellow) loading spaces along Third Street in the vicinity of the project site.

2.F Project Description

2.F.1 Bridge

The proposed project would involve the demolition and removal of the existing bridge deck, including all electrical equipment and drive machinery needed to open the drawbridge. These features would be replaced with a new 115-foot-long, 114-foot-wide, single-span precast/prestressed concrete through-girder with adjacent box beams[7] bridge, featuring a cast-in-place, reinforced-concrete topping. The bottom and top of deck elevation for the existing bridge are approximately 10.18 feet and 15.18 feet, respectively, from base flood (100-year) water surface elevation at the bridge.[8] The proposed project would increase this elevation and achieve a bottom of bridge minimum elevation of 15.2 feet and a top of deck minimum elevation of 18.6 feet; this design would provide an increased clearance of approximately 5.2 feet when compared to the existing bridge (see Figure 2.F-1). The new bridge would accommodate a center 26-foot-wide dedicated light rail trackway, two 11-foot-wide travel lanes in each direction, a 12-foot-wide Class I pedestrian path on the eastern side of the bridge, and a 16-foot-wide Class I shared pedestrian/bicycle path on the western side of the bridge (Figure 2.F-2 and Figure 2.F-3). The pedestrian/bicycle paths would be cantilevered off the exterior girders and would include a steel pedestrian/bicycle railing. The structure would consist of four through-girders. As shown on Figure 2.F-2, "through-girder" refers to a bridge type in which the bridge girders protrude above the bridge deck. The two exterior girders would support the combined pedestrian/bicycle path and half of the vehicle lanes, and the interior girders would support the other half of the vehicle lanes and the light rail trackway. Approximately 4 feet of the overall girder depth would be below the deck surface, with approximately 5 feet (exterior, facing the sidewalks) and approximately 6 feet (interior, facing the roadway) above the deck surface. The portions of the girders above the deck surface would serve as barriers between the trackway, Third Street vehicle lanes, and the pedestrian/bicycle paths.

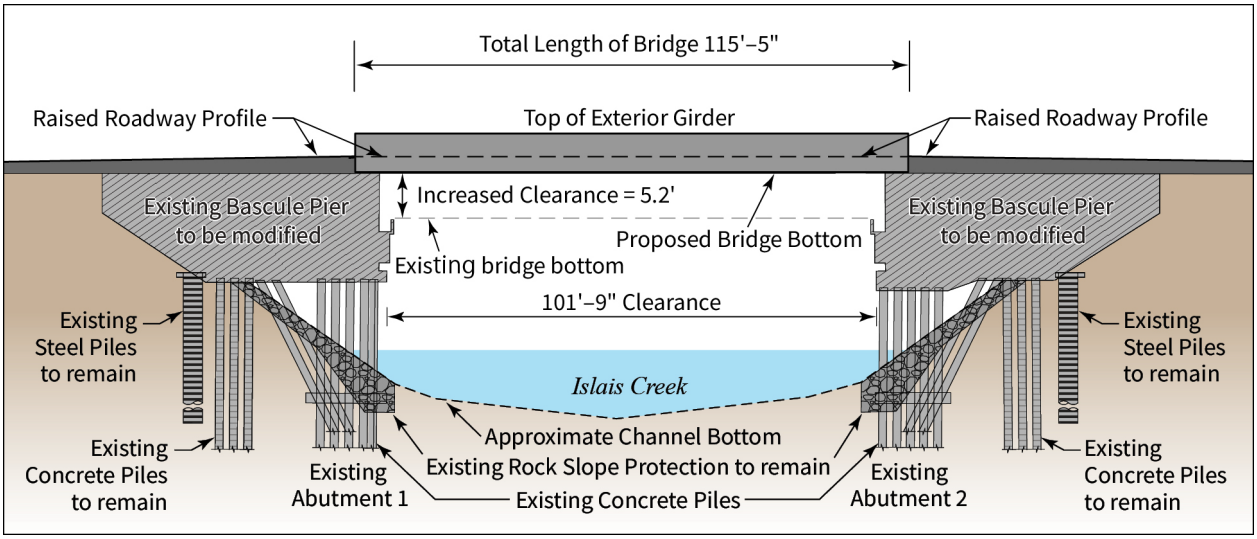

Figure 2.F-1 Proposed Bridge Longitudinal Section

[7] A box beam is a bridge component in which the cross section of the horizontal members are in the shape of a hollow box.

[8] Base flood elevation is the elevation of surface water resulting from a flood that has a 1 percent chance of equaling or exceeding that level in any given year. Base flood elevation is the design flood for this project and is 10 feet at the location of Islais Bridge.

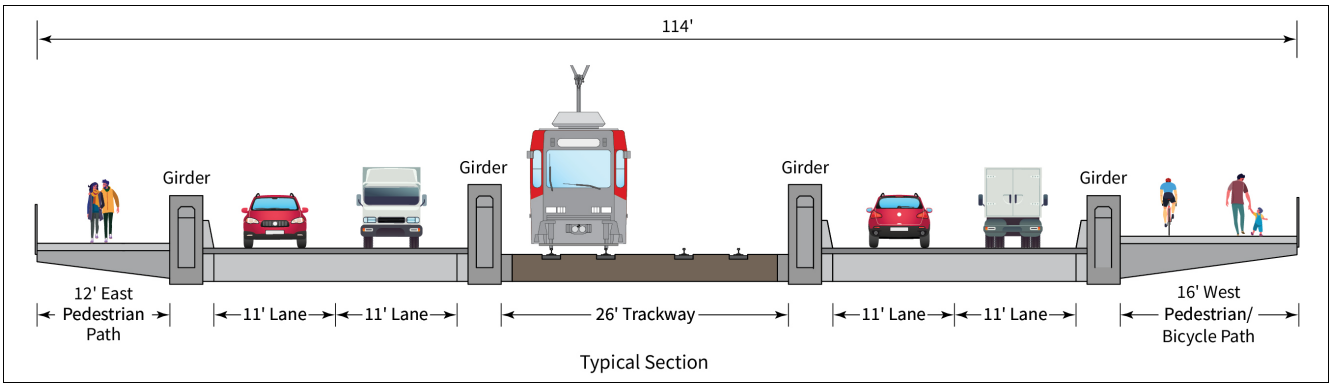

Figure 2.F-2 Proposed Bridge Cross Section

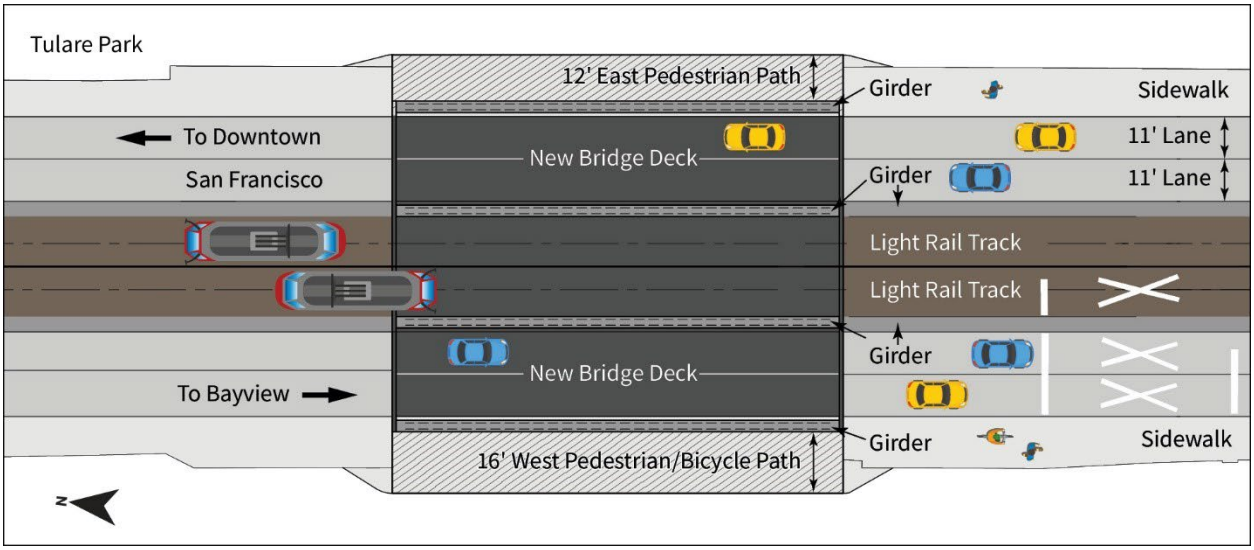

Figure 2.F-3 Proposed Bridge Plan View

The configuration of the bridge, Third Street, and the sidewalk would be maintained; however, the light rail alignment would be modified to eliminate the existing reverse curves required to accommodate the center girder of the existing bridge. As described above, the new bridge's bottom and top of deck would be approximately 5.2 feet and 3 feet higher, respectively, than the existing bridge, thus accommodating future sea-level rise within the city's existing right-of-way constraints. Replacing the bridge at its current location would not require the acquisition of new right-of-way from adjacent parcels. Third Street and the pedestrian/bicycle paths would be raised to match the profile of the reconstructed light rail tracks. The reconstruction, including minor adjustments to existing driveways and catchbasins, would extend approximately 200 feet to the north of the existing bridge superstructure and 250 feet to the south of the existing bridge superstructure. Sidewalks would be constructed 6 inches above Third Street.

2.F.2 Trackway

The light rail trackway would be constructed in the median of Third Street between the existing light rail station (Marin Street) north of the bridge and the freight rail crossing near Cargo Way south of the bridge. Once the rails have been installed, they would be embedded in concrete up to the top of the rails. The track centerline spacing would vary from 12 feet at the northern end to 12.5 feet at the southern end. A 6-inch-

high concrete curb would be placed along the edges of the trackway to prevent motor vehicles from entering the trackway. The curb would be discontinued near the existing fire station to allow emergency vehicles to cross the tracks. On the bridge, the through-girders would provide separation between the driving lanes and the rail tracks.

2.F.3 Bridge Abutments

The movable components of the existing drawbridge structure would be removed as part of the proposed project. Once the demolition of the bridge deck and supporting mechanical components is complete, the existing abutments would be modified to create the space necessary to support the new concrete girders and deck elements. An additional reinforced-concrete structure would be added to the existing abutments to support the new bridge at a higher elevation.

New pilings may be added to the existing abutments to support any increase in the weight of the bridge structure. If needed, pilings would be installed through the bottom of the existing abutments. The pilings would be constructed so as not to encroach into the channel. No impact-pile driving is proposed as part of the proposed project; piles to support the existing abutments would consist of either cast-in-drilled-hole reinforced-concrete or pipe piling, drilled to the appropriate foundation depth.

2.F.4 Lighting and Electrical

The existing streetlights would be removed and reinstalled on new foundations that would be placed in the new sidewalks as part of the project. The streetlight poles would also support the new overhead electric wires, which would supply electrical power to the light rail vehicles. On the bridge structure, new streetlight poles may be affixed to the through-girders. Any new or replacement lighting would comply with existing regulations and citywide policies to ensure that spillover light would be minimized.

2.F.5 Drainage

In comparison to the existing bridge, the new bridge would increase the area that drains to the combined sewer-and-storm-drain system within the project limits by approximately 0.25 acre. The project would not convert any permeable surface to impermeable surface. The reconstructed trackway and Third Street would be designed to convey stormwater runoff to the curb and gutters along the edge of Third Street, and then to new stormwater collection drains at the bridge approaches. These would be constructed to accommodate the raised Third Street profile. These drains would be connected to the existing combined sewer/stormwater system by new lines to the nearest manholes, which in turn connect to lines of adequate capacity to the north and south of the bridge. The closest manhole to the south is within the footprint of project construction. To the north, the nearest appropriate manhole is in the intersection with Marin Street. Currently, there is a sewer line running approximately 415 feet under Third Street from Arthur Avenue to Marin Street. The project would either replace the approximately 400-foot-long clay pipe with a new larger-diameter line or provide a second supplemental line. Construction would also include connecting laterals to the existing sewer line. Final design would depend on a hydraulic analysis that would be conducted as part of the project's detailed engineering design phase.

2.F.6 Fender Pile System

The existing bridge fender system on both sides of the navigable waterway beneath the bridge is in poor condition; in some areas, it exhibits extensive deterioration, with extensive loss of material in the tidal zone

(Figure 2.F-4).[9] Most of the timber in the fender system is degraded to such an extent that it is nonfunctional. The project would remove the remaining existing fender piles, which would be cut off just below the mudline and removed from the site. When piles or other debris from the existing fender system are removed from the channel, they will be promptly removed from the water and placed on a barge. The barge will be configured to contain all sediment that may be adhering to the removed piles or debris so that it does not fall into the water. No new fenders would be installed.

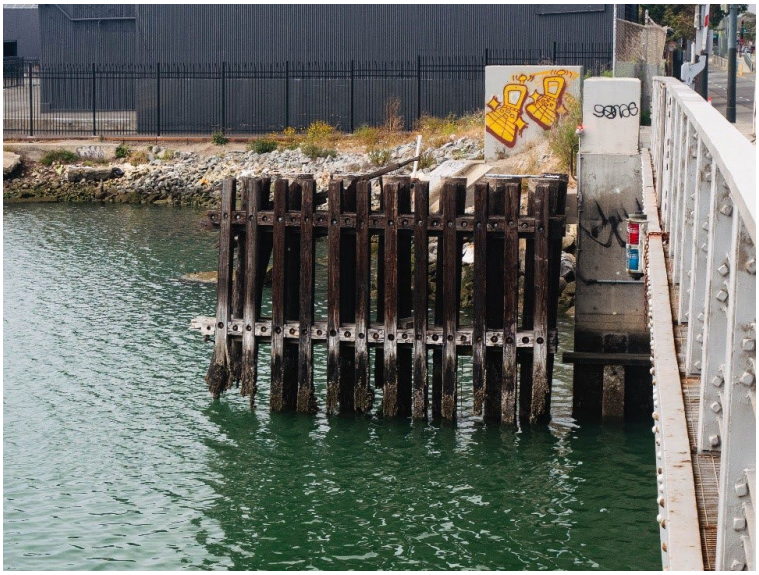

Figure 2.F-4 Existing Damaged Fender Piles

2.F.7 Control Tower

The upper portion of the control tower would be demolished down to the sidewalk level. The remaining portion would then be rehabilitated to create a public observation platform, with access from the reconstructed sidewalk adjacent to the bridge abutment. The existing concrete piling supporting the remaining tower would be rehabilitated in place to restore the structural integrity of the piles and to add corrosion protection. The pile rehabilitation work would be completed by a team of divers, and no new pilings are anticipated.

2.G Project Construction

Construction is estimated to last approximately 24 months and is assumed to begin no sooner than spring 2025. Construction is anticipated to use typical 8-hour work shifts during daylight hours. Nighttime and weekend construction is not anticipated. The project involves the demolition and removal of the existing bridge deck, including all electrical equipment and drive machinery needed to open the drawbridge. Because Third Street, the sidewalks, and track profiles are being raised above the existing road, project-related soil excavation would be limited to the ends of the bridge, where the raised area tapers down to the existing Third Street. There would also be localized trenching for new catch basin connections to the existing combined sewer/stormwater system, and trenching for electrical conduits. Excavation depths would range from 15 feet below the existing roadway grade to tie into the combined sewer/stormwater system; and up to 80 feet below the floor of the existing abutment if cast-in-drilled-hole or cast-in-steel-shell piles are necessary.

[9] A bridge fender is a group of connected piles in the channel that acts to cushion the impact to the bridge if struck by a ship.

During construction, access to the adjacent parks and recreational resources described above would be temporarily limited from Third Street. Throughout the construction period, access to these parks would be available from other access points along Illinois Street, Cargo Way, and Quint Street. Signs would be posted directing park users to these access points. Existing access points to the adjacent parks and recreational resources from Third Street would be fully restored after project completion.

2.G.1 Traffic Detours During Bridge Construction

Bridge closure is expected for approximately 24 months. Throughout the construction duration, there would be no access for vehicles, light rail, or pedestrians to the project area. A traffic management plan would be established that would include a detour plan for vehicles, bicyclists, and pedestrians. Most of the vehicle traffic would be diverted to local streets, including Evans Avenue and Illinois Street Bridge, and the remainder would use freeways, including U.S. 101 and I-280. People walking and bicycling would be detoured and directed to use the Illinois Street bridge. Local driveway access would be provided to owners within the project area on Third Street. Additional local access restriction may be provided for other roadways in the project vicinity affected by the project detour routes.

As part of the proposed project, Public Works is working with the SFMTA to develop a temporary bus bridge plan to replace the existing T-Third light rail service. As replacement, Muni would run a combination bus and rail service during the Islais Creek Bridge construction period. T-Third Bus service would run between Market Street and Bayshore/Sunnydale Station. T-Third light rail service would run between Chinatown Station and the University of California, San Francisco (UCSF) Medical Center Station at Third and Mariposa streets. The bus service would traverse Islais Creek via the Illinois Street Bridge, and provide a direct connection between the area south of Islais Creek Bridge to downtown. A goal of this plan is to ensure that most T-Line passengers would not have to transfer from the bus service to the T-Third light rail; passengers who must transfer would have transfer options at the 4th and King Caltrain Station and the UCSF Medical Center Station at Third and Mariposa streets.

Public Works is also working with the SFMTA to develop a detailed detour plan for the 15-Bayview Hunters Point Express, 91-Third Street/19th Avenue Owl, and T-Third Street Bus (select early-morning and late-night trips) bus routes, which would also use Third Street – Islais Creek Bridge during project construction.

2.G.2 Construction Access and Staging

The through-girders for the new bridge would be constructed off site, barged to the project site, and placed into position with the use of both barge-mounted cranes and cranes on the Third Street approach, adjacent to the modified abutments. Temporary supports would be installed on the girders prior to setting them in place. The new bridge deck would be made up of precast/prestressed concrete modules placed between the through-girders. Third Street and the shared use path would be topped with a cast-in-place, reinforced-concrete deck; the rail in the trackway would be supported on cast-in-place, reinforced-concrete supports. Debris containment systems would be used for work over water to prevent airborne or falling debris from entering the channel.

Construction limits of the proposed project would encompass the entire span of the Islais Creek Bridge along Third Street and extend to Cesar Chavez Street to the north, and to the driveway of Fire Station No. 25 to the south. During project construction, periodic disruptions in access to businesses along Third Street between Cesar Chavez and the Islais Creek Bridge may occur. Public Works will coordinate with these businesses on any temporary disruptions in access; but in general, access to businesses on Third Street between Cesar Chavez and the bridge would be maintained for the duration of the project's construction. Construction access to the project site would be via Third Street and the channel. As shown on Figure 2.B-1,

the project limits include areas along Third Street north and south of the bridge. This would accommodate the connection of the new light rail track to the existing track, and to the new storm drains on the bridge to the combined sewer/stormwater system; one at the Third Street/Marin Street intersection north of the bridge and one 250 feet south of the bridge. It is anticipated that the contractor would use this area for staging equipment and materials during the demolition of the existing bridge components and the construction of the replacement bridge. Although temporary construction easements may be required immediately adjacent to the bridge, no new permanent right-of-way would be required for the project. No vegetation would be removed during or after construction.

In addition to staging areas on the bridge approaches and anchored barges, three potential offsite construction staging area options have been identified (Figure 2.G-1). Site 1 is approximately 2.5 acres; it is east of the project site along Illinois Street on the southern side of the channel (500 feet east of the project site). The other two sites (Site 2, approximately 20 acres; and Site 3, approximately 22 acres) are 0.75 mile southeast of the project site to the east, in the Hunters Point area along Amador Street near Piers 94 and 96. These three sites are owned by the Port of San Francisco; they are currently used for Port-related storage, transport, and other industrial purposes. One of these staging areas may be selected by the construction contractor and could be used to stage and store materials, equipment, and construction vehicles. All construction staging areas would be on existing asphalt or concrete surfaces. All construction activity and staging in the waterway would be coordinated with the coast guard.

Figure 2.G-1 Potential Staging Area Options for Islais Creek Bridge Project

2.G.3 Construction Work Crew

It is anticipated that the total number of workers on the site at a given time would vary from 10 to 40 individuals, with an average of 20 workers over the 24-month construction duration.

2.G.4 Anticipated Construction Work in the Islais Creek Channel

No additional abutment elements would be constructed in the channel. The existing abutments would be modified to support the new bridge girders and deck, and to accommodate all modes of traffic without requiring construction in the channel. If the weight of the new bridge is significantly greater than the weight of the components of the existing bridge, additional pilings would be added in the channel bank beneath the abutments.

Removal of the existing bridge deck and mechanical and electrical equipment would be performed from behind the abutments and from barges in the channel. Once the existing bridge is removed, the existing fenders and piling would be cut off just below the mudline and removed from the site. When piles or other debris from the existing fender system are removed from the channel, they will be promptly removed from the water and placed on a barge. The barge will be configured to contain all sediment that may be adhering so that it does not fall into the water. Piles would be disposed of in a manner consistent with regulatory requirements for creosote-treated piles.

Barges would also be used during the construction of the new bridge. However, the construction would not result in the placement of permanent fill in the channel.[10]

2.G.5 Project Site Restoration and Cleanup

All construction-related materials would be removed after completion of construction activities. Temporary staging areas would be cleaned up, and any remaining concrete or asphalt would be removed and hauled to an appropriate waste disposal facility.

2.H Required Project Approvals

The proposed project is subject to review and approval by several local, regional, state, and federal agencies. Certification of the final EIR by the planning commission is required before any discretionary approval or permits may be issued for the proposed project. The proposed project would require the project approvals and other actions listed in the following sections.

2.H.1 Federal Agencies

- United States Coast Guard: Rivers and Harbors Act section 9 approval
- United States Army Corps of Engineers: Clean Water Act section 404 permit for filling or dredging of waters of the United States

[10] BCDC, a California state entity whose jurisdictional area includes the project area, defines bay fill as including pile-supported and cantilevered structures. For BCDC purposes, the project would introduce 1,710 square feet of fill due to the increase in shadow caused by the widening to accommodate the 16-foot-wide Class I shared pedestrian/bicycle path on the western side of the bridge.

- National Marine Fisheries Service: informal consultation pursuant to section 7 of the Endangered Species Act and section 305(b) of the Magnuson–Stevens Fishery Conservation and Management Act; authorization to incidentally harass marine mammals pursuant to the Marine Mammal Protection Act

- Federal Highway Administration delegated to Caltrans: National Environmental Policy Act – Finding of No Significant Impact

2.H.2 State Agencies

- State of California, San Francisco Bay Regional Water Quality Control Board: Clean Water Act section 401
- San Francisco Bay Conservation and Development Commission (BCDC): BCDC permit
- Caltrans: type selection review for evaluation of constructability and approval of the bridge
- CDFW: California Endangered Species Act Incidental Take Permit and Lake and Streambed Alteration Notification

2.H.3 Local Agencies

- San Francisco Planning commission: certification of the EIR
- San Francisco Public Works commission: Contract Award
- SFMTA: encroachment permit or memorandum of understanding
- Port of San Francisco: encroachment permit or memorandum of understanding
- SFPUC: facility permit for new stormwater tie-in

CHAPTER 3
PLANS AND POLICIES

3.A Overview

In accordance with California Environmental Quality Act (CEQA) Guidelines section 15125(d), this chapter describes any inconsistencies between the proposed project and applicable federal, state, regional, and local plans and policies that apply to the proposed project. Inconsistency with a policy, plan, or regulation does not necessarily result in a significant impact pursuant to CEQA. To result in an impact under CEQA, a project's inconsistency with a relevant plan or policy must be related to a direct or indirect physical impact on the environment and result in a significant, adverse impact. The potential physical impacts on the environment that may result from an inconsistency with a plan or policy are discussed in Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, or in the initial study prepared for this project (Appendix B).

The following plan and policy consistency analyses apply to the proposed project. The determination of a project's consistency with an applicable local general plan, policy, or regional plan is ultimately made independent of the environmental review process by the project decision-makers when they decide whether to approve or disapprove a project.

3.B City and County of San Francisco Plans and Policies

3.B.1 San Francisco General Plan

The San Francisco General Plan provides general policies and objectives to guide land use decisions. The general plan contains 10 elements (commerce and industry, recreation and open space, housing, community facilities, urban design, environmental protection, transportation, air quality, safety and resilience, and arts) that set forth goals, policies, and objectives for physical development of the city. The department is currently preparing a heritage and conservation element, which, if adopted, would add a new element to the general plan. In addition, a Land Use Index cross-references the policies to land use through the general plan.

The general plan elements that are particularly relevant to planning considerations associated with this project include air quality, safety and resilience, transportation, and urban design. The general plan also includes area plans that outline goals and objectives for specific geographic planning areas. Among these is the Bayview Hunters Point Plan, which is applicable to the project area. In an area plan, "the more general policies in the General Plan elements are made more precise as they relate to specific parts of the city" (San Francisco General Plan, Introduction). The area plans contain specific policies and objectives that address land use and planning issues in the local context.

Air Quality

The air quality element lays out goals, objectives, and policies for the improvement and protection of the city's air quality. The following objectives are relevant to the proposed project:

- Objective 1: Adhere to state and federal air quality Standards and Regional Programs.
- Objective 5: Minimize particulate matter emissions from road and construction sites.

The proposed project was assessed for its potential to impact air quality in Appendix B, Section E.8, Air Quality. As stated in Impact AQ-1, the proposed project would not conflict with the Bay Area Air Quality Management District's (air district's) 2017 Clean Air Plan, which is the current applicable air quality plan for the air basin. This plan implements state and federal air quality standards for the air basin. As discussed in Impact AQ-2, the proposed project would not exceed regional air pollutant emissions thresholds, and therefore the project would not conflict with Objective 1 of the air quality element.

The project would generate particulate matter during construction, due to the use of construction equipment that would emit diesel particulate matter. However, as discussed in Impact AQ-2 in Appendix B, Section E.8, Air Quality, the proposed project would comply with the construction dust control ordinance, limiting construction dust emissions. Also, as discussed in Impact AQ-3, the proposed project would comply with the clean construction ordinance and would use construction equipment with low emissions of particulate matter. Therefore, the proposed project would not conflict with Objective 5 of the air quality element.

Safety and Resilience

The safety and resilience element is intended to facilitate safety from hazards, achieve racial and social equity, and strengthen community resilience in the city. This includes policies to minimize the city's contribution to climate change. The following objectives are relevant to the proposed project:

- Objective 2.1: Climate Resilience. Pursue synergistic efforts that both eliminate greenhouse gases (climate mitigation) and protect people, the built environment, and nature from the unavoidable impacts of the climate crisis (climate adaptation).
- Objective 2.2: Multi-Hazard Resilience and Co-Benefits. In adaptation and mitigation investments to multiple and simultaneous hazards, maximize risk reduction strategies and the related community benefits.
- Objective 3.3. Infrastructure and public realm. Ensure that the city's lifeline systems, transportation and emergency response facilities, utilities, streets, public spaces, and coasts can withstand and adapt to all hazards.

As stated in Appendix B, Section E.17, Hydrology and Water Quality, the proposed replacement bridge's design accounts for projected sea-level rise and would raise the bridge deck elevation as far as geometric factors allow. This climate change adaptation strategy would reduce the likelihood of flooding due to sea-level rise, thereby increasing the longevity and resilience of the transportation system. Therefore, the proposed project would not conflict with relevant objectives of the safety and resilience element.

Transportation

The transportation element lays out goals, objectives, and policies for the city that cover its transportation system, and acknowledge its place within the greater region. The following objectives are relevant to the proposed project:

- Objective 8: Maintain and enhance regional pedestrian, hiking and biking access to the coast, the bay, and ridge trails.
- Objective 11: Establish public transit as the primary mode of transportation in San Francisco and as a means through which to guide future development and improve regional mobility and air quality.
- Objective 22: Develop transit as the primary mode of travel to and from downtown and all major activity centers in the region.
- Objective 29: Ensure that bicycles can be used safely and conveniently as a primary means of transportation, as well as for recreational purposes.

As stated in Section 2.F, Project Description, the proposed project would implement a 16-foot-wide Class I shared pedestrian/bicycle path on the western side of the proposed replacement bridge. The proposed Class I path would be fully separated from vehicle traffic. Therefore, the proposed project would not be in conflict with Objectives 8 and 29 of the Transportation Element.

As stated in Appendix B. Section E.1, Land Use and Planning, the proposed project would require the Islais Creek Bridge, along with the associated sidewalks and light rail service, to be closed for up to 24 months during construction. As explained in Section 2.G.2, SFMTA would run a combination bus and rail service during the Islais Creek Bridge's construction period. Although construction would require transit detours around the project site for approximately 24 months, the new Islais Creek Bridge structure would meet current structural and seismic standards, and would be resilient to predicted sea-level-rise impacts up to the year 2100. The proposed project would increase the longevity of the bridge on which the transit system relies, and would implement the aforementioned improvements to bicycle and pedestrian transportation. Therefore, the Islais Creek Bridge would not be in conflict with Objectives 11 and 22 of the Transportation Element.

Urban Design

The urban design element concerns the physical character and order of the city, and the relationship between people and their environment. The urban design element of the general plan includes the following policy related to historic preservation:

- *Policy 2.4:* Preserve notable landmarks and areas of historic, architectural, or aesthetic value, and promote the preservation of other buildings and features that provide continuity with past development.

Overall, the proposed project is anticipated to result in less-than-significant impacts to aesthetics and the visual environment of Islais Creek (Appendix B, Section E.2, Aesthetics). However, it is anticipated to result in a significant and unavoidable impact to historic architectural resources, as discussed in Section 4.B.5 of this EIR. As stated therein, the Islais Creek Bridge was determined to be eligible for listing in the National Register and is listed in the California Register under Criterion C/3 for its distinctive design qualities and as an example of the Art Moderne style applied to a bascule bridge. Mitigation measures M-CR-1a through M-CR-1d would be implemented as a result, but the impact would still be significant and unavoidable. Therefore, the project would not be consistent with Policy 2.4 2 because it would demolish a historic resource.

3.B.2 The Accountable Planning Initiative (Proposition M)

In November 1986, the voters of San Francisco approved Proposition M, the Accountable Planning Initiative, which added section 101.1 to the planning code to establish eight priority policies. Prior to issuing a permit for any project that requires an initial study under CEQA, issuing a permit for any demolition, conversion or change in use, or taking any action that requires a finding of consistency with the general plan, the city is required to find that the plan or legislation is consistent with the priority policies. The priority policies pertain to (1) the preservation and enhancement of neighborhood-serving retail uses, (2) protection of neighborhood character, (3) preservation and enhancement of below-market-rate housing, (4) discouragement of commuter automobiles, (5) protection of industrial and service land uses from commercial office development and enhancement of resident employment and business ownership, (6) maximization of earthquake preparedness, (7) landmark and historic building preservation, and (8) protection of open space.

Priority policy 1 is addressed in Appendix B, Section E.1, Land Use and Planning; priority policy 2 is addressed in Appendix B, Section E.2 Aesthetics; priority policy 3 is not applicable, because the project does not propose any changes to the city's supply of affordable housing; priority policy 4 is addressed in Section 4.C, Transportation and Circulation; priority policy 5 is not applicable, because the proposed project does not propose commercial office development; priority policy 6 is addressed in Appendix B, Section E.16, Geology and Soils; priority policy 7 is addressed in Section 4.B, Historic Architectural Resources; and priority policy 8 is addressed in Appendix B, Section E.12, Recreation.

3.B.3 Climate Action Plan

The 2021 San Francisco Climate Action Plan[11] provides a summary of the city's progress through existing programs, and a detailed list of priority actions that San Francisco can take that will have the greatest potential to reduce emissions, while also having the greatest potential to provide an equitable distribution of benefits.

As discussed in Appendix B, Section E.8, Air Quality, the proposed project would result in increased air quality emissions during project construction but would not result in an increase in operational air quality emissions because the proposed replacement for the Islais Creek bridge would have a configuration similar to the existing condition. The proposed project would be resilient to future sea-level rise through 2100, which is consistent with the plan's goal of changing infrastructure to be more resilient, and would entail the creation of a shared bicycle/pedestrian path on the Islais Creek Bridge. The proposed project would not impede the implementation of the city's climate action plan, nor would it be inconsistent with its overarching goals and principles.

3.B.4 Hazards and Climate Resilience Plan

The hazards and climate resilience plan[12] is San Francisco's roadmap to address the impacts of natural hazards and climate change. This plan differs from the climate action plan in that it specifically addresses response to climate-related hazards, including flooding, liquefaction, tsunami, and extreme heat. The proposed project would align with the goals of the hazards and climate resilience plan because the project

[11] San Francisco Department of the Environment, San Francisco's Climate Action Plan 2021, *https://sfenvironment.org/sites/default/files/events/cap_fulldocument_wappendix_web_220124.pdf*, accessed October 2, 2023.

[12] City and County of San Francisco, Hazards and Climate Resilience Plan, June 2020, ***https://onesanfrancisco.org/sites/default/files/inline-files/HCR_FullReport_200326_0.pdf***, accessed October 2, 2023.

would replace aging infrastructure that is vulnerable to the effects of climate change. As stated above, the project's design would be resilient to projected sea-level rise through 2100 and would increase the bridge's resilience; therefore, the proposed project would not obviously conflict with the hazards and climate resilience plan.

3.B.5 Sea-Level Rise Action Plan

The San Francisco Sea-Level Rise Action Plan[13] defines an overarching vision and set of objectives for future sea-level rise and coastal flooding planning and mitigation in San Francisco. The plan provides the foundation and guidance to develop a citywide sea-level rise adaptation plan. The adaptation plan process will include adaptation strategy development and selection and will set a planning framework that helps prioritize investments to best improve climate resilience while protecting economic and environmental values. The vision of the sea-level rise action plan is to make San Francisco a more resilient city in the face of immediate and long-term threats of sea-level rise by taking measures to protect and enhance public and private assets, natural resources, and quality of life for all.

The guiding principles of the sea-level rise action plan include the following:

- Engage partners and stakeholders as owners and collaborators using an inclusive, equitable, and community-based planning process.
- Recognize regional interdependencies and promote regional collaboration.
- Foster innovative, interdisciplinary design approaches and solutions that increase resilience to sea-level rise while enhancing San Francisco's treasured shoreline qualities.
- Closely monitor evolving climate science and adapt approaches accordingly, as consistent with Capital Planning Committee guidance.
- Develop and apply rigorous metrics to track progress for reducing vulnerabilities, risk, and impacts.

The proposed project would be resilient to projected sea-level rise impacts up to 2100; therefore, it would not obviously conflict with the sea-level rise action plan. A detailed discussion of sea-level rise as it relates to the project can be found in Appendix B, Section E.17, Hydrology and Water Quality.

3.B.6 San Francisco Sea Level Rise Guidance

The San Francisco Sea Level Rise Guidance provides direction from the City's Capital Planning Committee to all departments on how to incorporate sea level rise considerations into new construction, capital improvement, and maintenance projects.[14] The guidance provides a framework for evaluating sea level rise vulnerability and developing adaption strategies as part of the capital planning process. To help guide the initial vulnerability assessment, the city developed a mapping tool that shows areas of the city potentially

[13] City and County of San Francisco, San Francisco Sea Level Rise Action Plan, March 2016, *sfplanning.s3.amazonaws.com/default/files/plans-and-programs/planning-for-the-city/sea-level-rise/160309_SLRAP_Final_ED.pdf*, accessed October 2, 2023.

[14] City and County of San Francisco, Guidance for Incorporating Sea Level Rise into Capital Planning – Assessing Vulnerability and Risk to Support Adaptation, adopted September 14, 2014, last updated January 3, 2020, *https://onesanfrancisco.org/sites/default/files/inline-files/San_Francisco%20SLR_Guidance%20SLRTC%20REV%20TO%20CPC%20Jan%202020.pdf*, accessed October 20, 2023.

inundated under an extreme sea level rise scenario (6.9 feet) plus a 100-year storm surge in the year 2100.[15] Projects proposed for locations within the inundation zone are required to assess their adaptive capacity through completion of a sea level rise checklist.

The mapping tools show the inundation zone boundary generally follows Islais Creek, so Public Works completed the sea level rise checklist for the Islais Creek Bridge Project.[16] Using the current City guidance for a planning horizon of 2075, sea level rise between 1.9 feet and 4.3 feet is anticipated at the Islais Creek Bridge project site, and would result in some localized flooding in the lowest surrounding areas under current shoreline conditions. It is anticipated the existing Islais Creek Bridge's deck would be submerged by 2075. The bottom and top of deck elevation for the existing bridge are approximately 10 feet and 15.6 feet, respectively. The proposed project would increase this elevation and achieve a bottom-of-bridge minimum elevation of 15.2 feet and a top-of-deck minimum elevation of 18.6 feet. With this design, the bridge would be resilient to predicted sea-level rise impacts up to the year 2100. For these reasons, the Islais Creek Bridge Project would not conflict with San Francisco's Sea Level Rise Guidance.

3.B.7 Better Streets Plan

In 2006, the San Francisco Board of Supervisors (board of supervisors) adopted the Better Streets Policy. Since then, the board of supervisors has amended the policy several times, including in 2010 to reference the Better Streets Plan. The Better Streets Plan creates a unified set of standards, guidelines, and implementation strategies to govern how San Francisco designs, builds, and maintains its pedestrian environment. The planning code requires certain new development projects to make changes to the public right-of-way so that it is consistent with the Better Streets Plan (planning code section 138.1). The planning code requires most projects to plant and maintain street trees and requires some larger projects to submit a streetscape plan that may require elements such as sidewalk widening, transit boarding islands, and medians.

Under the proposed project, the existing Islais Creek Bridge would be replaced in a similar configuration, including two traffic lanes in each direction; one pedestrian path on each side, with the path on the west wide enough for people bicycling and walking; and two light rail tracks. The proposed project would not be inconsistent with the overarching goals and principles of the Better Streets Plan.

3.C Regional Plans and Policies

3.C.1 Plan Bay Area 2050

Plan Bay Area 2050 is a long-range regional transportation plan and sustainable communities strategy for the nine-county San Francisco Bay Area, prepared by the Association of Bay Area Governments and the Metropolitan Transportation Commission. The plan discusses how the bay area will grow over the next three decades and identifies transportation and land use strategies to enable a more sustainable, equitable, inclusive, and economically vibrant future. In response to emerging and increasingly pressing threats to the bay area's communities, ecosystem, and economy, Plan Bay Area 2050 recommends continuing and expanding existing resilience efforts and developing creative funding solutions to

[15] City and County of San Francisco, Interactive Mapping Tool: *108" Inundation Vulnerability Zone Line (Sea Level Rise + 100 year Flood Event), 108" Inundation Vulnerability Zone Line (Sea Level Rise + 100YR Flood Event) | DataSF | City and County of San Francisco (sfgov.org)*, accessed October 20, 2023.

[16] City and County of San Francisco. Islais Creek Bridge Rehabilitation Sea level Rise Checklist. December 2021.

implement resilience projects. Resilience efforts help the region protect assets and people from natural disasters like earthquakes, floods, landslides, and fires; and prepare for climate change hazards like sea-level rise, extreme storms, and droughts. Resilience underpins the achievement of many other goals in the plan, such as providing affordable housing, improving infrastructure, and fostering equitable economic development, which the impacts of disasters or climate change may significantly compromise. The proposed project was reviewed in the context of Plan Bay Area 2050, and no potential conflicts were identified.

3.C.2 Bay Area Air Quality Management District's 2017 Clean Air Plan

The 2017 Clean Air Plan includes measures to reduce ozone, particulate matter, air toxics, and greenhouse gases (GHGs); and establishes emission control measures. The 2017 Clean Air Plan aims to attain all state and national air quality standards, eliminate disparities among Bay Area communities regarding the cancer health risk from toxic air contaminants, and reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The plan requires implementation of "all feasible measures" to reduce ozone and provides a control strategy for reducing ozone, particulate matter, toxic air contaminants, and GHGs. The plan describes the status of local air quality and identifies the emission control measures.[17]

As discussed in Impact AQ-1 in Appendix B, Section E. 8, the proposed project would not hinder implementation of the 2017 Clean Air Plan, because it would support relevant 2017 Clean Air Plan control measures during project construction through compliance with key San Francisco policies and ordinances that would reduce air quality impacts. As discussed in Impact AQ-2 in Appendix B, Section E.8, Air Quality, the proposed project would not exceed regional air pollutant emissions thresholds. Furthermore, as discussed in Impact AQ-3, Mitigation Measure M-AQ-3: Requirements for Off-Road Construction Equipment would reduce the significant health risk impact at the maximally exposed worker receptor during the project's construction. As discussed in Section 4.C of this EIR, the proposed replacement of the Islais Creek Bridge would not result in a permanent increase in vehicle trips or vehicle miles traveled (VMT) following the project's construction, because it would replace the bridge in similar configuration. Therefore, implementation of the proposed project would not conflict with the 2017 Clean Air Plan.

3.C.3 San Francisco Bay Trail Plan

The San Francisco Bay Trail Plan[18] proposes developing a regional hiking and bicycling trail around the perimeter of San Francisco and San Pablo Bays. In 2015, the Association of Bay Area Governments prepared the plan pursuant to Senate Bill 100, which mandated that the Bay Trail provide connections to existing park and recreation facilities, create links to existing and proposed transportation facilities, and be planned in such a way as to avoid adverse effects on environmentally sensitive areas. Over 350 miles of the Bay Trail have been constructed. When complete, the trail will pass through 47 cities and all nine bay area counties.

The Bay Trail currently traverses the Islais Creek channel via the Illinois Street Bridge. Third Street and the existing Islais Creek Bridge are not designated as part of the Bay Trail. Therefore, project construction and

[17] Bay Area Air Quality Management District, 2017 Clean Air Plan: Spare the Air, Cool the Climate, April 19, 2017, *http://www.baaqmd.gov/~/media/files/planning-and-research/plans/2017-clean-air-plan/attachment-a_-proposed-final-cap-vol-1- pdf.pdf?la=en*, accessed October 18, 2023.

[18] Metropolitan Transportation Commission. San Francisco Bay Trail, *https://mtc.ca.gov/operations/regional-trails-parks/san-francisco-bay-trail*.

the temporary closure of Third Street would not affect public access on the Bay Trail and would not conflict with the San Francisco Bay Trail Plan.

3.D State Plans and Policies

3.D.1 San Francisco Bay Conservation and Development Commission

The BCDC is a state agency with permit authority over the bay and its shoreline. Created by the McAteer-Petris Act in 1965, BCDC regulates filling, dredging, and changes in use in San Francisco Bay. The creation of BCDC was a legislative response to address environmental damage created by years of extensive and unmanaged filling, by developing policies and regulations that recognize and protect San Francisco Bay, an invaluable natural resource of the Bay Area region.

Of primary concern to BCDC is the placement of new "fill" (generally defined as any material in or over the water surface, including pilings, structures placed on pilings, and floating structures) in the bay. The McAteer-Petris Act imposes very strict standards for the placement of new fill. Placement of fill may be allowed only for uses that are (1) necessary for public health, safety or welfare of the entire bay area; (2) water-oriented uses, such as water-related industry, water-oriented recreation, and public assembly and the like; or (3) minor fill to improve shoreline appearance and public access. Fill must be the minimum necessary for the purpose and can be permitted only when no alternative upland location exists.

In addition, BCDC regulates new development within 100 feet of the shoreline to ensure that maximum feasible public access to and along the bay is provided. BCDC is also charged with ensuring that the limited amount of shoreline property suitable for regional high-priority water-oriented uses (ports, water-related industry, water-oriented recreation, airports, and wildlife areas) is reserved for these purposes. Land-side uses and structural changes are governed by policies regarding public access. BCDC can require, as conditions of permits, shoreline public access improvements consistent with a proposed project, such as, but not limited to, pathways, observation points, bicycle racks, parking, benches, landscaping, and signs.

The Islais Creek Bridge Project would require a permit from BCDC because the project is within BCDC's jurisdiction. BCDC would make a final determination of the project's consistency with San Francisco Bay Plan policies as part of the permitting process.

BCDC planning documents applicable to the proposed project are described below.

3.D.2 San Francisco Bay Plan

The San Francisco Bay Plan was prepared by BCDC from 1965 through 1969, and amended through 2019 in accordance with the McAteer-Petris Act. The bay plan guides the protection and use of the bay and its shoreline. BCDC has permit jurisdiction over shoreline areas subject to tidal action up to the *mean high tide line*[66] and including all sloughs, tidelands, submerged lands, and marshlands lying between the mean high tide and 5 feet above mean for the nine bay area counties with bay frontage.[67] Under the McAteer-Petris Act, the bay plan provides policy direction for BCDC's permit authority regarding the placement of fill, extraction of materials, determining substantial changes in use of land, water, or structures within its jurisdiction, protecting the bay habitat and shoreline, and maximizing public access to the bay.

The McAteer-Petris Act specifies that BCDC should continually review the bay plan and amend it so that it reflects changing conditions and new information. In 2019, BCDC approved two bay plan amendments: the

Bay Fill for Habitat Amendment to allow substantially more fill to be placed in the bay as part of an approved multi-benefit habitat restoration and shoreline adaptation project to help address rising sea levels; and the Environmental Justice and Social Equity Amendment to implement BCDC's first-ever formal environmental justice and social equity requirements for local project sponsors.

Priority Use Areas

To minimize future pressures for bay fill, San Francisco Bay Plan maps designate shoreline "Priority Use Areas" that should be reserved for regionally important, water-oriented uses, or historically located on shoreline sites, such as ports, water-related industry, water-related recreation, airports, and wildlife refuges. The bay plan maps also contain policies that generally specify uses and other criteria for the use and development of each designated site. The project site (Islais Creek) is shown on Plan Map 5, Central Bay, and is identified with the "Port" priority use designation, as part of the Port of San Francisco Priority Use Area. This priority use area is discussed in greater detail in the San Francisco Bay Area Seaport Plan.

3.D.3 San Francisco Bay Area Seaport Plan

As stated above, the project site is identified in San Francisco Bay Plan Map 5 as part of the Port of San Francisco Priority Use Area. BCDC is currently in the process of updating the San Francisco Bay Area Seaport Plan. The purpose of the seaport plan is to plan for the bay area's long-term seaport growth, including considerations for climate change and sea-level rise. The following policies of the seaport plan apply to the Port of San Francisco Priority Use Area, and are relevant to the proposed project:

- **Preserving Priority Use Areas.** Port Priority Use Areas should be protected and reserved for port purposes, as defined in Finding A of this section, and other uses that would not impair existing or future use of the area for port purposes. Potentially allowable interim and non-port uses are described in additional policies below.

- **Public Access.** Public access amenities that enhance the public's access to or understanding about the working waterfront, including visual corridors, temporary access, or other programmatic elements should be encouraged, provided that such proposals are consistent with all applicable San Francisco Bay Plan Public Access policies.

- **Historic Resources.** The development of non-maritime uses at historically significant structures should only be allowed where the use is compatible with an active maritime environment and would not interfere with surrounding maritime operations or create risks to safety or security. Such uses could include commercial or light industrial uses.

The proposed project would not affect the Port of San Francisco's status as a Priority Use Area, or change its primary uses. Further, the project would not permanently affect public access. As discussed in Section 4.B.4, the project would cause a substantial adverse change in the significance of a historical resource by demolishing and replacing the existing Islais Creek Bridge. However, this would not affect the existing maritime use of the Islais Creek Bridge, because the proposed replacement bridge would serve a similar function. Therefore, the project would be compatible with the seaport plan policies described above.

3.D.4 California Regional Water Quality Control Board Plans

Water quality control plans (basin plans) provide the basis for protecting water quality in California. Basin plans are mandated by both the federal Clean Water Act and the state Porter-Cologne Water Quality Act (water code). Water code sections 13240 through 13249 specify the required contents and procedures for adopting a regional basin plan. Each plan must contain water quality objectives, which in the judgment of the regional board will ensure the reasonable protection of beneficial uses and the prevention of nuisance; and a program of implementation for achieving those objectives, including a description of the nature of actions that are necessary to achieve the objectives, time schedules for the actions to be taken, and a description of surveillance to be undertaken to determine compliance with objectives. The goal of the San Francisco Basin Plan is to provide a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in San Francisco Bay. The basin plan is used as a regulatory tool by the regional board's technical staff. Regional board orders cite the basin plan's water quality standards and prohibitions applicable to a particular discharge. The basin plan is also used by other agencies in their permitting and resource management activities. It also serves as an educational and reference document for dischargers and members of the public. The proposed project was reviewed in the context of the regional board's basin plan, and no potential conflicts were identified. (See Section E.17, Hydrology and Water Quality, of the initial study, for a more detailed discussion of the proposed project's impacts on water quality.)

CHAPTER 4
ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

4.A Introduction to the Environmental Analysis

This chapter includes an overview of the approach to analysis and an overview of the existing and cumulative environmental setting. This chapter also describes more detailed existing conditions in the project vicinity for each environmental resource discussed in this EIR, and analyzes the physical environmental effects of the proposed project described in Chapter 2, Project Description. This chapter describes the environmental and regulatory framework for topics evaluated under CEQA; assesses project impacts and cumulative impacts; and identifies feasible mitigation measures that would reduce or avoid environmental impacts that have been determined to be significant.

4.A.1 CEQA Standards of Adequacy

Section 15151 of the CEQA guidelines describes the standards for the preparation of an adequate EIR. Specifically, the standards under section 15151 state the following:

- An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that intelligently takes into account environmental consequences.
- An evaluation of the environmental impacts of a project need not be exhaustive; rather, the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible.
- Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts.

In practice, the preceding points indicate that EIR preparers should use a reasonable, professionally accepted methodology to assess impacts. This approach sometimes requires making reasonable assumptions using the best information available. In some cases, when information is limited, this draft EIR employs a "reasonable worst-case analysis" to identify the largest expected potential change from existing baseline conditions that the proposed project may create. This approach thus identifies the most-severe impact that could occur, providing a conservative analysis of potential environmental impacts.

The project setting sections of this draft EIR reflect the baseline, which is synonymous with existing conditions. The environmental analyses of this draft EIR, including the initial study and supporting technical studies, consider the changes that may result from the construction and operation of the proposed project in comparison to the baseline.

The following sections provide an overview to the background and approach for the impact assessments that follow.

4.A.2 Scope and Organization of this Chapter

The resource topic areas addressed in this chapter of the draft EIR are listed below (along with the abbreviations used when naming impact statements and mitigation measures for each resource topic):

- Section 4.B, Historic Architectural Resources (CR)
- Section 4.C, Transportation and Circulation (TR)

Both of these resource topics are discussed first by presenting the setting (i.e., the physical characteristics applicable to the resource topic) that describes conditions as they exist without the proposed project. The physical environmental impacts of the proposed project are then identified by comparing the existing conditions with the changes to those conditions that are anticipated to result from construction and operational activities (as applicable) associated with the proposed project. Impacts for each resource topic are evaluated based on specific "study areas" dictated by the characteristics of the resource being evaluated, as well as the type, magnitude, and location of potential environmental effects. The discussion of each resource topic is organized as follows.

- **Introduction.** This subsection provides a brief description of the overall contents of the section, a cross-section to other related resource topics, and a summary of comments received on the NOP that relate to that resource topic.

- **Environmental Setting.** This subsection presents a description of the existing physical environmental conditions in the project area with respect to each resource topic. The environmental setting constitutes the baseline physical conditions (existing conditions) by which potential impacts of the proposed project are assessed for significance. Section 15360 of the CEQA guidelines defines the environment (or the setting) as "the physical conditions which exist within the area which will be affected by a proposed project."

- **Regulatory Framework.** This subsection provides an overview of statutory and regulatory considerations that are applicable to the specific resource topic.

- **Impacts and Mitigation Measures.** As described in more detail below, this subsection identifies the significance criteria specific to that resource topic and describes the approach to the analysis. The Impacts and Mitigation Measures section is further subdivided into the following subsections.

    - **Significance Criteria.** This subsection lists the criteria—specific to each resource topic—used to identify and determine significant environmental effects of the proposed project. Under CEQA, a significant effect is defined as a substantial or potentially substantial adverse change in the environment. The guidelines implementing CEQA direct that this determination be based on scientific and factual data, including the entire record for the project, and not on argument, speculation, or unsubstantiated evidence. The significance criteria used in this draft EIR are based on planning department guidance used to assess the severity of environmental impacts of the proposed project, and on CEQA guidelines Appendix G, using the procedures set forth in San Francisco Administrative Code chapter 31.10.

- **Approach to Analysis.** This subsection describes the general approach and methodology used to apply the significance thresholds in evaluating the impacts of the proposed project. The methodology for applying significance criteria provides the basis for the impact analysis, which could be either qualitative or quantitative, depending on the specific impact. The methodology identifies the applicable regulatory guidelines, thresholds, standards, or accepted professional practices or protocols to be used to assess construction, operational, and cumulative impacts.

- **Impact Evaluation.** This subsection evaluates the potential for the proposed project to result in significant adverse effects on the existing physical environment. The proposed project's impacts are presented as individually numbered impact statements (shown in boldface type) that address each significance criterion. Thus, Impact CR-1 would be the first impact in the Cultural Resources section and would discuss the effects of the proposed project in response to the first significance criterion. Impact statements conclude with a significance determination (see descriptions below in Section 4.A.3, Significance Determinations). Each impact statement is followed by a discussion providing the analysis and rationale for the significance determination.

  If the impact analysis concludes that an impact is significant, feasible mitigation measure(s) are presented immediately following the impact analysis. CEQA guidelines section 15126.4 directs preparers of an EIR to describe feasible measures that could minimize significant adverse impacts. Mitigation measures are developed to avoid, minimize, rectify, reduce, eliminate, or compensate for an impact resulting from project implementation. CEQA guidelines section 15041 grants authority to the lead agency to require feasible changes in any or all activities involved in a project to substantially lessen or avoid significant effects on the environment.

  Feasible mitigation measures have been included in this chapter for specific environmental impacts, where applicable. The measures are indented and are numbered to correspond to the number of the impact analysis.

- **Cumulative Impacts.** This subsection considers the combined impacts of the proposed project and other closely related projects. A further description of cumulative impacts and other related projects is provided later in Section 4.A.6, Cumulative Impacts.

4.A.3 Significance Determinations

A "significant effect" is defined by CEQA guidelines section 15382 as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

The significance criteria used in this draft EIR are based on the planning department's thresholds of significance for assessing the severity of the environmental impacts of the proposed project. The planning department's guidance is based on CEQA guidelines Appendix G, with some modifications. The level of significance of the impact is indicated in parentheses at the end of the impact statement, based on the following terms:

- **No Impact (NI)**– No adverse physical changes (or impacts) to the environment are expected.
- **Less than Significant (LTS)** – The impact would not exceed the defined significance criteria or would be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations.
- **Less than Significant with Mitigation (LTSM)** – The impact is reduced to a less-than-significant level through implementation of the identified mitigation measure or measures.
- **Significant and Unavoidable with Mitigation (SUM)** – The impact exceeds the defined significance criteria and cannot be reduced to less-than-significant levels through compliance with existing local, state, and federal laws and regulations and/or implementation of all feasible mitigation measures.
- **Significant and Unavoidable (SU)** – The impact exceeds the defined significance criteria and cannot be eliminated or reduced to a less-than-significant level through compliance with existing local, state, and federal laws and regulations, and there are no feasible mitigation measures.

4.A.4 Environmental Baseline Conditions

CEQA Guidelines section 15125 provides that, in most cases, the environmental conditions at the time of publication of the NOP of the EIR constitute the appropriate baseline physical conditions by which the lead agency should evaluate project impacts. The baseline conditions are described in the Environmental Setting section of each Chapter 4 environmental topic section. The environmental analysis then presents existing and existing-plus-project scenarios to identify environmental impacts that would occur from the proposed project. The analysis in this EIR uses the physical conditions of the existing environmental setting as the baseline to determine whether an impact is significant.

4.A.5 Standard Construction Measures

On June 26, 2017, Public Works adopted standard construction measures through Director's Order.[19] Under this directive, Public Works requires all construction contracts to include standard construction measures for the purposes of protecting human health and safety, environmental resources, and to ensure compliance with applicable environmental laws and best practices. The standard construction measures are related to the following resource topics: seismic and geotechnical, air quality, hydrology and water quality, traffic, noise, hazardous materials, biological resources, aesthetics, and cultural resources. Standard construction measures are identified in this draft EIR and in Appendix B, Initial Study and in Appendix E (Public Works Standard Construction Measures). Moreover, the applicable standard construction measures would be followed as standard practice in the execution of every Public Works project and are not considered mitigation measures. In addition to these standard construction measures, the proposed project would also be subject to other pertinent city regulations governing construction in the public right-of-way. One such regulation is San Francisco Public Works Code section 2.4.20, which requires contractors to prepare a parking plan when conducting major excavation activities (i.e., excavation expected to last more than 30 days), which is assumed for the proposed project.

[19] San Francisco Public Works, Memorandum, SUBJECT: Standard Construction Measures for Public Works Projects, June 26, 2017, *https://files.ceqanet.opr.ca.gov/264040-3/attachment/ZyF42EVoVUrMWkqvN8-Igv-ikuXQr68hYWsH-lFoX6WguH8FRmwH92kfWrkqyeh8-yER3v0a2rdyVnfa0*, accessed September 25, 2023.

4.A.6 Cumulative Impacts

Defining Cumulative Impacts

CEQA requires evaluation of a proposed project's potential contributions to cumulative impacts, in addition to proposed project-specific impacts. Cumulative impacts, as defined in CEQA guidelines section 15355, refer to two or more individual effects that, when taken together, are "considerable" or that compound or increase other environmental impacts. A cumulative impact from several projects is the change in the environment that would result from the incremental impact of the project when added to the impact of other closely related past, present, or reasonably foreseeable future projects. Pertinent guidance for cumulative impact analysis is provided in CEQA guidelines section 15130.

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

The cumulative impact analysis for each individual resource topic is described in the corresponding resource sections of this chapter, immediately following the description of the project-specific impacts and mitigation measures. The cumulative impact statements are denoted with the letter "C," for cumulative, in the naming convention.

Approach to Cumulative Impact Analysis

Two approaches to a cumulative impact analysis are provided in CEQA guidelines section 15130(b)(1):

- the analysis can be based on a list of present and probable future projects producing related or cumulative impacts; or
- a summary of projections contained in a general plan or related planning document can be used to determine cumulative impacts.

The analyses in this draft EIR employ both a list-based approach and projections from the general plan or other related planning documents, as appropriate for the specific resource topic being analyzed. The following factors were used to determine an appropriate list of projects to be considered in the near-term cumulative impact analysis:

- **Similar Environmental Impacts.** A relevant project contributes to effects on resources that are also affected by the proposed project. A relevant future project or plan is defined as one that is "reasonably foreseeable," such as a proposed project for which an application has been filed with the approving agency or has approved funding, or an approved plan that amended the land use controls applicable to an adjacent neighborhood.

- **Geographic Scope and Location.** A relevant project is within the defined geographic scope for the cumulative effect. The geographic scopes varies on a resource-by-resource basis.

- **Timing and Duration of Implementation.** Effects associated with activities for a relevant project (e.g., short-term construction or demolition or long-term operations) would most likely coincide with the related effects of the proposed project.

Cumulative Setting

The cumulative environmental setting identifies projects within an approximately 0.25-mile radius of the project site as well as projects within 0.25 mile of the anticipated vehicle detour route along Evans Avenue, Cesar Chavez Street, and the Illinois Street Bridge. This is because impacts associated with various topics, such as transportation and circulation and air quality, may extend beyond the immediate project vicinity due to the implementation of the traffic detour. The following is a list of reasonably foreseeable projects in the project vicinity (approximately 0.75 mile) that are included:

- **Carpenters Union Hall Project, 3433 Third Street (Planning Department Case No. 2023-008546PRJ):** This project would entail constructing an approximately 16,200-gross-square-foot, two-story office and assembly building. The building would include approximately 7,400 square feet of union assembly/ meeting hall space, 8,800 square feet of office space, 4,200 square feet of landscaped area, and a 9,400-square-foot parking lot with 30 parking spaces. Construction is anticipated to start in spring 2025.[20] Construction may overlap with the proposed project.

- **SFPUC City Distribution Division Campus, 2000 Marin Street (Planning Department Case No. 2022-000702ENV):** SFPUC proposes to construct a new City Distribution Division campus at 2000 Marin Street in San Francisco's Bayview neighborhood. The majority of the City Distribution Division operations, currently at 1990 Newcomb Avenue, would be transferred to the 2000 Marin Street location. The project would demolish the existing building and parking lot on the site and constructing five buildings, totaling approximately 370,900 square feet, including administrative offices, electrical, landscaping, carpentry, machine, auto and meter shops, a warehouse, a parking garage, and a fueling station. The proposed buildings would range from one to six stories. As of publication of this draft EIR, 2000 Marin Street project construction is anticipated to begin in the fall of 2024 and would conclude in

[20] Phone conversation between Larry Badiner (Carpenters Union Hall project sponsor) and Liz White (planning department). October 3, 2023.

the winter of 2028. Construction of the 2000 Marin Street Project would overlap with the construction of the proposed project.

- **Amador Street Sewer Replacement, 429 Amador Road (Planning Department Case No. 2021-002177ENV):** The Port of San Francisco has proposed work on a 437-foot section of failed storm drain inlets and pipe in front of the Darling office building at 429 Amador Street, approximately 2,100 feet southeast of the proposed project. The repairs will address stormwater runoff that does not currently drain off of the roadway, causing flooding during rain events. Improvements include installation of approximately 437 linear feet of 12-inch reinforced-concrete pipe, three concrete manholes, and two storm drain vitrified clay pipe and lateral sewer connections to the new storm drains; and pavement restoration. Project construction is scheduled for March 2024 to November 2025. Therefore, construction of the Amador Street Sewer Replacement project is projected to briefly overlap with the construction schedule of the proposed project.

- **Pier 94 Grasslands Meadow Enhancement Project (Planning Department Case No. 2020-011352PRJ):** The Port of San Francisco has a proposed project that would remove invasive nonnative plants from 3 acres of uplands adjacent to the "Pier 94 Wetlands" and plant 500 native plants, creating 2 acres of biologically diverse native grasslands meadow habitat. This two-year project is part of a multi-year effort by the Port of San Francisco (property owner) and Golden Gate Audubon (site restoration partner) to establish valuable saltmarsh and uplands habitat in San Francisco's southeastern waterfront. The project does not include excavation or grading activities. No trees would be removed. Pier 94 is approximately 3,190 feet southwest of the proposed project. A project construction date is not available.

- **Biosolids Digester Facilities, Various Addresses, (Planning Department Case No. 2015-000644ENV):** The SFPUC is currently constructing a new solids treatment, odor control, energy, and associated facilities as part of improvements to the wastewater treatment facilities at the existing southeast Water Pollution Control Plant located in the southeastern part of San Francisco. The Biosolids Digester Facilities Project will replace and relocate the existing solids treatment facilities with more reliable, efficient, and modern technologies and facilities. Biosolids are the recyclable solid materials removed from the wastewater during the wastewater treatment process, and digesters are the major facilities used in the solids treatment process. The new facilities will produce higher quality biosolids; capture and treat odors more effectively; and maximize biogas utilization and energy recovery. The Biosolids Digester Facilities Project began construction in 2019, and construction completion is anticipated in 2028. Therefore, the construction of this project would overlap with the proposed Islais Creek Bridge Project.

- **2101 Jerrold Avenue (Planning Department Case No. 2019-007215PRJ):** The Department of the Environment proposes a project to install exterior wall-mounted electric-vehicle charging units at existing parking bays at the exterior of existing structures at 1100 Cesar Chavez Street and 2101 Jerrold Avenue, approximately 3,700 feet southwest of the proposed project. Additionally, a 246.21-kilowatt solar photovoltaic system comprising 566 panels and eight inverters would be installed on the roof at 2101 Jerrold Avenue. No construction date has been determined.

Figure 4.A-1 shows the locations of cumulative projects in relation to the Islais Creek Bridge. The figure includes projects within 0.25-mile buffer from either side of the bridge and a 0.25-mile buffer around the anticipated vehicle detour routes during the project's construction.

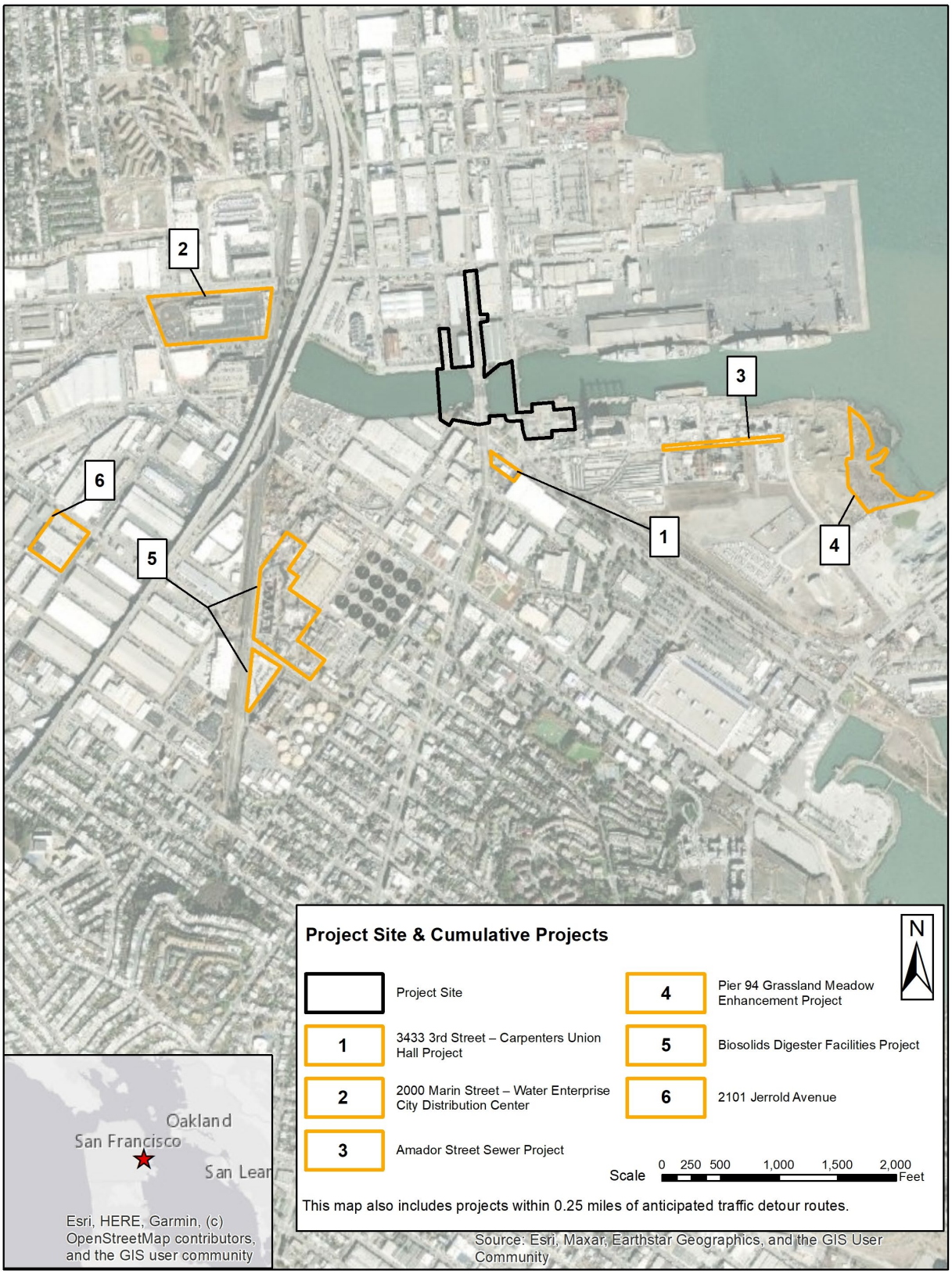

Figure 4.A-1 Cumulative Projects

4.B Historic Architectural Resources

4.B.1 Introduction

This section assesses the proposed project's impacts on historic architectural resources.[21] The section outlines the regulatory framework, describes the existing environmental setting as it relates to historic architectural resources, identifies historic architectural resources in and near the project site, evaluates potential direct and indirect impacts on historic architectural resources that could result from implementation of the proposed project, and identifies mitigation measures to reduce adverse impacts. Project-related impacts on other cultural resources (i.e., archeological resources, human remains, and tribal cultural resources) are addressed in Appendix B, Initial Study, of this EIR.

Definitions and Data Sources

For the purposes of this analysis, the term "historic architectural resource" is used to distinguish such resources from archeological resources, which may also be considered historical resources under CEQA. Archeological resources, including archeological resources that are potentially historical resources under CEQA guidelines section 15064.5, are addressed in the initial study (see Appendix B).

The information and analysis included in this section are based on the Islais Creek Bridge Project Supplemental Historic Property Survey Report, Islais Creek Bridge Project Finding of Adverse Effect Report, Historic Resource Status of Islais Creek Bridge Memorandum (Appendix C), and Islais Creek Bridge Project Preservation Alternatives Memorandum (Appendix D).[22, 23]

4.B.2 Regulatory Framework

This section summarizes federal, state, and local plans and policies that have regulatory authority over historical resources.

Federal

The proposed project is receiving federal funding and is therefore required to comply with section 106 of the National Historic Preservation Act. These federal guidelines relate to the treatment of cultural resources; they are relevant for the purposes of determining whether cultural resources, as defined under CEQA, are present, and for guiding the treatment of such resources. The following subsections summarize the relevant federal regulations and guidelines.

National Historic Preservation Act

The National Historic Preservation Act of 1966 requires project review for effects on historic properties listed in or eligible for listing in the National Register only when the projects involve federal funding or permitting, or occur on federal land, known as section 106 review. The National Historic Preservation Act:

- sets the federal policy for preserving our nation's heritage;
- establishes a federal-state and federal-tribal partnership;

[21] *Historic architectural resources* generally refer to above-ground constructed and landscape features that support an understanding of human history through historical, social, cultural, aesthetic/design, or construction qualities. Historic architectural resources—which are sometimes also called architectural resources, built resources, built environment resources, or other similar terms—include buildings, structures, objects, and districts.

[22] AECOM, Preservation Alternatives Memorandum – Islais Creek Bridge Project (2022-000112ENV), May 2023.

[23] San Francisco Planning Department, Memorandum to File, Historic Resource Status of Islais Creek Bridge (Levon Hagop Nishkian Bridge), July 5, 2023.

- establishes the National Register and the National Historic Landmarks Program;
- mandates the selection of qualified State Historic Preservation Officers (SHPOs);
- establishes the Advisory Council on Historic Preservation;
- charges federal agencies with responsible stewardship; and
- establishes the role of Certified Local Governments within the States.

Although the National Historic Preservation Act sets federal policy for historic preservation, the actual regulations can be found in 36 Code of Federal Regulations Part 800, Protection of Historic Properties, which provides guidelines on how to follow the policy set forth in the National Historic Preservation Act.

National Register of Historic Places

The National Register is the nation's master inventory of cultural resources worthy of preservation. Administered by the NPS, the National Register includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archeological, or cultural significance at the national, state, or local level. Typically, a resource that is more than 50 years of age is eligible for listing in the National Register if it meets any one of the four eligibility criteria, described below, and retains sufficient historical integrity. A resource less than 50 years old may be eligible if it can be demonstrated that it is of "exceptional importance" or a contributor to a historic district. National Register criteria are defined in National Register bulletin number 15: How to Apply the National Register Criteria for Evaluation.[24]

A structure, site, building, district, or object would be eligible for listing in the National Register if it can be demonstrated that it meets at least one of the following four evaluative criteria:

- **Criterion A (Event):** properties associated with events that have made a significant contribution to the broad patterns of our history

- **Criterion B (Person):** properties associated with the lives of persons significant in our past

- **Criterion C (Design/Construction):** properties that embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; possess high artistic values; or represent a significant distinguishable entity whose components lack individual distinction

- **Criterion D (Information Potential):** properties that have yielded, or may be likely to yield, information important in prehistory or history

Although there are exceptions, certain kinds of resources are not usually considered for listing in the National Register. These include religious properties, moved properties, birthplaces and graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years.

In addition to meeting at least one of the four criteria, a property or district must retain integrity, meaning that it must have the ability to convey its significance through the retention of seven aspects, or qualities, that in various combinations define integrity:

[24] United States Department of the Interior, National Park Service, *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*, 1997, *https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf*, accessed May 10, 2023.

- *Location:* the place where the historic property was constructed
- *Design:* the combination of elements that create the form, plans, space, structure, and style of the property
- *Setting:* the physical environment of the historic property, inclusive of the landscape and spatial relationships of the buildings
- *Materials:* the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property
- *Workmanship:* physical evidence of the crafts of a particular culture or people during any given period in history
- *Feeling:* the property's expression of the aesthetic or historic sense of a particular period of time
- *Association:* a direct link between an important historic event or person and a historic property

Properties that are listed in the National Register, as well as properties that are formally determined to be eligible for listing in the National Register, are automatically listed in the California Register and therefore are considered historical resources under CEQA.[25]

The Secretary of the Interior's Standards for the Treatment of Historic Properties

The Secretary's Standards were published and codified as 36 Code of Federal Regulations Part 68 in 1995, and updated in 2017.[26] The Secretary's Standards for rehabilitation have been adopted by local government bodies across the country, including the city, for reviewing proposed work on historic properties under local preservation ordinances. The Secretary's Standards provide an analytical tool for understanding and describing the potential impacts of changes to historic resources and are used to inform CEQA review. Developed by the NPS for reviewing certified rehabilitation tax credit projects, the rehabilitation standards provide guidance for reviewing work on historic properties. The rehabilitation standards are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces, and spatial relationships.

2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.

3. Each property will be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.

4. Changes to a property that have acquired historic significance in their own right will be retained and preserved.

5. Distinctive materials, features, finishes, and construction techniques or examples of craftsmanship that characterize a property will be preserved.

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[25] California Code of Regulations, title 14, section 4851, Historical Resources Eligible for Listing in the California Register of Historical Resources, *https://casetext.com/regulation/california-code-of-regulations/title-14-natural-resources/division-3-department-of-parks-and-recreation/chapter-115-california-register-of-historical-resources/section-4851-historical-resources-eligible-for-listing-in-the-california-register-of-historical-resources*, accessed May 10, 2023.

[26] United States Department of the Interior, National Park Service (Kay D. Weeks and Anne E. Grimmer), The Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstruction Historic Buildings, revised 2017, *https://home1.nps.gov/tps/standards/treatment-guidelines-2017.pdf*, accessed May 10, 2023.

6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature will match the old in design, color, texture, and, where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.

7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.

8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work will be differentiated from the old and will be compatible with the historic materials, features, size, scale, proportion, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Conformance with all rehabilitation standards does not determine whether a project would cause a substantial adverse change in the significance of a historical resource under CEQA. Rather, projects that comply with the standards benefit from a regulatory presumption that they would have a less-than-significant adverse impact on a historic resource. Projects that do not comply with the rehabilitation standards may or may not cause a substantial adverse change in the significance of a historical resource and would require further analysis to determine whether the historical resource would be "materially impaired" by the project under CEQA guidelines section 15064.5(b).

State

California implements the National Historic Preservation Act through its statewide comprehensive cultural resource preservation programs. The California Office of Historic Preservation, an office of the California DPR, implements the policies of the National Historic Preservation Act on a statewide level. The California Office of Historic Preservation also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdiction.

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects in California. To be considered a historical resource, a property must generally be at least 50 years old; when acting as the CEQA lead agency, the planning department uses a threshold of 45 years. A "historical resource" is defined in CEQA Guidelines section 15064.5 as a cultural resource (i.e., a built-environment resource, archeological resource, or human remains) that meets at least one of the following criteria:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in the California Register shall be considered a historical resource.

2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code, or identified as significant in a historical resource survey meeting the requirements of

section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the California Register.

4. The fact that a resource is not listed in, or determined to be eligible for listing in the California Register, not included in a local register of historical resources (pursuant to section 5020.1[k] of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in section 5024.1[g] of the Public Resources Code) does not preclude a lead agency from determining that the resource may be a historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

Therefore, under the CEQA guidelines, even if a resource is not included in any local, state, or federal register, or identified in a qualifying historical resources survey, a lead agency may still determine that any resource is a historical resource for the purposes of CEQA if there is substantial evidence supporting such a determination. A lead agency must consider a resource to be historically significant if it finds that the resource meets the criteria for listing in the California Register.

CEQA requires a lead agency to determine whether a proposed project would have a significant effect on important historical resources or unique archaeological resources. If a resource is neither a unique archaeological resource nor a historical resource, the CEQA guidelines note that the effects of the project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines section 15064.5[c][4]). As noted above, projects that comply with the Secretary's Standards benefit from a regulatory presumption under CEQA that they would have a less-than-significant impact on a historical resource. Projects that do not comply with the Secretary's Standards may or may not cause a substantial adverse change in the significance of a historical resource and must be subject to further analysis to assess whether they would result in material impairment of a historical resource's significance.

California Register of Historical Resources

The California Register, administered by the California Office of Historic Preservation, is the authoritative guide to historical and archeological resources that are significant within the context of California's history. Criteria for eligibility for inclusion in the California Register are based on and correspond to the National Register criteria. Certain resources are determined under CEQA to be automatically included in the California Register, including California properties formally eligible for or listed in the National Register. These resources are considered historical resources by the planning department for the purposes of CEQA. The evaluative criteria used for determining eligibility for listing in the California Register closely parallel those developed by the NPS for the National Register, but include relevance to California history. To be eligible for listing in the California Register as a historical resource, a resource must meet at least one of the following criteria (Public Resources Code section 5024.1(c)):

- *Criterion 1 (Event):* resources that are associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage

- *Criterion 2 (Person):*resources that are associated with the lives of persons important in our past
- *Criterion 3 (Design/Construction):* resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values
- *Criterion 4 (Information Potential):* resources or sites that have yielded, or may be likely to yield, information important in prehistory or history

A historical resource must also possess integrity in addition to meeting the significance criteria to be considered eligible for listing in the California Register. Consideration of integrity for evaluation of California Register eligibility closely follows the seven aspects of integrity that apply to the National Register (listed above).

Local

San Francisco Historic Preservation Commission

The HPC is a seven-member body that makes recommendations directly to the board of supervisors regarding the designation of landmark buildings, historic districts, and significant buildings. The HPC approves certificates of appropriateness for individual landmarks and landmark districts designated under article 10, along with permits to alter individual properties and conservation districts listed under article 11. The HPC reviews and comments on CEQA documents for projects that affect historic resources, as well as projects that are subject to review under National Historic Preservation Act section 106.

San Francisco Planning Department CEQA Review Procedures for Historical Resources

The planning department prepared the CEQA Review Procedures for Historic Resources to provide guidance in determining whether a resource is considered a historical resource as defined by CEQA. The following three categories of properties are defined:

- *Category A.* Category A has two subcategories:
  - *Category A.1.* resources listed in or formally determined to be eligible for the California Register
  - *Category A.2.* resources listed in adopted local registers, or properties that appear to be eligible, or may become eligible, for the California Register
- *Category B.* properties requiring further consultation and review
- *Category C.* properties determined not to be historical resources, or properties for which the city has no information indicating that the property is a historical resource

To determine whether a property is eligible as a historical resource for the purposes of CEQA, the planning department evaluates a property's individual significance for listing in the California Register and a property's relationship to any eligible historic district.

To assess impacts in historic districts, the planning department examines several factors, including but not limited to, size and significance of a historic district, number and location of contributing features/ noncontributing features, character-defining features, district integrity, district boundaries, and details of the proposed project. Assessments in historic districts are examined on a case-by-case basis, due to the wide variety and unique nature of historic resources and historic districts.

4.B.3 Environmental Setting

Property Description

The Islais Creek Bridge, officially named the Levon Hagop Nishkian Bridge (assigned Caltrans Bridge Number 34C0024), is a built-up steel double-leaf bascule bridge.[27] It was completed in 1950 on Third Street over the channel in the Bayview neighborhood of San Francisco. The bridge is approximately 1,700 feet east of I-280, and approximately 3,300 feet west of the bay. The bascule arms, which open to allow boats to pass on the channel, consist of riveted steel box girders supporting an open-grid, steel grate roadway. There are three joints of the open-grid steel deck where the bascule leaves separate during bridge operations. The bridge is approximately 100 feet wide and spans 114 feet over the channel, which is a coast guard-regulated navigable waterway. Each leaf consists of three built-up steel box girders, with transverse floor beams, longitudinal stringers, and an open-grid steel deck. Each leaf carries four lanes of traffic, two light rail transit tracks, and two cantilevered sidewalks. The leaves are supported by concrete abutments on either side of the channel. The bridge control tower, which houses the controls the operator uses to raise and lower the leaves, is on the northeastern side and immediately adjacent to the bridge. The control tower is a structure consisting of two elevated concrete floors, a basement level, and a steel/wood roof supported by steel pipe columns. The control room on the second floor of the control tower is surrounded by large plate glass windows canted slightly outward. A balcony with metal pipe railings surrounds the second-floor control room. The control tower foundation consists of concrete grade beams that are 3 feet wide by 1 foot 6 inches deep. The grade beams are supported by eight precast concrete piles that are 18 inches square.

As originally designed in 1950, the bridge carried only vehicular traffic and pedestrians. In 2007, SFMTA retrofitted the bridge to carry two light rail tracks with overhead electric wires and poles to provide power to light rail vehicles. The two light rail tracks have a horizontal alignment reverse curve over the bridge to go around the existing center bascule, which crosses the three rail joints of the open-grid steel deck where the bascule leaves separate during bridge operations. The retrofit added five 48-inch cast-in-steel-shell piles at each abutment.

Caltrans evaluated and assigned the Islais Creek Bridge a National Bridge Inventory Rating of 20 out of 100 (“poor”) in terms of its structural sufficiency and a structural system scoring of 0.[28]

Historic Context

Islais Creek

Prior to reclamation efforts of the nineteenth and early twentieth centuries, the waters of Islais Creek emptied into a small bight, also known as Islais Creek Cove, which extended roughly from the southern edge of Potrero Point southwards approximately 1,000 feet from the project location, in the vicinity of the intersection of today’s Evans Avenue and Newhall Street. Based on nearby archeological investigations, Native American habitation along Islais Creek dates to at least 4,000 years ago along the changing shoreline of San Francisco Bay and the tidal marshes of Islais Creek. Limited land use occurred in this area during the Spanish and Mexican periods, but some settlement along Islais Creek occurred during the Gold Rush, as the

[27] A bascule is type of bridge with a pivoting section that is raised and lowered using counterweights; it is typically used over waterways.

[28] The National Bridge Inspection Standards are the standards established by the United States Secretary of Transportation that govern the safety inspections of highway bridges on public roads throughout the United States. The standards follow the federal policy that periodic and thorough inspections of U.S. bridges are necessary to maintain safe bridge operation and prevent structural and functional failures, and to allow bridge owners to make informed investment decisions as part of an asset management program (see *MAP-21*, Public Law 112-141, 126 Stat. 405).

city's rapid population growth significantly surpassed the development of infrastructure and forty-niners–erected shacks along the creek.

As San Francisco's population grew during the 1850s and 1860s, Islais Creek was one of several physical barriers to traveling by land along the waterfront. Construction of Long Bridge over Mission Creek, as well as a movable bridge over Islais Creek, occurred around 1867. Later, by the mid-1870s, Islais Creek Cove, south of the creek mouth and today's Islais Creek channel, was developed by meat processing firms. So-called "Butchertown" was constructed on a pile-supported wharf over the shallow waters of the cove. Construction of levees along the bridge restricted water flow to the bay to a 28-foot-wide drainage culvert and changed Islais Creek to become little more than a pond by 1886. Butchertown suffered from the effects of the 1906 earthquake, and debris was used to fill portions of Islais Creek, giving way to the area's transformation away from meatpacking and processing toward a more commercial and industrialized neighborhood. Southern Pacific Railroad built a Strauss trunnion bascule steel drawbridge across Islais Creek around 1914. In addition to vehicle lanes, the structure contained tracks used by the Southern Pacific Railroad, the Santa Fe Railroad, and the Market Street Railway (streetcar line); by 1940, the drawbridge carried six trains and 12,000 cars per day and opened for four ships per day. In 1942, the streetcar line was replaced with bus service. Traffic over the bridge tripled between 1940 and 1943 due to wartime production activities at Hunters Point shipyard.

Islais Creek Bridge Development, Design, and Construction History

Planning and development of a new Islais Creek bridge began in the mid-1940s, but construction did not begin until the end of World War II due to steel shortages. Designed by Leon Hagop (L.H.) Nishkian, the Islais Creek Bridge opened March 4, 1950. During construction from 1949 to 1950, vehicle traffic was routed around Islais Creek on Army (now Cesar Chavez Street) and Evans Streets. From 1950 to the late 1990s, Public Works regularly raised the drawbridge—typically six times a month on average—but in the last 20 years, the drawbridge has not been raised as frequently.

The designer, L.H. Nishkian, was born in Constantinople (now modern-day Istanbul, Turkey) in 1882. He received his degree in Civil Engineering at the University of California, Berkeley, in 1906. Following graduation, he worked for other engineers in San Francisco, Los Angeles, and Portland on the structural design of numerous buildings and bridges. From 1912 to 1919, he worked as an assistant engineer in the City Engineer's office of Public Works, and as the Consulting Structural Engineer in the city's Bureau of Building Inspection. He then entered into private practice from 1919, continuing until his death in 1947. According to his obituary, L.H. Nishkian engineered many important buildings, including the Fox Theater in Oakland and the Western Furniture Exchange and Merchandise Mart (at 1355 Market Street); and served as structural engineer for a series of Bank of America buildings along the west coast (including a company headquarters at 300 Montgomery Street in San Francisco), and the Islais Creek Bridge. In 1941, Nishkian replaced Russell Corie as bridge engineer for the Golden Gate Bridge and supervised "exhaustive studies of the structural stability of the bridge," according to the *San Francisco Chronicle*.

Art Moderne

The 1950-constructed bridge uses elements of the Art Moderne style that was part of the Modernist architecture and design movement that evolved through various phases. Art Deco, the earliest phase, often emphasized verticality and included intricate geometric ornamentation like stylized floral decoration or patterns such as chevrons. This was followed by Art Moderne (also referred to as Streamline Moderne or simply Moderne) that was less ornamental than Art Deco.

The aesthetics of the Art Moderne style used in the 1950-constructed bascule bridge include an emphasis on the horizontal, with its curvilinear railings; the silver color as a classic expression of the image of speed, movement, and newness, associated with Art Moderne; the teardrop-shaped girder housing units; and the riveted steel side and center box girders acting as a "skin," obscuring the mechanics of the bridge within.

The control tower for the bridge was constructed using mass-produced materials, such as concrete; the metal-frame windows and metal doors also convey elements of the Art Moderne style. Smooth concrete and metal illustrate the manufactured building fabric and characterize the machine/technological-inspired aesthetic.

Bascule Bridges[29]

In the United States, the first bascule bridges were constructed in Chicago in 1893. The design gained popularity in California in the early twentieth century because it solved many of the disadvantages of other earlier movable bridge designs, such as swing bridges. Swing bridges require a central pivot in the waterway, and therefore create an obstruction in the middle of the waterway. Bascules do not need a central pivot, thereby avoiding an obstruction in the waterway. Additionally, bascule bridges could be partially raised to allow smaller boats to pass through; this made bascule bridges faster to operate than swing bridges, which had to be fully opened even for small vessels.

Bascule bridges, or drawbridges, were constructed with one or two leaves that could be raised vertically from an abutment to permit passage through the waterway. Bascule bridges feature a hinge, or a trunnion, that pulls the movable span upward and inward, thereby allowing vessels to pass through an unobstructed waterway. Because movable bridges were expensive to build and operate, they were built only where absolutely necessary, a condition found only along major waterway transportation corridors. By the middle of the twentieth century, movable bridges fell out of favor as engineers opted to construct high, fixed-span crossings. In recent decades, the state began to remove its movable bridges and replace them with fixed spans, eliminating the cost of staffing and maintaining the bridges.

The 1950-constructed drawbridge was built as a replacement for the 1914-constructed drawbridge that carried two lines of rail traffic (freight and streetcar) and vehicular traffic over Islais Creek and allowed ships to access inland industrial facilities along the creek. During World War II, wartime production at the nearby Hunters Point Shipyard saw traffic over the bridge triple between 1940 and 1943, with the movement of materials, goods, and people involved in wartime industries. The 1950-constructed Islais Creek Bridge provided four lanes of vehicular traffic (compared to the previous bridge's two-lane configuration) and the continued use of the drawbridge allowed for ships to continue to access inland industries along the creek.

Evaluation of Historical Significance

Previous Designations and Historical Resource Survey Evaluations

The earliest known inventory and evaluation of the Islais Creek Bridge occurred in 1994, when Carey & Co. Inc. documented the bridge[30] to inform the San Francisco Waterfront Plan EIR and Waterfront Land Use Plan (adopted in 1997). At the time, the bridge was not yet 50 years of age, and was assigned an Office of Historic Preservation Status Code of 5S1. This code meant the bridge was not eligible for listing in the National

[29] The following text has been extracted and edited from California Department of Transportation, *Caltrans Historic Bridge Inventory Update: Metal Truss, Moveable, and Steel Arch Bridges,* Volume 1: Report and Figures, 2004: 39, 42; and California Department of Transportation, *Historic Highway Bridges of California*, 1990: 111.

[30] California Department of Parks and Recreation (DPR) 523 Primary Record for San Francisco's Auxiliary Water Supply System.

Register, but was of local interest because it was separately listed or eligible for listing under an existing local ordinance. However, the reconnaissance-level survey did not include an evaluation of the bridge under the four National Register criteria.

In 1997, Dames & Moore evaluated the Islais Creek Bridge for the "Third Street Light Rail Project, San Francisco, California, Historic Architectural Survey Report." The Dames & Moore report concluded that the bridge was eligible for listing in the National Register at the local level under Criterion C, both as an "outstanding example of a Moderne style drawbridge" and as the work of master[31] engineer, L. H. Nishkian. This report was followed by a "Finding of No Adverse Effect" report prepared in June 1998 by ICF Kaiser Engineers and the Duffey Company. The Kaiser Engineers and Duffey Company report identified the bridge's contributing features as "the two bascules and their mechanisms; decking for six lanes of vehicular traffic and two sidewalks; bridge median, and sidewalk railings; and control tower including the stucco base, control room with canted, curved glass, and walkway and railings."[32]

In an evaluation as part of the "Caltrans Statewide Historic Bridge Inventory Update" in 2004, Caltrans determined that the Islais Creek Bridge was eligible for listing in the National Register. The bridge is eligible at the local level of significance under Criterion C for its distinctive design qualities as an example of the Art Moderne style applied to a bridge. The SHPO concurred with the finding of eligibility on December 7, 2005. Because SHPO formally determined the bridge to be eligible for listing in the National Register, the bridge is automatically listed in the California Register under Criterion 3, and is therefore considered to be a historical resource for the purposes of CEQA.

The Third Street Light Rail project, completed in 2006, required several modifications to the bridge, including adding rail tracks to the bridge's decking, removing some steel-grate decking, adding some steel to the floor system to support the rail tracks, minor modifications to the counterweight, and adding catenary poles and overhead wires for operating the trains. The Finding of No Adverse Effect prepared for the Third Street Light Rail Project concluded that the modifications would not alter the operation of the bridge or the contributing features; and the visual changes, including the new rail tracks, poles, and overhead wires, would meet the Secretary of the Interior's Standards for the Treatment of Historic Properties (Secretary's Standards). The report also noted that the Secretary's Standards would be consulted as detailed designs were prepared.

JRP Historical Consulting prepared a Historic Property Survey Report and other supporting documentation in 2017-2018 as part of a proposed bridge rehabilitation project on behalf of Caltrans, and concluded the previous determination of eligibility for the bridge remained valid. The planning department has reviewed the previous determination and concurred with the findings with regard to eligibility, period of significance, integrity, and character-defining features.[33]

The following subsections summarize the National Register and California Register eligibility evaluation for the bridge.

[31] The city no longer uses this term and instead refers to architects of merit or designers or engineers of merit.
[32] ICF Kaiser Engineers, Inc., and The Duffey Company, with Dames & Moore, "Third Street Light Rail Project, San Francisco, California, Finding of No Adverse Effect," prepared for San Francisco Municipal Railway and Federal Transit Authority, June 1998, 22.
[33] AECOM, "Preservation Alternative Memorandum – Islais Creek Bridge Project (2022-000112ENV)," prepared for Environmental Planning, May 2023.

Criterion A/1 (Events)
The Islais Creek Bridge was not found to be significantly associated with an event important to local, regional, state, or national history and is not eligible for listing under Criterion A/1, either as an individual or part of a historic district.

Criterion B/2 (People)
No individuals of historical significance are associated with the Islais Creek Bridge; therefore, it is not eligible for listing under Criterion B/2, either as an individual resource or as part of an eligible historic district.

Criterion C/3 (Design/Construction)
The Islais Creek Bridge is individually eligible for listing in the National Register and is listed in the California Register under Criterion C/3 at the local level of significance as an outstanding example of an Art Moderne-style drawbridge, with its curvilinear railings and silver color classic expressions of the image of speed, movement, and newness, associated with Art Moderne. It is also significant as the work of an engineer of merit, L.H. Nishkian. Like many structural engineers, most of his work is invisible hidden inside the walls of buildings. This bridge best expresses not only his engineering skill but his design sensitivity as well.

Criterion D/4 (Information Potential)
To be eligible for listing in the National or California Register under Criterion D/4, a property must have the potential to yield information important in prehistory or history. Criterion D/4 is generally understood to apply primarily to archeological resources. Criterion D/4 may apply to historic architectural resource under limited circumstances where study of the physical fabric of a building, structure, or landscape may yield important scientific and historic information that is not otherwise available in the documentary record. The Islais Creek Bridge does not represent a construction type that would yield information important to the prehistory or history of San Francisco. Therefore, it is not eligible for listing under Criterion D/4, either as an individual resource or as part of an eligible historic district.

Archeological resources, human remains, and tribal cultural resources are addressed in Appendix B Sections E.4 and E.5, Initial Study, of this draft EIR.

Period of Significance
The bridge's period of significance is 1950, the year of the bridge's completion.

Overview of Integrity Analysis
Integrity is the ability of a property to convey its significance. To be considered a historical resource, a property must be shown to be historically significant and to retain sufficient integrity to convey that significance. There are seven aspects of integrity, described in the following paragraphs.

- *Location:* the place where the historic property was constructed
- *Design:* the combination of elements that create the form, plans, space, structure, and style of the property
- *Setting:* the physical environment of the historic property, inclusive of the landscape and spatial relationships of the buildings

- *Materials:* the physical elements that were combined or deposited during a particular period of time and in a particular pattern of configuration to form the historic property
- *Workmanship:* physical evidence of the crafts of a particular culture or people during any given period in history
- *Feeling:* the property's expression of the aesthetic or historic sense of a particular period of time
- *Association:* a direct link between an important historic event or person and a historic property

Caltrans' 2018 Finding of Effect for the bridge concluded that it retains historic integrity to its period of significance. The removal of two lanes of traffic and the addition of rails, overhead wires, catenary poles, and a barrier between the rails and automobile lanes as part of the 2006 light rail project somewhat diminished the integrity of the bridge's materials, design, workmanship, and feeling. However, the bridge's integrity overall remains intact because its character-defining features were not altered by that project. The bridge also retains integrity of location, setting, and association because it has not been moved; the bridge's surrounding built environment remains largely industrial in nature; and the structure continues to be used as a bridge crossing Islais Creek.

Character-Defining Features

As illustrated on Figure 4.B-1 through Figure 4.B-4, the character-defining features of the bridge that make it eligible for listing under Criterion C/3 include:

- the bridge type (i.e., bascule type bridge with two spans and concrete abutments);
- above-deck detailing elements on top of, or associated with, the bascule leaves, including:
  - above-deck visible elements of riveted steel side and center box girders;
  - quarter-round and teardrop bascule girder housing units with Art Moderne styling;
  - steel sidewalk guardrails with Art Moderne styling, including the guardrails for the staircase leading to the abutment machinery pit entrance on southeast corner;
- a steel hatch door on the eastern side of the south machinery pit; and
- the control tower location, design, and materials, including:
  - oblong plan;
  - two-story (with basement) design;
  - concrete walls;
  - canted window configuration, size, and materials;
  - copper roofing with overhang;
  - walkway and handrails surrounding the top floor; and
  - door locations and configurations.

Figure 4.B-1 **Above-Deck Character- Defining Features, Facing Southeast**

Figure 4.B-2 **Above-Deck Character-Defining Features, Facing South**

Figure 4.B-3 Character-Defining Steel Staircase Leading to Abutment Machinery Pit and Sidewalls of Concrete Abutments, at Southeastern Corner Leading to Steel Hatch Door, Facing Northwest

Figure 4.B-4 Control Tower Character-Defining Features, Facing South

Historic Architectural Resources Located Adjacent to the Project

The Islais Creek Bridge is at the southern boundary of the Central Waterfront/Potrero Point Historic District. As identified in the San Francisco Planning Department's "Central Waterfront Cultural Resources Survey Summary Report and Draft Context Statement" in 2001, and the Kelley & VerPlanck and Page & Turnbull District Update form prepared in 2008, the southern boundary of the district follows along the southern side of Islais Creek. The Islais Creek Bridge is not identified as a contributor to the historic district, and neither study mentions the bridge. The closest identified historic resources north of the Islais Creek Bridge are 3201-3255 Third Street and 3210-3240 Third Street.

3201-3255 Third Street

Northeast of the bridge along the east side of Third Street is 3201-3255 Third Street (Assessor's Parcel Number [APN] 4377/001), a one- and two-story industrial building constructed in 1956 for the Reynolds Metals Company as an office and warehouse. The building was surveyed as part of the Central Waterfront Cultural Resources Survey. It is not a contributor to the Central Waterfront Historic District because it post-dates the period of significance. It was identified as being individually eligible for listing in the California Register under Criterion 1 for its association with industrial development in the Central Waterfront area of San Francisco, and under Criterion 3 as an example of a rare construction technique in which aluminum cladding is attached to a steel frame. Therefore, the building at 3201-3255 Third Street is a historic resource for purposes of CEQA.

3210-3240 Third Street

Northwest of the bridge along the western side of Third Street is 3210-3240 Third Street (APN 4378/006), a one-story industrial building constructed originally as the F.E. Book Company, Incorporated Plant, a sardine canning plant. The building was most recently surveyed in 2012, and identified as a contributor to the Central Waterfront Historic District. Therefore, the building at 3210-3240 Third Street is a historic resource for purposes of CEQA.

Auxiliary Water Supply System

San Francisco's auxiliary water supply system (AWSS) Historic District is a discontinuous historic district composed of buildings, structures, and infrastructure features related to this redundant fire suppression system that was originally constructed between 1908-1913. The AWSS Historic District is eligible for listing in the National and California Registers under Criteria A/1 and C/3 for its association with the post-1906 Earthquake and Fire reconstruction and engineering in San Francisco. Based on the DPR Primary Record for the AWSS Historic District there are many components of the AWSS near the Islais Creek Bridge including a 1988 date-stamped high-pressure hydrant, a below-grade distribution pipe, a manifold, and three suction connections.[34] The only identified components of the AWSS near Islais Creek Bridge that are considered contributing features are the distribution main and manifold. The other features, including the hydrant and suction connections, were installed after the period of significance and are not contributing features.

Fire Station No. 25

Fire Station No. 25 is at 3305 Third Street (APN 4502A/002), just south of the bridge on the eastern side of Third Street. Fire Station No. 25 was constructed in 1927. The fire station was most recently identified in the

[34] ICF, State of California Department of Parks and Recreation (DPR) Primary Record Form for the San Francisco Auxiliary Water Supply System (San Francisco, June 4-11, 2018), 92.

Port of San Francisco's Waterfront Plan EIR[35] as a historic resource individually eligible for listing in the National Register and listed in the California Register. Therefore, Fire Station No. 25 is a historical resource for purposes of CEQA.

4.B.4 Impacts and Mitigation Measures

This section analyzes impacts from the proposed project on historic architectural resources. It describes the methods used to determine the impacts of the proposed project and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate (i.e., avoid, minimize, rectify, reduce, eliminate, or compensate for) significant impacts accompany the discussion of each identified significant impact.

Significance Criteria

The proposed project would have a significant impact on historical resources if it would cause a substantial adverse change in the significance of a historical resource, as defined in CEQA guidelines section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.

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

(A) convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

(B) account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Public Resources Code section 5024.1(g), unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

(C) convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

As noted above, a project that would comply with the Secretary's Standards is considered to have mitigated its impact to a less-than-significant level (CEQA guidelines section 15064.5(b)(3)). However, CEQA guidelines section 15126.4(b)(2) states that, "In some circumstances, documentation of a historical resource, by way of historic narrative, photographs, or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur." In such cases, the demolition or substantial alteration of a historical resource would remain a significant and unavoidable impact on the environment even after the historical documentation has been completed.

[35] San Francisco Planning Department. Waterfront Plan EIR, February 2023. *https://sfplanning.org/environmental-review-documents?title=Waterfront&field_environmental_review_categ_target_id=All&items_per_page=10*, accessed October 17, 2023.

Approach to Analysis

Potential impacts on historical resources are assessed by identifying any activities (either during construction or operation) that could affect resources that have been identified as historical resources for the purposes of CEQA. Once a resource has been identified, it then must be determined whether the proposed project would "cause a substantial adverse change in the significance" of the resource, as described above. Therefore, in accordance with CEQA guidelines section 15064.5(b)(2), the following analysis considers the potential for the proposed project to materially impair the significance of a historical resource by causing direct or indirect changes to the physical characteristics of the resource that convey its historical significance. Mitigation for impacts on historical resources may involve avoidance of alterations to or demolition of the resource; revision of a project to minimize the effect; or, where avoidance or minimization is not feasible, documentation and public interpretation of the resource. However, as noted above, documentation would not reduce impacts on a historical resource to a less-than-significant level.

4.B.5 Impact Evaluation

Impact CR-1. The proposed project would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code. (*Significant and Unavoidable with Mitigation*)

The Islais Creek Bridge was determined to be eligible for listing in the National Register and is listed in the California Register under Criterion C/3 for its distinctive design qualities as an example of the Art Moderne style applied to a bascule bridge. The period of significance is 1950, the year the bridge was completed.

The proposed project would demolish the Islais Creek Bridge; the proposed project would remove the majority of character-defining features of the Islais Creek Bridge such that it would no longer convey its historic significance as an Art Moderne style drawbridge. The demolition would remove historic materials, features, and spaces that characterize the property and would result in physical destruction, damage, or alteration such that the significance of the individual historical resource would be materially impaired.[36] Therefore, the proposed project would result in a significant impact to a historical resource. To reduce this impact, the project sponsor would be required to implement **Mitigation Measures M-CR-1a through M-CR-1d**.

Mitigation Measure M-CR-1a: Islais Creek Bridge Documentation

Prior to approval of the proposed project by the Public Works Commission, the project sponsor shall submit to the department for review photographic and narrative documentation of the bridge. The documentation shall be funded by the project sponsor and undertaken by a qualified professional who meets the standards for history, architectural history, or architecture (as deemed appropriate by the department's preservation staff), as set forth by the Secretary of the Interior's Professional Qualification Standards (36 Code of Federal Regulations, Part 61). The scope of the documentation should focus on the bridge's character-defining features and significance under Criterion 3 as an outstanding example of an Art Moderne-style drawbridge. The documentation scope shall be

[36] San Francisco Planning Department, Memorandum to File, Historic Resource Status of Islais Creek Bridge (Levon Hagop Nishkian Bridge), July 5, 2023.

reviewed and approved by the department prior to any work on the documentation. The types and level of documentation shall include the following formats:

Historic American Engineering Record (HAER)-Like Measured Drawings – A set of Historic American Engineering Survey-like (HAER-like) measured drawings that depict the existing size, scale, and dimension of the subject property. The department's preservation staff will accept the original architectural drawings or an as-built set of architectural drawings (plan, section, elevation, etc.). The department's preservation staff will assist the consultant in determining the appropriate level of measured drawings. A cover sheet may be required that describes the historic significance of the property.

HAER-Like Photographs – Digital photographs of the subject property. Large-format negatives are not required. The scope of the digital photographs shall be reviewed by the department's preservation staff for concurrence, and all digital photography shall be conducted according to current NPS standards. The photography shall be undertaken by a qualified professional with demonstrated experience in HAER or Historic American Building Survey (HABS) photography.

HAER-Like Historical Report – If the department determines that existing survey information or historic resource evaluations of a property do not sufficiently document the historic resources' significant associations, a written historical narrative and report shall be provided in accordance with the HAER Historical Report Guidelines. The written history shall follow an outline format that begins with a statement of significance supported by the development of the architectural and historical context in which the structure was built and subsequently evolved. The report shall also include architectural description and bibliographic information.

Print-on-Demand Book – The Print-on-Demand book shall be made available to the public for distribution by the project sponsor by uploading the book onto a website so the public can access and download and or print out the book. The project sponsor shall make the content from the historical report, historical photographs, HAER photography, measured drawings, and field notes available to the public through a digital book that will contain all the content in a format that is easy to read and or download and print out. The project sponsor shall be required to keep the book up for public access digitally, but is not responsible for the physical print out of the book for the public.

Video Recordation – In coordination with the department's preservation staff, the project sponsor shall prepare video documentation of the historic resource. The purpose of this video documentation is to supplement other recordation and interpretive measures and enhance the collection of reference materials that would be available to the public and inform future research. This video recordation should also document the raising of the drawbridge, as required by Mitigation Measure M-CR-1d, Community Memorial Event, as detailed below. Video recordation shall be conducted by a professional videographer with experience recording architectural resources or experience with the Bayview community. The professional videographer shall provide a storyboard of the proposed video recordation for review and approval by the department's preservation staff.

The project sponsor, in consultation with the department, shall conduct outreach to determine which repositories may be interested in receiving copies of the above documentation, either digital or physical copies. Potential repositories include, but are not limited to, the San Francisco Public Library, the Environmental Design Library at the University of California, Berkeley, the Northwest

Information Center, San Francisco Architectural Heritage, the California Historical Society, and Archive.org. The final approved documentation shall be provided in electronic or printed form to the interested repositories. The department requires one printed copy of the print-on-demand book and digital copies of the print-on-demand book and all other materials. Additionally, the department will make electronic versions of the documentation available to the public for their use at no charge.

The professional(s) shall submit the completed documentation for review and approval by the department's preservation staff. All documentation must be reviewed and approved by the department prior to Public Works Commission approval.

Mitigation Measure M-CR-1b: Salvage Plan

Prior to approval of the proposed project by the Public Works Commission, the project sponsor shall consult with the department's preservation staff as to whether any such features may be salvaged, in whole or in part, during demolition or alteration. The project sponsor shall make a good faith effort to salvage character-defining features or materials of historical interest to be used as part of the interpretative program, incorporated into the architecture of the new bridge, or offered to other city agencies, non-profit or culturally affiliated groups, or other educational or artistic groups. The project sponsor shall prepare a salvage plan for review and approval by the department's preservation staff prior to Public Works Commission approval.

Mitigation Measure M-CR-1c: Public Interpretive Plan

The project sponsor shall facilitate the development of a public interpretive program focused on the history of the project site, the identified historic resource, and its significant historic context. The interpretive program should be developed and implemented by a qualified design professional with demonstrated experience in displaying information and graphics to the public in a visually interesting manner, as well as a professionally qualified historian or architectural historian, or community group approved by the department. Through consultation with department preservation staff, coordination with local Native American tribal representatives should occur to ensure that a holistic history of the bridge and Islais Creek area is presented to the public. The primary goal of the program is to educate visitors and future residents about the property's historical themes, associations, and lost contributing features within broader historical, social, and physical landscape contexts.

The interpretive program shall be initially outlined in an interpretive plan subject to review and approval by the department's preservation staff prior to Public Works Commission approval. The plan shall include the general parameters of the interpretive program including the substance, media, and other elements of the interpretative program. The interpretive program shall include —in publicly accessible areas of the project site —permanent display(s) of interpretive materials concerning the history and design features of the affected historic resource, including both the site as a whole and the individual contributing buildings and features. The display shall be placed in a prominent public setting near the new bridge such as the proposed public observation platform. The interpretive material(s) shall be made of durable all-weather materials and may also include digital media in addition to a permanent display. The interpretive material(s) shall be of high quality and installed to allow for high public visibility. Content developed for other mitigation measures, as applicable, including the documentation programs, may be used to inform and provide content for

the interpretive program. The interpretive program may also incorporate video documentation completed under M-CR-1a, Islais Creek Bridge Documentation, as applicable to provide a narrated video that describes the materials, construction methods, current condition, historical use, historic context and cultural significance of the historic resource.

The detailed content, media, and other characteristics of such an interpretive program shall be coordinated and approved by the department's preservation staff. The final components of the public interpretation program shall be constructed and installed, and a plan for their maintenance shall be finalized prior to completion of the new bridge.

The interpretive program shall be developed in coordination with the other interpretative programs as relevant, such as interpretation under archeological mitigation measure, if required. In particular, this interpretive program shall present the full and holistic history of the Islais Creek Bridge and Islais Creek area and should be developed in consultation with the local Native American representatives as requested during tribal cultural resources consultation.

Mitigation Measure M-CR-1d: Community Memorial Event

Prior to commencement of demolition activities on the bridge, the project sponsor shall host a community memorial event with the intent of raising and lowering the drawbridge to demonstrate the bridge's character-defining feature as a drawbridge. The project sponsor shall reach out to relevant community groups associated with the historic resource, and other neighborhood groups that may be interested in cosponsoring or attending the commemorative event. The purpose of the event would be to commemorate the site's history, but it would also be an opportunity to provide information about the bridge's construction schedule, logistics of the bus bridge while the bridge is under construction, and general information about how the new bridge fits within the city's overall approach to addressing sea-level rise around Islais Creek. The event shall be coordinated with department staff and may take on a variety of forms, but the preferred location of the event would be at the site of the Islais Creek Bridge. The community memorial event and raising and lowering of the drawbridge should be documented by video and photographs in coordination with the requirements of Mitigation Measure M-CR-1a: Islais Creek Bridge Documentation. Additionally, the video documentation should incorporate the actions of or an interview with current or former staff responsible for operating the drawbridge or a drawbridge engineer familiar with the Islais Creek Bridge, to understand what actions must take place when raising and lowering the drawbridge. The project sponsor will make efforts to ready the draw-span for a successful raising and lowering, but this will depend on the condition of the drawbridge and whether it can be raised and lowered practically and safely at the time of the community memorial event.

Significance After Mitigation

Mitigation Measures M-CR-1a through M-CR-1d would document the historic architectural resource, require the preparation of a salvage plan, create an interpretive program, and require a community memorial event that involves raising and lowering the drawbridge. The identified mitigation measures would partially compensate for impacts associated with the proposed project through comprehensive documentation and memorialization of the historic architectural resource. However, only avoidance of substantial adverse changes would reduce impacts to a less-than-significant level, and the mitigation measures would not

reduce impacts to that degree. Therefore, the impact on historic architectural resources would remain ***significant and unavoidable with mitigation***.

Impact CR-2: The proposed project would not result in a substantial adverse change in the significance of any adjacent historical resources pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code. ***(Less than Significant)***

The project proposes to raise the bridge deck three feet higher than the existing deck, resulting in Third Street sloping upwards starting approximately 200 feet north of the bridge superstructure. This will also be in the immediate vicinity of 3201-3255 Third Street and 3210-3240 Third Street, and 250 feet to the south of the bridge superstructure to just north of the existing driveway of the San Francisco Fire Department Fire Station No. 25. Third Street and the pedestrian/bicycle paths at the approaches to the bridge would need to be raised to conform to the profile of the reconstructed light rail tracks and sidewalks, which would be constructed 6 inches above existing grade. Minor adjustments would be made to the elevation of existing driveways and drainage catch basins along Third Street. These proposed roadway and light rail improvements would not result in the demolition, destruction, relocation, or alteration to adjacent historical resources such that the significance of these resources would be impaired. The change in roadway and bridge deck elevation would not adversely affect any identified character-defining features of and/or contributors to the Central Waterfront Historic District or to any individually eligible historic resources adjacent to the roadway. Although minor adjustments would be required to the elevation of existing driveways and drainage catch basins in the modified approach grades along Third Street, these improvements would not result in adverse effects to character-defining features of these historic resources. The proposed project improvements would not affect any of the contributing features of the Auxiliary Water Supply System historic resource near Islais Creek Bridge.

Therefore, mitigation measures are not required, and impacts would be ***less than significant*** related to adjacent historical resources.

4.B.6 Cumulative Impacts

Impact C-CR-1: The proposed project, in combination with cumulative projects, would not result in cumulative impacts to historic architectural resources and would not result in a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code. (*Less than Significant*)

The cumulative analysis for historic architectural resources considers individual projects that are anticipated to occur in the project site vicinity that may affect historical architectural resources and cultural resources also affected by the proposed project. Because the Islais Creek Bridge is an individual historical resource and is not a contributing feature of the San Francisco Fire Department Auxiliary Water Supply System or the Central Waterfront/Potrero Point Historic District, it does not share a historic context or use with identified historical resources or with properties where cumulative projects are located. None of the cumulative projects would result in direct or indirect impacts to identified historic resources with above- or below-ground contributing elements of the San Francisco Fire Department Auxiliary Water Supply System. None of cumulative projects are within the boundaries of the Central Waterfront/Potrero Point Historic District.

None of the cumulative projects would result in direct or indirect impacts to the identified adjacent historic resources, including the San Francisco Fire Department Fire Station No. 25, 3201-3255 Third Street, or 3210-3240 Third Street. The five cumulative projects range from 0.40 to 0.70 mile away from the identified historic resources adjacent to the Islais Creek Bridge; therefore, there would be no impacts that would alter the setting of the individual historic resources or the district contributors from nearby projects. Although one of the cumulative projects, the Biosolids Digester Facility project, identified impacts to historic resources, the significance of these historic resources has no direct functional, historic, or aesthetic relationship with the Islais Creek Bridge or the adjacent historic resources. Therefore, the impacts of the cumulative projects would not combine with the impacts of the proposed project related to the historic resources such that it would result in a significant cumulative impact because the adverse impacts to the historic resources on the project site are limited to the historic Islais Creek Bridge and not to any other identified adjacent historic resources, and no cumulative projects were identified that could result in historic resource impacts to adjacent historic resources. Therefore, the impact of the proposed project, in combination with cumulative projects, on historic architectural resources would be ***less than significant***.

Cumulative impacts related to archeological resources and human remains are addressed in Section E.4, Cultural Resources, the Initial Study in Appendix B.

4.C Transportation and Circulation

4.C.1 Introduction

This section of the draft EIR describes existing transportation and circulation conditions in the study area and analyzes potential project-level and cumulative impacts on transportation and circulation during construction of the proposed project. Transportation and circulation topics cover issues concerning people walking, bicycling, or driving; public transit; emergency access; vehicle miles traveled (VMT); and loading (i.e., loading and unloading of goods, services, and passengers). For each of these topics, this section includes subsections discussing the environmental setting, regulatory framework, approach to analysis, environmental impacts, and mitigation measures (as applicable).

As part of the project's public scoping, the planning department received comments related to the project's construction impacts (including cumulative transportation impacts from other construction projects and sporting events in the area) and impacts to transit riders during the project's two-year construction period. The planning department considered these comments in the preparation of this analysis.

4.C.2 Environmental Setting

The Islais Creek Bridge Project would close the bridge and reroute vehicular, light rail, bicycle, and pedestrian traffic around the site for a period of approximately two years. Therefore, the transportation study area includes major arterials where vehicle traffic may be rerouted, and is generally bounded by Cesar Chavez Street to the north, Cargo Way to the east, and Evans Avenue to the south and west.

Regional and Local Roadways

Regional Roadways

The Islais Creek Bridge is approximately 1 mile northeast of the U.S. 101 and I-280 interchange; both I-280 and U.S. 101 provide regional access to and from the project site. The Islais Creek Bridge serves as a major link between the Dogpatch/Central Waterfront neighborhoods and the Bayview–Hunters Point neighborhoods.

U.S. 101 is a north-south freeway spanning much of the length of California. Near the project site, U.S. 101 is an eight-lane freeway with four lanes in each direction. The project site can be directly accessed from the Bayshore Boulevard/Jerrold Avenue off-ramp in the northbound direction and the Cesar Chavez Street off-ramp in the southbound direction. The nearest on-ramps are approximately 0.9 mile from the project site on Cesar Chavez Street for both the northbound and southbound directions. The average daily traffic volume on U.S. 101 near Faith Street is approximately 247,900 vehicles; the AM and PM peak-hour traffic volumes at this location are approximately 12,460 and 13,160 vehicles, respectively.

I-280 is a north-south freeway that runs between the U.S. 101/I-680 interchange in San Jose and the King Street ramps in San Francisco. Near the project site, I-280 is generally a six-lane freeway, with three lanes in each direction. The project area can be accessed from the Cesar Chavez Street off-ramp in the northbound direction or the Pennsylvania Avenue off-ramp in the southbound direction. The nearest on-ramps are on 25th Street in the northbound direction and on Pennsylvania Avenue in the southbound direction.

Local Roadways

The Islais Creek Bridge serves as a major link between the Dogpatch/Central Waterfront neighborhoods and the Bayview– Hunters Point neighborhoods. Local streets surrounding the proposed project area are described in the following paragraphs.

Third Street runs north and south between Bayshore Boulevard and Market Street. In the vicinity of the project site, Third Street has two travel lanes in each direction, with the T-Third light rail tracks in a center median. A Class 3 bicycle facility runs along Third Street south of Cargo Way. The segment over the channel (i.e., Islais Creek Bridge) has light rail tracks in each direction that occupy 28 feet of the bridge right-of-way, one 10-foot and one-14-foot travel lane in each direction, and 7-foot sidewalks on each side (excluding railings).

The general plan designates Third Street as a major arterial in the Congestion Management Program network. Third Street is also part of the Metropolitan Transportation System network, a transit preferential street (transit important) street, a citywide pedestrian network street, a neighborhood commercial pedestrian street, and a designated freight traffic route. The Better Streets Plan identifies Third Street as an industrial street north of Jerrold Avenue and a commercial throughway south of Jerrold Avenue. Third Street between 23rd Street and Fairfax Avenue is classified as a Vision Zero high injury network.

Illinois Street is a two-way, north-south roadway that runs parallel to Third Street, extending between 16th Street and the intersection of Cargo Way and Amador Street. It has one 12-foot travel lane in each direction and Class 2 bicycle lanes on both sides of the street. On-street parking is provided on both sides of the street north of Marin Street. The segment over the channel (i.e., the Illinois Street Bridge) has one travel lane in each direction, a freight rail track running in the middle over the vehicle lanes, and a shared bicycle/pedestrian path. The Better Streets Plan identifies Illinois Street as an industrial street south of 20th Street.

Marin Street is a discontinuous east-west roadway that runs between Michigan and Indiana streets, with an interruption between Tennessee and Third streets, and then continues between I-280 and Evans Street. Marin Street has one travel lane in each direction, with on-street parking on both sides of the street. There are no bicycle facilities on Marin Street, and it has intermittent sidewalks. The Better Streets Plan identifies Marin Street as an industrial street.

Amador Street is an approximately half-mile long roadway that runs between Cargo Way and Jennings Street through the Pier 94 and 96 backland areas. It has one travel lane in each direction; on-street parking is intermittently permitted in the off-shoulder areas; and there are no sidewalks. The Better Streets Plan identifies Amador Street as an unaccepted/paper street.

Cargo Way is an approximately 0.75-mile-long east-west roadway that runs between Quint Street and Jennings Street. It has two travel lanes in each direction, and no on-street parking is provided. A Class 4 bicycle facility runs along Cargo Way. Approximately 6-foot-wide sidewalks are provided along the southern side of the road, with no sidewalks on the northern side. The general plan designates Cargo Way as a freight traffic route. The Better Streets Plan identifies Cargo Way as an industrial street.

Cesar Chavez Street is a two-way east-west street that runs between Guerrero Street and Third Street. In the vicinity of the project site, Cesar Chavez Street has two travel lanes in the eastbound direction and one travel lane in the westbound direction, with no on-street parking on either side. Class 2 bicycle lanes run along Cesar Chavez Street between San Jose Avenue and Illinois Street. There are continuous sidewalks along both sides of the street west of Michigan Street. The general plan identifies Cesar Chavez Street as a major arterial between San Jose Avenue and Third Street in the Congestion Management Program network, a freight traffic route, and as part of the Metropolitan Transportation System network. The Better Streets Plan identifies Cesar Chavez Street as an industrial street. Cesar Chavez Street is classified as a Vision Zero high injury network east of Third Street.

Evans Avenue runs east-west between Cesar Chavez Street and the India Basin waterfront, where it becomes Hunters Point Boulevard. In the vicinity of the project site, Evans Avenue has two 10- to 11-foot travel lanes in each direction and on-street parking on both sides of the street. A Class 3 bicycle facility runs along Evans Avenue west of Third Street, and a Class 2 bicycle facility runs along Evans Avenue east of Third Street. There are continuous sidewalks along both sides of the street east of Rankin Street. The general plan identifies Evans Avenue as a major arterial between Cesar Chavez Street and Third Street, a designated freight traffic route, and as part of the Metropolitan Transportation System network. The Better Streets Plan designates Evans Avenue as an industrial street between Cesar Chavez Street and Hunters Point Boulevard. Evans Street between Cesar Chavez Street and Mendell Street is classified as a Vision Zero high injury network.

Vehicular Counts

As part of the transportation analysis, the planning department collected vehicle counts at eight intersections shown on Figure 4.C-1. The vehicle counts were taken on Wednesday, May 11, 2022 during the AM peak (7 a.m. to 9 a.m.) and PM peak (4 p.m. to 6 p.m.) periods, except for the Evans Avenue and Cesar Chavez Street intersection. Volumes at Evans Avenue and Cesar Chavez Street intersection were collected on Tuesday, October 4, 2022.[37] These intersections were selected because they are most likely to be potentially impacted by vehicle traffic that would be rerouted during the two-year construction period for the Islais Creek Bridge.

Additionally, 24-hour traffic volumes were collected along Third Street on the Islais Creek Bridge from Monday, May 9 to Sunday, May 15, 2022; and from Friday, May 20, 2022, to Saturday, May 21, 2022. The PM peak hour volumes were higher than AM peak or midday volumes. The highest volume on the Islais Creek Bridge occurred on Friday between 4 p.m. and 5 p.m. and traffic volumes are generally low between 6 p.m. and 7 a.m. On a typical weekday, the Islais Creek Bridge carries approximately 15,930 vehicles, including 7,750 trips in the southbound direction and 8,180 trips in the northbound direction.

[37] CHS Consulting Group, Isais Creek Bridge Project Transportation Impact Study, prepared for San Francisco Planning Department, October 2023.

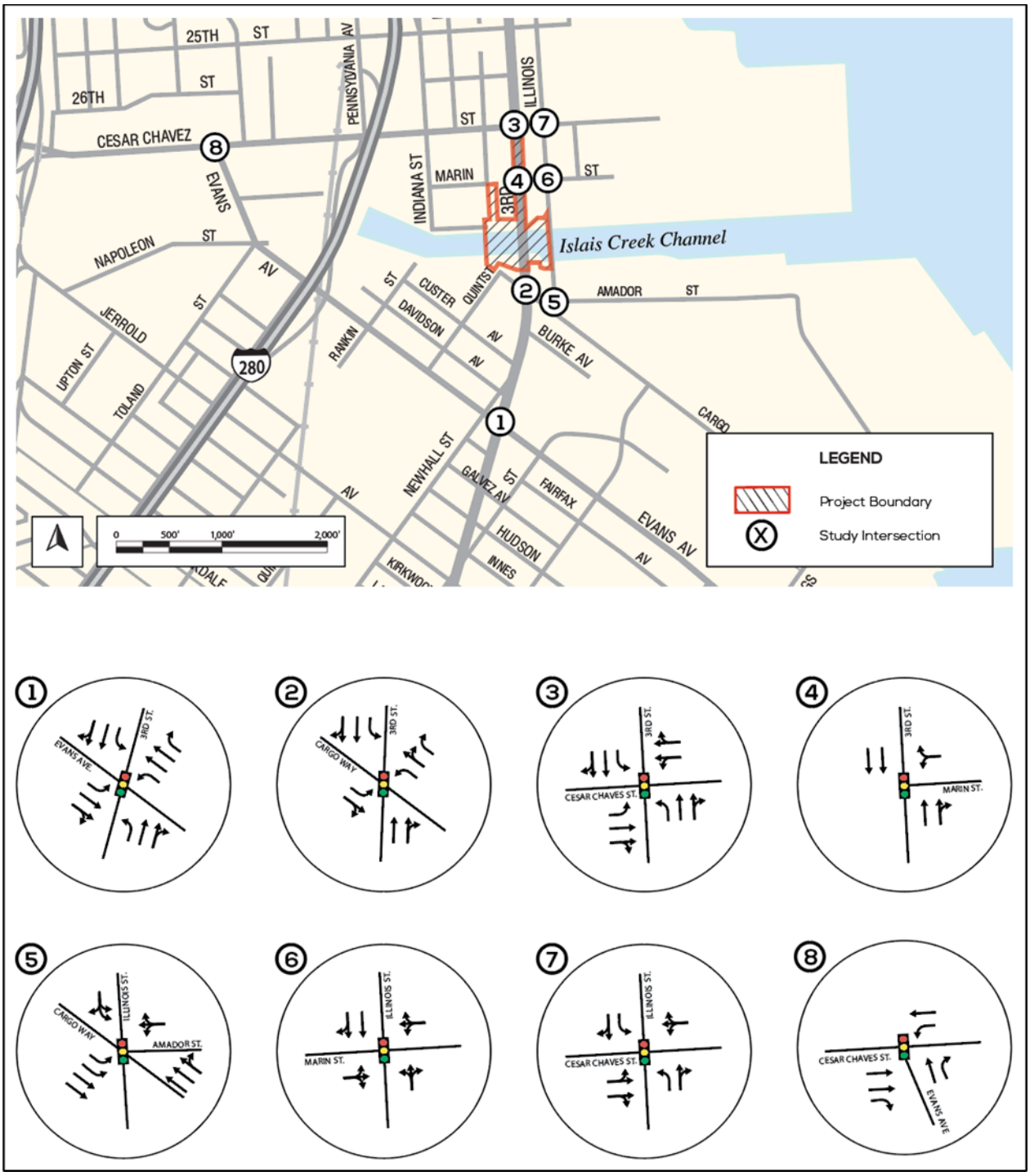

Figure 4.C-1 Islais Creek Bridge Project Study Intersections and Lane Configurations

Emergency Access Conditions

The following describes the closest emergency access facilities to the project site. San Francisco Fire Department Fire Station No. 25 is at 3305 Third Street, immediately south of the project site (approximately 10 feet from the southern point of the Islais Creek Bridge). There is a "KEEP CLEAR" zone in the northbound travel lanes in front of Fire Station No. 25 to allow emergency vehicles to turn in and out in the southbound

direction on Third Street. San Francisco's Bayview Police Station, at 201 Williams Avenue, is the closest police station to the project site (approximately 1.5 miles from the Islais Creek Bridge).

Vehicle Miles Traveled

Vehicle miles traveled (VMT) per person (or per capita) is a measurement of the amount and distance that a resident, employee, or visitor drives, accounting for the number of passengers within a vehicle. In general, higher VMT areas are associated with more air pollution, including greenhouse gas emissions, and energy usage than lower VMT areas. Many interdependent factors affect the amount and distance a person might drive. In particular, the built environment affects how many places a person can reach within a given distance, time, and cost, using different ways of travel (e.g., private vehicle, public transit, bicycling, walking, etc.). Typically, low-density development located at great distances from other land uses and in areas with few options for ways of travel provides less accessibility to places a person can reach than a location with high density, a mix of land uses, and numerous ways of travel. Therefore, low-density development typically generates more VMT compared to a similarly sized development located in an urban area.

Given these travel behavior factors, on average, persons living or working in San Francisco result in lower amounts of VMT per person than persons living or working elsewhere in the nine-county San Francisco Bay Area region. In addition, on average, persons living or working in some areas of San Francisco result in lower amounts of VMT per person than persons living or working elsewhere in San Francisco. The city displays different amounts of VMT per capita geographically through transportation analysis zones.[38] The San Francisco County Transportation Authority's San Francisco Chained Activity Modeling Process (SF-CHAMP) travel demand model is used to estimate existing and future year average daily VMT per capita for residential, office, and retail land use types for the transportation analysis zones in the city.

The Islais Creek Bridge Project is an infrastructure project that does not include transportation features that would generate new travel demand (e.g., more lanes on the bridge, substantial parking structure). Therefore, existing VMT per capita is not presented. Although the study area includes some of the highest VMT per person in San Francisco, the study area exhibits some of the lowest VMT per person in the bay area region.

Freight and Passenger Loading Conditions

The project site is in an industrial area, and several industrial buildings in the area have large off-street loading bays for commercial truck deliveries. There are no on-street freight (yellow) loading spaces along Third Street in the vicinity of the project site. Loading activities in the area generally occur at loading bays attached to warehouses or along available curb spaces.

The are no passenger loading/unloading zones adjacent to the project site or in the project vicinity.

Bicycle Conditions

Bikeways are typically classified as Class 1, 2, 3, or 4 facilities. Class 1 bikeways are bicycle paths with exclusive rights-of-way for use by bicyclists, with minimal cross flow by motorized vehicles. Class 2 bikeways are bicycle lanes striped in the paved areas of roadways and established for the exclusive use of bicyclists.

[38] Planners use these zones as part of transportation planning models for transportation analyses and other planning purposes. The zones vary in size from single city blocks in the downtown core and multiple blocks in outer neighborhoods to even larger zones in historically industrial areas such as the Hunters Point Shipyard area.

Class 3 bikeways are signed bicycle routes that allow bicycles to share streets with vehicles. Class 4 bikeways are separated bikeways exclusively for bicycles, physically separated from motorized traffic with a vertical feature. In the vicinity of the project site, there are existing bicycle facilities along Third Street, Illinois Street, Cesar Chavez Street, Cargo Way, and Evans Avenue, all of which are part of the San Francisco bicycle network or the San Francisco Bay Trail system. Figure 4.C-2 shows these facilities.

Figure 4.C-2 Bicycle Facilities

Bicycle counts were collected on Wednesday, May 11, 2022, during the AM and PM peak hours. There were approximately five people bicycling on the Islais Creek Bridge during the PM peak hour and approximately 25 people bicycling on the Illinois Street Bridge during the PM peak hour.[39] Table 4.C-1 includes the existing bicycle counts at each intersection.

Table 4.C-1 Bicycle Volumes during Weekday AM and PM Peak Hours

Intersection	Northbound	Southbound	Eastbound	Westbound	Total
Third Street/Evans Avenue	3/4	6/3	6/3	1/1	16/11
Third Street/Cargo Way	8/5	2/1	0/1	2/1	12/8
Third Street/Cesar Chavez Street	0/3	2/2	0/2	0/2	2/9
Third Street/Marin Street	4/4	1/1	0/0	0/0	5/5
Illinois Street/Cargo Way/Amador Street	10/6	12/15	5/5	0/0	27/26
Illinois Street/Marin Street	16/8	14/17	0/1	0/1	30/27
Illinois Street/Cesar Chavez Street	22/10	12/16	3/2	2/1	39/29
Evans Avenue/Cesar Chavez Street	6/8	—	38/7	7/15	51/30

Source: CHS Consulting, 2022

Pedestrian Conditions

Pedestrian amenities generally include sidewalks, crosswalks, curb ramps, pedestrian signals, and streetscape and landscape amenities (e.g., benches, tree-lined buffers, planters, bulb-outs, and street lighting). The Islais Creek Bridge includes sidewalks on both sides of the bridge that connect to the existing sidewalks along Third Street both north and south of the bridge. There are continuous sidewalks along Third Street, Illinois Street, and Cesar Chavez Street (west of Michigan Street), but there are limited sidewalks along Cargo Way, Marin Street, and Amador Street. Third Street between 23rd Street and Fairfax Avenue, Cesar Chavez Street east of Third Street, and Evans Street between Cesar Chavez Street and Mendell Street are classified as part of the Vision Zero high injury network.

Pedestrian counts were collected on Wednesday, May 11, 2022, during the AM and PM peak hours. Pedestrian volumes are generally low to moderate in the vicinity of the Islais Creek Bridge, with approximately 35 pedestrian crossings just north of the bridge at the Third Street/Marin Street intersection and 21 pedestrian crossings just south of the bridge at the Third Street/Cargo Way intersection during the PM peak hour. It is estimated that approximately 20 pedestrians walked on the Islais Creek Bridge during the PM peak hour and approximately seven pedestrians walked on the Illinois Street Bridge during the PM peak hour.[40] Table 4.C-2 presents the existing pedestrian crossing volumes at each intersection.

[39] Bicycles traveling in the northbound and southbound directions at the Third Street/Marin Street intersection are assumed to cross the Islais Creek Bridge. Bicycles traveling in the northbound and southbound directions at the Illinois Street/Marin Street intersection are assumed to cross the Illinois Street Bridge.

[40] Pedestrians crossing at the east and west crosswalks at the Third Street/Cargo Way intersections are assumed to cross the Islais Creek Bridge. Pedestrians crossing at the south crosswalks at the Illinois Street/Marin Street intersections are assumed to cross the Illinois Street Bridge.

Table 4.C-2 Pedestrian Crossings during Weekday AM and PM Peak Hours

Intersection	North Crosswalk	South Crosswalk	East Crosswalk	West Crosswalk	Total
Third Street/Evans Avenue	16/14	19/34	25/22	20/11	80/81
Third Street/Cargo Way	0/0	1/1	9/10	5/10	15/21
Third Street/Cesar Chavez Street	4/4	5/4	8/8	21/15	38/31
Third Street/Marin Street	1/3	15/9	17/10	14/13	47/35
Illinois Street/Cargo Way/Amador Street	1/0	0/3	4/3	0/1	5/7
Illinois Street/Marin Street	1/5	0/7	1/3	2/8	4/23
Illinois Street/Cesar Chavez Street	0/0	3/7	4/1	2/9	9/17
Evans Avenue/Cesar Chavez Street	2/1	4/3	7/7	8/4	21/15

Source: CHS Consulting, 2022

Note: #/#= AM peak hour crossings/PM peak hour crossings

Historic and Existing Context of Transit Conditions in San Francisco's Bayview Neighborhood

The Islais Creek Bridge connects Bayview-Hunters Point with Mission Bay, downtown, and other San Francisco neighborhoods. Following the Great Migration[41] of the 1930s and 1940s, Bayview-Hunters Point became San Francisco's largest African American neighborhood. Decades of institutional racism and disinvestment have left residents in this neighborhood with limited mobility options.[42] Bayview-Hunters Point residents use transit less frequently than other areas of San Francisco and cite low reliability and long travel times as key factors.[43]

In 2014, the SFMTA adopted a Muni Service Equity Policy requiring the development of a biannual Equity Strategy in conjunction with the SFMTA budget process to document transit service performance issues in low-income and minority neighborhoods, monitor progress to improve service to these communities over time, and link improvement strategies to capital and transit service funding requests as needed.[44] In 2016, the SFMTA identified neighborhoods to focus the Equity Strategy on based on variables including low income levels, persons of color, seniors, people with disabilities, and access to vehicles. Based on this analysis, the SFMTA identified the Bayview in its Equity Strategy.[45] As a result of Muni Service Equity strategies and a Bayview Community-Based Transportation Plan in 2020, the SFMTA has made changes to public transit serving the Bayview. This includes the routes in the vicinity of the project site. As shown on Figure 4.C-3, SFMTA operates six bus routes and one light rail route in the vicinity of the project site.

[41] The Great Migration was the widespread migration of African Americans from rural communities in the southern United States to the urban Northeast, Midwest, and West during the twentieth century.

[42] San Francisco Municipal Transportation Agency. Bayview Community Based Transportation Final Plan. February 2020. Accessed July 24, 2023. Bayview CBTP Final Plan | SFMTA.

[43] *Ibid*.

[44] San Francisco Municipal Transportation Agency. April 2014. Accessed August 1, 2023 from *https://www.sfmta.com/sites/default/files/agendaitems/5-6-14%20Item%2013%20Muni%20Service%20Equity%20Policy.pdf*.

[45] San Francisco Municipal Transportation Agency. 2016. Muni Service Equity Strategy Report Accessed August 1, 2023 from *https://www.sfmta.com/sites/default/files/projects/2016/MTABApproved-2016Strategy.compressed_0.pdf*

Figure 4.C-3 **Transit Network Near Islais Creek Bridge Study Area**

These include the following three routes operating across the Islais Creek Bridge:

- T-Third Street operates six light rail vehicles per hour during the AM and PM peak periods, with a capacity of approximately 1,428 passengers per hour in each direction.[46]
- 15-Bayview-Hunters Point Express operates six buses per hour during the AM and PM peak periods, with a capacity of approximately 378 passengers per hour in each direction.[47]
- 91-Third Street/19th Avenue Owl replaces the T-Third Street light rail and 15-Bayview Hunters Point Express service from 12 AM to 6 AM, operating one bus per hour during this period.

The SFMTA changed the T-Third over the last few years to address its low reliability, including retiming signals along Third Street, increasing the T-line to two cars in 2018, and ending the practice of regular "switchbacks" on the line where T-Third traincars are turned around just north of the Bayview neighborhood.

The SFMTA launched the 15-Bayview-Hunters Point Express in January 2021 as a new route to connect the Bayview-Hunters Point neighborhood to downtown.

No regional transit stops are located within the Bayview neighborhood. Local transit service can be used to connect to regional transit operators. The most direct local transit service to regional service for residents and employees in the Bayview near the project site is via the 44 O'Shaughnessy to the Bay Area Rapid Transit at the Glen Park station (about 3.5 miles west of the project site) and the T-Third to the 4th and King Caltrain station (about 2.5 miles north of the project site). In addition, there are three SFMTA facilities in the vicinity of the project site:

- Islais Creek (1301 Cesar Chavez Street) – motor coach storage
- Marin (1399 Marin Street) – motor coach acceptance, track shop, and streetcar storage
- Muni Metro East (601 25th Street) – light rail and streetcar facility

[46] It is assumed that the capacity of a two-car light rail is approximately 238 passengers.
[47] It is assumed that the capacity of a 40-foot motor coach is approximately 63 passengers.

Table 4.C-3 summarizes transit routes that operate in the vicinity of the project site.

Table 4.C-3 Local Muni Routes

Route[1]	Weekday Headway (min) AM	PM	Hours of Operation	Nearest Stop Location (Distance to Project Site in feet)[2]
T-Third Street	10	10	5:00 AM – 12:50 AM	Third Street/Marin Street (300)
15-Bayview-Hunters Point Express	10	10	5:10 AM –10:20 PM	Third Street/Marin Street (300)
91-Third Street/19th Avenue Owl	30	30	12:00 AM – 6:00 AM	Third Street/Marin Street (300)
19-Polk	15	15	5:10 AM – 10:40 PM	Evans Avenue/Phelps Street (1,500)
44-O'Shaughnessy	12	12	24 hours	Evans Avenue/Third Street (1,500)
48-Quintara/24th Street	15	15	24 hours	25th Street/Pennsylvania (3,000)
54-Felton	20	20	5:50 AM – 11:00 PM	Newhall Street/Hudson Street (2,700)

Source: SFMTA 2023.

Notes:

1. Does not include a planned demand-response shuttle service for the Bayview community neighborhood scheduled for operation between spring 2023 and spring 2026 (source: https://www.sfmta.com/sites/default/files/reports-and-documents/2022/04/5-5-22_cac_item_9_our_community_our_shuttle_program_slide_presentation.pdf).
2. Distances are approximate and are measured from the center of the project site along local streets to reach the nearest transit stop.

4.C.3 Regulatory Framework

The following subsections summarize state and local agency transportation regulations relevant to the project, along with relevant transportation plans and policies. No federal or regional regulations, plans, or policies are relevant to the proposed project.

State

CEQA Section 21099(b)(1) (Senate Bill 743)

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

After a five-year public process, the California Natural Resources Agency amended the CEQA guidelines in 2018, adding section 15064.3, Determining the Significance of Transportation Impacts. Appendix G, Environmental Checklist Form, was also amended to remove automobile delay as a measure to determine a project's significance on the environment, instead requiring (in most circumstances) analysis of a project's impact on VMT.

Local

Transit First Policy

In 1973, the board of supervisors declared that public transit be given priority over other vehicles on San Francisco streets. In 1998, the San Francisco voters amended the City Charter (charter article 8A,

section 8A.115) to include a transit first policy. The general plan incorporates the policy, which requires all city boards, commissions, and departments to implement principles that, among other things, encourage the use of public rights-of-way by people walking, bicycling, and riding public transit above the use of the personal automobile.

Vision Zero

In 2014, the board of supervisors adopted a resolution to implement an action plan to reduce traffic fatalities to zero by 2024 through engineering, education, and enforcement (resolution 91 14). Numerous San Francisco agencies responsible for the aforementioned aspects of the action plans adopted similar resolutions. In 2017, the board of supervisors amended the Transportation and Urban Design elements of the general plan to implement Vision Zero (ordinance 175 17).

San Francisco General Plan

The transportation element of the general plan consists of objectives and policies that relate to the nine aspects of the citywide transportation system: general, regional transportation, congestion management, vehicle circulation, transit, pedestrian, bicycles, citywide parking, and goods management. The transportation element references San Francisco's Transit First Policy in its introduction, and contains the objectives and policies that are directly pertinent to consideration of the proposed project, including objectives related to prioritizing sustainable modes of travel, promoting freight delivery/pickup traffic as necessary for the economic vitality of San Francisco and the region, and designing streets for walking, bicycling, and public transit.

The general plan also includes the Bayview-Hunters Point Area Plan, which provides objectives and policies to guide industrial and residential development, to improve streets to encourage truck traffic away from neighborhood residential and commercial areas, and to improve the transportation network for all ways of travel.

San Francisco Regulations for Working in San Francisco Streets

The San Francisco Regulations for Working in San Francisco Streets (SFMTA blue book) contains regulations that are prepared and regularly updated by the SFMTA, under the authority derived from the San Francisco Transportation Code. The SFMTA blue book serves as a guide for all city agencies (Public Works, SFMTA, SFPUC, the Port of San Francisco, etc.), utility crews, private contractors, and others who conduct construction-related activities (e.g., excavation, or staging of materials or equipment) in San Francisco's public rights-of-way. The SFMTA blue book establishes rules and guidance so that work can be done safely and with the least possible interference to people walking and bicycling, transit, and vehicular traffic. It also contains relevant general information, contact information, and procedures related to working in the public right-of-way when it is controlled by agencies other than SFMTA.

Prior to construction of development projects (including infrastructure projects such as the proposed project), construction contractor(s) would be required to meet with Public Works and SFMTA staff members to develop and review the project's construction plans in preparation for obtaining relevant construction permits. This may include reviewing truck routing plans for the disposal of excavated materials, material delivery and storage, and staging for construction vehicles. If SFMTA determines that a construction project impacts transit routing or alters the flow of vehicle, bicycle, or pedestrian traffic, a logistics plan would be required so that SFMTA permit staff can confirm what permits from SFMTA or Public Works are required for the project.

Should the project's construction activities not comply with regulations in the SFMTA blue book or the traffic routing specifications in a city contract, or when two or more contractors work at a time on any one block, the contractor would be required to apply for a special traffic permit from SFMTA prior to the commencement of onsite work. Some examples of circumstances when special traffic permits are required include but are not limited to closing a street or an alley, closing a sidewalk, closing or detouring a bicycle route, moving a bus zone outside the limits of the project, inability to provide the required number of lanes, and/or construction work occurring within one block of an existing construction site.

As part of its review for special traffic permits, SFMTA, in coordination with Public Works, may include necessary measures in the special traffic permit to ensure the safety and accessibility of people walking, bicycling, and driving, and public transit operations at or near the project site. In addition, as part of the permitting process, Public Works also reviews proposed construction activities so that they comply with all applicable requirements under the Americans with Disabilities Act.

If a special traffic permit is required, the project contractor may not commence construction activities until the permit is issued. A special traffic permit is issued for no more than 30 calendar days, after which the contractor is required to renew to perform further construction activities. SFMTA may refuse to issue, extend, or revoke a special traffic permit, depending on transportation network conditions at or near the project site. Penalties may be assessed for violating the terms of a special traffic permit and/or the regulations described in the SFMTA blue book, or failing to obtain a special traffic permit when one is required. Additional penalty fees, six months in jail, or both may be applied for the fourth and subsequent violations in a 12-month period.

In addition to the regulations presented in the manual, all traffic control, warning, and guidance devices must conform to the California Manual on Uniform Traffic Control Devices. Furthermore, contractors are responsible for complying with all applicable city, state, and federal codes, rules, and regulations. The party responsible for setting up traffic controls during construction is responsible if such controls do not meet the guidance and requirements established by this manual and any applicable state requirements.

Public Works Code Construction Work Requirements

San Francisco Public Works Code section 724 requires that a property owner obtain a street space occupancy permit from Public Works for occupying any part of the fronting street or sidewalk for any purpose, including building construction operations. Section 724 also establishes requirements for the temporary occupation of the public-right-of way, including but not limited to clearances for traffic-signal equipment, notice to all impacted fronting property owners, pedestrian clearances, construction worker parking plans in certain use districts, debris management, and clearances for fire department equipment. Section 724 also requires that the property owner provide lights, barriers, barricades, signs, cones, and other devices to ensure pedestrian and traffic safety.

San Francisco Public Works code section 2.4.20 addresses permits to excavate. For a permit for major work or excavation that would affect the public right-of-way that is 30 consecutive calendar days or longer, contractors are required to submit for Public Works review a contractor parking plan, including a proposal to reduce parking demand in the project site vicinity.

San Francisco Public Works order no. 167, 840 identifies requirements related to the placement of various types of barricades at construction sites, such as A-frames, barrier caution tapes, fencing, and barricades around crosswalks. These requirements are intended to protect pedestrians near construction sites,

consistent with all local, state, and federal codes, including the Americans with Disabilities Act and the California Building Code, title 24.

Better Streets Plan, Policy, and Requirements

In 2006, the board of supervisors adopted the Better Streets Policy. Since then, the board has amended the policy several times, including in 2010 to reference the Better Streets Plan. The Better Streets Plan creates a unified set of standards, guidelines, and implementation strategies to govern how San Francisco designs, builds, and maintains its pedestrian environment. The planning code requires certain new development projects to make changes to the public right-of-way to be consistent with the Better Streets Plan (planning code section 138.1). The planning code requires most projects to plant and maintain street trees; and some larger projects to submit a streetscape plan that may require elements such as sidewalk widening, transit boarding islands, and medians.

4.C.4 Impacts and Mitigation Measures

This section describes the impact analysis related to transportation and circulation associated with the proposed project. It describes the methods used to determine the impacts of the proposed project and lists the criteria used to conclude whether an impact would be significant. Measures to mitigate significant impacts accompany the discussion of each identified significant impact. Information in this section is from the Transportation Impact Study prepared in November 2023 for the Islais Creek Bridge Project.

Significance Criteria

San Francisco Administrative Code chapter 31 directs the planning department to identify the environmental effects of a project using as its base the environmental checklist form set forth in the CEQA guidelines, Appendix G, as modified by the planning department. As it relates to transportation and circulation, the checklist asks whether the project would:

- conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities;
- conflict or be inconsistent with CEQA guidelines section 15064.3, subdivision (b);
- substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses; or
- result in inadequate emergency access.

The planning department uses the above significance criteria as further defined in the following subsections to facilitate the transportation analysis and address the CEQA guidelines Appendix G checklist. The planning department separates the significance criteria into construction and operation.

Construction

Construction of a project would have a significant effect on the environment if it would require a substantially extended duration or intense activity, and the effects of this activity would create potentially hazardous conditions for people walking, bicycling, or driving; create potentially hazardous conditions for public transit operations; interfere with accessibility for people walking or bicycling; or substantially delay public transit.

Given the project's site context as well as the anticipated duration of the project's construction, the department is using the quantitative thresholds of significance, which are typically used to evaluate a project's operational impacts, as well as qualitative criteria to determine whether the project's construction would substantially delay public transit.

Operation

The operational impact analysis addresses the following five significance criteria. A project would have a significant effect if it would:

- create potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations;
- interfere with accessibility of people walking or bicycling to and from the project site, and adjoining areas, or result in inadequate emergency access;
- result in transit delay greater than or equal to four minutes[48] (for individual routes or corridors with service headways less than eight minutes, the department uses a one-half headway threshold—for example, for a bus route or corridor with a headway of six minutes, the threshold would be half of six minutes, which is three minutes; should a project result in transit delay of three minutes or more, then it might result in a significant impact);
- cause substantial additional VMT or substantially induce additional automobile travel by increasing physical roadway capacity in congested areas (i.e., by adding new mixed-flow travel lanes) or by adding new roadways to the network; or
- result in a loading deficit, the secondary effects of which would create potentially hazardous conditions for people walking, bicycling, or driving, or substantially delay public transit.

Approach to Analysis

The planning department uses the above-listed significance criteria to facilitate the transportation analysis and address the CEQA guidelines Appendix G checklist. The planning department separates the significance criteria into construction and operation.

4.C.5 Impact Evaluation

Impact TR-1: Construction of the proposed project would result in intensive and disruptive activities that would not create potentially hazardous conditions for people driving, walking, or bicycling, or for public transit operations, but could substantially delay public transit. (*Significant and Unavoidable with Mitigation*)

The SF Transportation Impact Analysis Guidelines set forth screening criteria for types of construction activities that typically would not—based on project site context, and construction duration and magnitude—result in significant construction-related transportation effects.[49] The project would not meet all

[48] The threshold uses the adopted Transit-First Policy, City Charter section 8A.103, percent on-time performance service standard for Muni. The charter considers transit vehicles arriving more than four minutes beyond a published schedule time as late.

[49] San Francisco Planning Department, Transportation Impact Analysis Guidelines, *https://sfplanning.org/project/transportation-impact-analysis-guidelines-environmental-review-update#impact-analysis-guidelines*.

the screening criteria. The project site context could be disrupted by the magnitude (or intensity) of construction of the Islais Creek Bridge Project, so additional construction-related transportation analyses are included by sub-topic below.

Driving Hazards

Construction of the proposed project would generate approximately 16 daily truck trips and up to 40 construction worker vehicle trips during the PM peak hour. These construction-related trips would occur along Illinois Street and Evans Avenue. Illinois Street has a 12-foot travel lane in each direction, and Evans Avenue has one 10- to 11-foot travel lane in each direction and a turn lane in the middle. These local roadways are wide enough to accommodate truck turning movements. As part of the proposed project, construction logistics would be developed in coordination with SFMTA and in compliance with city regulations set forth in the Regulations for Working in San Francisco Streets (Blue Book), transportation code, and public works code. The construction logistics may include, but would not be limited to, posting advance warning signs, detour signs, and variable message signs along detour routes to avoid vehicles making turns at uncontrolled or stop sign-controlled intersections. Moreover, the proposed project would deploy flaggers or temporary traffic signals at the entrance to staging areas to facilitate safe truck turning movements, as needed.

For the reasons explained above (related to development of a construction traffic logistics plan in compliance with applicable regulations), construction of the proposed project would not create potentially hazardous conditions due to construction-related vehicle traffic. Therefore, impacts would be ***less than significant*** and no mitigation is required.

Hazards and Accessibility Impacts to People Bicycling and Walking

During construction of the project, people walking and bicycling would not be able to cross the Islais Creek Bridge due to its closure. Based on the counts of people crossing at the Third Street/Marin Street and Third Street/Cargo Way intersections, approximately 20 people walked and five people bicycled on the Islais Creek Bridge during the PM peak hour. During the bridge closure, people walking from either side of the bridge would be directed to use the Illinois Street Bridge via continuous sidewalks along Cargo Way, Rosa Parks Plaza, and Illinois Street; and people bicycling would be directed to detour to the Illinois Street Bridge via Cargo Way (Class 2 bicycle facility) or Cesar Chavez Street (with a Class 3 bicycle facility). Detours are as shown on Figure 4.C-4.

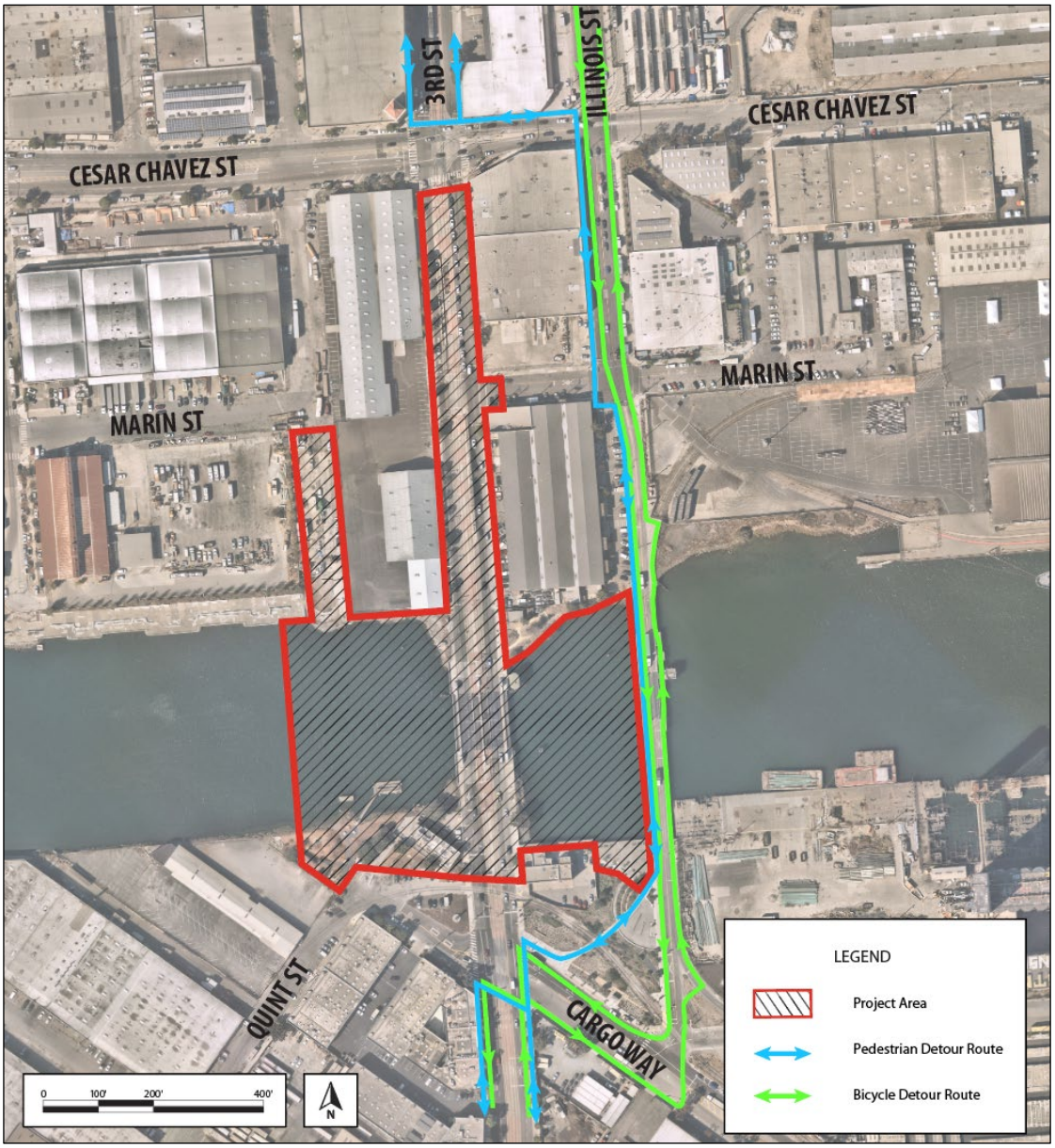

Figure 4.C-4 Pedestrian and Bicycle Detour Routes during Project Construction Period

This detour would temporarily increase the walking distance for people by approximately 500 feet between Cargo Way and Cesar Chavez Street, and would increase the travel distance for those bicycling between the Third Street/Cargo Way and Third Street/Marin Street intersections by approximately 1,100 feet. However, project construction would not interfere with accessibility or create potentially hazardous conditions for people walking, because these detour routes include clearly defined sidewalks, crosswalks with pedestrian signals, and a continuous walking path with width and pedestrian environment comparable to those of the existing Islais Creek Bridge. Similarly, project construction would not interfere with accessibility or create potentially hazardous conditions for people bicycling, because the detour routes would direct people bicycling to existing bicycle facilities with safety features (e.g., bidirectional shared bicycle/pedestrian facilities along the Illinois Street Bridge). Moreover, the construction logistics would include posting

advance warning signs, pedestrian and bicyclist detour signs, and variable message signs along Third Street and other detour routes to provide a clear path of travel for people walking and bicycling. Additionally, because the construction area would be closed to people walking and bicycling during the full construction period, there would be no direct construction hazards to people walking and bicycling. Therefore, hazards and accessibility impacts related to people walking and bicycling would be ***less than significant*** during project construction.

Emergency Access

During the project construction, emergency vehicles would use the adjacent Illinois Street Bridge (approximately 250 feet to the east of the Islais Creek Bridge) in lieu of the Islais Creek Bridge. Although the proposed project would divert more vehicles to the Illinois Street Bridge and nearby streets, the increase in vehicles would not be substantial enough to impede the movement of emergency vehicles in the project area because there would be sufficient vehicle-to-capacity ratio along detour routes for the diverted traffic during the PM peak hour; this means that the roadways would not be at capacity with the additional vehicles from the detour. Therefore, the bridge and roads have the capacity to accommodate these higher traffic volumes caused by diverted traffic during the PM peak hour. Thus, slowdowns that could affect emergency vehicles response times on these roadways are not expected during construction.

Construction activities associated with the Islais Creek Bridge would involve minor trenching activities to access a manhole in front of the driveway of Fire Station No. 25. These activities would not fully block the fire station's driveway, and access via the driveway would be maintained. The construction logistics would include providing advance notices to San Francisco Fire Department (SFFD) Administration, Station No. 25, and SFFD Fireboat concerning the schedule of bridge closures and accessibility to Islais Creek by construction phase. Public Works would coordinate with SFFD to develop a communications framework such as developing communications protocols, procedures, and contact list to ensure access for emergency response vehicles at all times.[50] Therefore, project impacts related to emergency access would be ***less than significant*** during project construction.

Public Transit

An approximately two-year closure of the Islais Creek Bridge would affect the operation of Muni's T-Third Street light rail line, 15–Bayview-Hunters Point Express, 91-Third Street/19th Avenue Owl, and Third Street bus routes, which currently operate across the bridge. As part of the proposed project, the San Francisco Public Works is working with SFMTA to provide a temporary bus bridge plan to replace the existing T-Third light rail service. In replacement, Muni will run a combination bus and rail plan. T-Third Street bus service will run between Market Street and Bayshore/Sunnydale Station. T-Third Street light rail service will run between Chinatown Station and UCSF Medical Center Station at Third Street/Mariposa Street. The bus service will traverse Islais Creek via the Illinois Street bridge and provide a direct connection between the Bayview neighborhood and downtown. A goal of this plan is to ensure that most T-Third Street passengers will not have to transfer from the bus service to the light rail service; rail passengers who must transfer will have transfer options at the 4th and King Caltrain Station and the UCSF Medical Center Station at Third Street/Mariposa Street. Full details of the T-Third Street temporary bus service, including the last light-rail station, passenger pick-up/drop-off locations, bus frequency, and passenger transfer route, would be

[50] Email from Nicol Juratovac (SFFD) to Robert Postel (SFFD), SUBJ: RE: Islais Creek Bridge SPW/SFFD Meeting Minutes 3/8/2023, March 9, 2023.

developed by Public Works and SFMTA as the project's design progresses. Public Works and SFMTA are working on an outreach strategy to inform transit riders of temporary changes to transit routes.

Public Works would also work with the SFMTA to develop a detailed detour plan for the 15-Bayview Hunters Point Express, 91-Third Street/19th Avenue Owl, and T-Third Street Bus (early morning and late-night trips) bus routes to minimize transit rider delays during construction. It is anticipated that these routes would be rerouted across Islais Creek using the Illinois Street Bridge. Rerouting along Illinois Street would increase travel distance for these routes by approximately 0.3 mile per trip, with minor increases to travel time.[51] Muni routes 19-Polk and 44-O'Shaughnessy operate along Evans Avenue and a section of Cesar Chavez Street, which are part of the anticipated vehicle detour routes. The diverted trips and construction-related trips are not expected to cause extensive vehicle queues or delays along access roads in the project area. Moderate but not substantial delays are expected for these bus routes.

The T-Third Street is the primary transit connection between the Bayview-Hunters Point neighborhood with Mission Bay and downtown San Francisco. Without knowledge of the full details of the replacement bus service, there is a potential that the project construction could cause substantial delays to T-Third Street riders. For example, riders may experience a longer travel time on a given trip. A rider's longer travel time could make transit less competitive compared to private or for-hire vehicles and could result in people switching from transit to private automobiles or for-hire vehicles. The project could result in people having limited access to transit during project construction. This could cause a temporary, significant impact to public transit operations by substantially delaying public transit during the two-year construction phase.

Mitigation Measure M-TR-1 is proposed for the project to reduce delays to T-Third Street riders, as described below.

> **Mitigation Measure M-TR-1: Reduce Transit Travel Times for T-Third Street Riders**
>
> San Francisco Public Works is working with the San Francisco Municipal Transportation Agency to provide a bus bridge service plan (plan). The plan shall identify measures, to the degree feasible, that would meet a performance standard of limiting travel times to the T-Third vehicle to less than four minutes between the Third Street/Evans Street Intersection on the south and the Third Street/Mariposa Street intersection to the north above conditions that existed in September 2023. The plan may include, but not be limited, the following temporary measures during construction:
>
> - Private vehicle restrictions on certain routes (e.g., Illinois Street Bridge) or reallocating roadway space to prioritize transit (e.g., Evans Avenue).
> - Transit signal priority or signal timing optimization.
> - Providing transit capacity consistent with customer demand to minimize waits for riders.
> - Providing new safe pedestrian crossings and paths, clear directions, and wayfinding signs for any new transfers between the light rail and bus services.

[51] Assumes a bus travel speed of 15 miles per hour.

- Or other measures to achieve the performance standard.

Implementing M-TR-1 would minimize transit delays for T-Third Street riders, because it would require Public Works and the SFMTA to develop measures to meet a performance standard to reduce or limit transit delays to acceptable levels. If implemented, M-TR-1 would reduce the Islais Creek Bridge project's significant construction-related delays to T-Third Street riders to less-than-significant levels. The SFMTA is currently evaluating the exact measures that could result from implementation of M-TR-1. Given that this evaluation is still ongoing and may be modified based on community input prior to being finalized, the project's potential significant constructed-related delays to T-Third Street riders would remain ***significant and unavoidable***, even with mitigation.

Environmental Effects of Mitigation Measure M-TR-1

Mitigation Measure M-TR-1 would require Public Works and the SFMTA to reduce transit travel time impacts for T-Third Street riders. Implementation of this mitigation measure could result in temporary private vehicular restrictions or reallocation of roadway space to the surrounding street network, such as on Illinois Street or Evans Avenue, during project construction. In turn, existing vehicle trips could be temporarily redistributed to other streets with transit, such as the 44 O'Shaughnessy and the 19 Polk, or could result in temporary loss of protected bicycle facilities. However, is not anticipated that such measures would result in substantial delays to these transit routes (44 O'Shaughnessy and the 19 Polk) based on the anticipated numbers of vehicles being redistributed. Potentially hazardous conditions would not result for people bicycling because measures would be in place for access that reduces potential conflicts and would be consistent with SFMTA Blue Book requirements.

Loading

The proposed project would temporarily close Third Street between Cesar Chavez Street and the driveway of San Francisco Fire Station No. 25. This area does not have any on-street loading zones. Access to private driveway(s) on Third Street south of Cesar Chavez Street would be maintained for local vehicle access. Other nearby loading docks would be accessible from Marin Street or Illinois Street. Loading activities for the Islais Creek Park would continue to be accommodated via Arthur Avenue and Quint Street. Therefore, project impacts related to loading would be ***less than significant*** during project construction.

Impact TR-2: Operation of the proposed project would not create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional VMT, or substantially induce automobile travel, or result in substantial loading or parking deficits (*Less Than Significant*)

After the construction is completed, the Islais Creek Bridge would be replaced with a fixed-span bridge, and transportation conditions on the bridge would be restored similar to existing conditions. Thus, the project operational impacts would be ***less than significant***.

4.C.6 Cumulative Impacts

Impact C-TR-1: The construction of the proposed project, in combination with cumulative projects, would have cumulative impacts related to traffic delays during project construction. The proposed project, in combination with cumulative projects, would not contribute to potentially hazardous

conditions for people walking, bicycling, or driving, or public transit operations; or interfere with emergency access or accessibility for people walking or bicycling *(Less than significant)*

The cumulative context for transportation and circulation for the proposed project is based on the transportation study area defined in Section 4.B.3. Three projects in the study area may overlap with the construction of the Islais Creek Bridge: SFPUC's 2000 Marin Street (anticipated to start construction in the fall of 2024), SFPUC's Biosolids Digester Facilities Project (construction began in August 2019 and is anticipated to conclude in summer 2028), and the Carpenters Union Hall (construction is anticipated to begin in spring of 2025).

Construction activities for these cumulative projects would occur when the Islais Creek Bridge is closed during the project construction. However, the closure of the Islais Creek Bridge is unlikely to disrupt the majority of construction trips associated with these cumulative projects because construction traffic to and from their respective project sites would likely use the nearest on- and off-ramps to U.S. 101 or I-280 at Cesar Chavez Street, San Bruno Avenue, or Bayshore Boulevard. It is noted that the Biosolids Digester Facilities Project is a multi-phased project which started construction in 2019, and its construction-related trips are already accounted for in the existing traffic volumes collected on March 19, 2022.

In addition, there are several large-scale development projects planned within a mile radius of the project site, including the San Francisco Gateway Project[52] and the San Francisco Market Project[53] in the Bayview neighborhood and the Potrero Power Station Mixed-Use Development Project[54] in the Central Waterfront area. Construction access for these projects would also use the nearest freeway ramps to their project sites (e.g., Bayshore Boulevard on- and off-ramps and 18th Street on- and off-ramps) and would not rely on the Islais Creek Bridge for access to the project sites. Therefore, the cumulative construction impacts would be considered less than significant.

Impact C-TR-2: The operation of the proposed project, in combination with cumulative projects, would not: create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional VMT or substantially induce automobile travel, or result in substantial loading or parking impacts. *(No Impact)*

The operation of the project would not result in any changes related to hazardous conditions or interference with accessibility, substantially delay public transit, cause substantial additional VMT or substantially induce automobile travel, or result in substantial loading or parking impacts to the street or transportation circulation on or adjacent to the Islais Creek Bridge. The new bridge would result in no changes from existing conditions to the number of travel lanes, travel routes, access to local land uses, emergency vehicle

[52] The San Francisco Gateway Project (Planning Department Case No. 2015-012491ENV) would construct two new multi-story production, distribution, and repair buildings that would provide new industrial space in San Francisco at 749 Toland Street and 2000 McKinnon Avenue. The two buildings would total approximately 2,160,000 gross square feet and could include manufacturing and maker space, parcel delivery and last-mile delivery, wholesale and storage, and fleet management. As of November 2023, the planning department circulated the SF Gateway draft Environmental Impact Report for public review and comment, and is preparing a responses to comment document.

[53] The SF Market Project (Planning Department Case No. 2009-1153ENV) is a phased development plan that would replace the existing SF Market buildings at the main site, located along Jerrold Avenue between Toland and Rankin Streets. Construction is anticipated to occur from 2024 to 2041.

[54] The Potrero Power Station Project (2017-011878ENV) would develop an approximately 29-acre site along San Francisco's central waterfront for residential, commercial (including office, research and development, retail, hotel, and production distribution, and repair), parking, community facilities, and open space land uses. The Project Master Plan and Development Agreement were approved in April 2020 and will be implemented in multiple phases over a 30-year period.

response, or pedestrian or bicyclist circulation. Because the proposed project would not result in changes to the transportation operations or facility, there would be no transportation impacts that could combine with cumulative projects, and there would be ***no cumulative impacts***.

CHAPTER 5
OTHER CEQA CONSIDERATIONS

This chapter discusses the following topics in relation to the proposed project: growth-inducing impacts, significant unavoidable impacts, significant irreversible impacts, significant and irreversible environmental changes, and areas of known controversy and issues to be resolved.

5.A Growth Inducement

The CEQA guidelines (section 15126.2[d]) require an examination of the direct and indirect impacts of the proposed project, including the potential of the project to induce growth leading to changes in land use patterns and population densities, and related impacts on environmental resources. Specifically, CEQA states that the EIR shall discuss:

> *[T]he ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth … It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

A project has the potential to induce growth both directly and indirectly. Direct growth inducement would result if a project involved construction of new housing or construction of commercial development that attracted new visitors. Indirect growth-inducement would result, for instance, if implementing a project resulted in any of the following:

- substantial new housing or permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- a construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; or,
- removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area) or adding development adjacent to undeveloped land.

Growth inducement itself is not an environmental effect, but it may lead to foreseeable environmental effects. Generally, a project that increases population is not viewed as having a significant impact on the environment unless the physical changes that would be needed to accommodate the project-related population growth would have adverse impacts on the environment.

The proposed project would not directly or indirectly induce unplanned population growth in San Francisco, as discussed in Section 3, Population and Housing, of the initial study (Appendix B). Project construction activities would generate short-term employment opportunities during the project's two-year construction period. The number of onsite workers would vary depending on the construction phase, but it is expected that there would be between 10 and 40 workers, with an average of 20 workers over the 24-month construction period. It is anticipated that construction employees who are not already living in San Francisco would likely commute from their residences elsewhere in the bay area rather than permanently relocate to San Francisco from more distant locations; this is typical for employees in the

various construction trades. Therefore, construction of the proposed project would not induce population growth in the city or region.

The project would replace the existing bridge with a new bridge; the proposed bridge would not add additional travel lanes or change the capacity of the bridge in comparison to existing conditions. Implementation of the proposed project would not increase the number of employees to support the maintenance and/or operational functions of the Islais Creek Bridge from existing levels. Furthermore, the proposed project would not remove any barriers to population growth, such as providing housing, jobs, constructing transportation modes, increasing capacity of roadways, or developing new roadways. Therefore, the proposed project would not result in unplanned population growth or induce substantial growth in San Francisco, and there would be ***no growth-inducing impacts***.

5.B Significant Unavoidable Environmental Effects

CEQA guidelines sections 15126(b) and 15126.2(c) require that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. Chapter 4 and Appendix B of this EIR identify all significant and potentially significant environmental impacts related to implementing the proposed project; identify feasible mitigation measures that could avoid or reduce these significant and potentially significant impacts; and present a determination on whether these mitigation measures would reduce these impacts to less-than-significant levels. The proposed project would result in the significant and unavoidable impacts discussed below and further discussed in Sections 4.B, Historic Architectural Resources, and 4.C, Transportation and Circulation.

Historic Architectural Resources

- The proposed project would cause a substantial adverse change in the significance of a historical resource as defined in CEQA guidelines section 15064.5, including those resources listed in articles 10 or 11 of the San Francisco Planning Code (Impact CR-1).

Transportation and Circulation

- Construction of the proposed project would result in intensive and disruptive activities that could substantially delay public transit (Impact TR-1).

5.C Significant Irreversible Changes

CEQA guidelines section 15126(c) provides that an EIR shall include a detailed statement setting forth "[i]n a separate section…[a]ny significant effects on the environment that would be irreversible if the Project is implemented." Accordingly, CEQA Guidelines section 15126.2(d) provide the following guidance for analyzing the significant irreversible environmental changes of a Project:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irretrievable damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

Project construction would require the use of nonrenewable resources such as fossil fuels in the form of electricity, gasoline, and diesel fuel from construction equipment, marine barge equipment, and delivery trucks. There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites or for comparable infrastructure projects in other parts of San Francisco. Therefore, it is not expected that construction fuel consumption associated with the proposed project would be more inefficient, wasteful, or unnecessary than at other construction sites in the region.

Other nonrenewable and slowly renewable resources consumed as a result of project development would include, but would not necessarily be limited to, lumber and other forest products, sand and gravel, asphalt, petrochemical construction materials, and water. The use of these nonrenewable resources would account for only a small portion of the region's resources and would not affect the availability of these resources for other needs in the region.

The proposed project would not result in irreversible damage from environmental accidents, such as an accidental spill of a hazardous material. During construction and operation, the proposed project could require routine transport, use, and storage of hazardous materials. In the State of California, the storage and use of hazardous substances are strictly regulated and enforced by local, regional, and state agencies to prevent impacts related to environmental accidents (see Section E.17, Hazards and Hazardous Materials, in Appendix B of this draft EIR for further discussion). In San Francisco, articles 21 and 21A of the San Francisco Health Code enforce mandatory measures to minimize the risk of a hazardous materials release, and article 22A of the San Francisco Health Code, commonly referred to as the Maher Ordinance, provides measures for safe handling of hazardous soils in the city. Each of these regulations is specifically designed to protect the public health through improved procedures for the handling of hazardous materials, better technology in the equipment used to transport these materials, and a more coordinated, quicker response to emergencies. The nature of construction would not involve unusual amounts or types of hazardous materials that could result in irreversible damage from an accidental release, and would not pose any greater risk of upset or accident than other similar infrastructure projects in San Francisco.

Once constructed, the project would not result in a condition that is different from current conditions. Any hazardous chemicals used to maintain the bridge would be used in minimal amounts, and maintenance workers would be required to follow manufacturer's instructions (if applicable).

5.D Areas of Known Controversy and Issues to Be Resolved

As discussed in Chapter 1, Introduction, the planning department published a NOP for the proposed project on May 31, 2023, and sent a notice of availability to governmental agencies, organizations, and persons who may have an interest in the proposed project. The NOP requested that agencies and interested parties comment on environmental issues that should be addressed in the EIR (see Appendix A of this EIR). Table 1.C-1 in Chapter 1 summarizes the issues raised by the public and governmental agencies in response to the NOP prepared for the project and identifies the section of the draft EIR or initial study where each comment is addressed. To the extent that the comments received on the NOP relate to environmental Issues, they are addressed in the EIR. Any comments related to the project merits that cannot be addressed through the CEQA process will be provided to decision makers.

CHAPTER 6
ALTERNATIVES

6.A Introduction

This chapter presents the alternatives analysis, as required by CEQA, for the proposed project. The chapter includes a discussion of the CEQA requirements for an alternatives analysis and the methodology used for the selection of alternatives, with the intent of developing potentially feasible alternatives that avoid or substantially lessen the significant impact identified for the proposed project, but still meet most of the basic project objectives. Because the proposed project would adversely affect historic architectural resources, preservation alternatives have been developed to consider strategies that would lessen such impacts. This chapter describes the process for developing alternatives and summarizes feedback received from the HPC regarding the preservation alternatives. This chapter identifies a reasonable range of historic preservation alternatives that fulfill CEQA criteria and evaluates alternatives for their comparative merits with respect to minimizing adverse environmental effects.

After identifying the alternatives, the chapter evaluates the alternatives' impacts in comparison to existing environmental conditions and compared to the impacts of the proposed project. Based on this analysis, this chapter then identifies the environmentally superior alternative. Finally, this chapter describes other alternative concepts that were considered but eliminated from detailed consideration and the reasons for their elimination. Alternatives that would lessen the transportation and circulation (construction-related transit delay) were considered, but rejected.

6.A.1 CEQA Requirements for Alternatives Analysis

CEQA guidelines section 15126.6(a) states that an EIR must describe and evaluate a reasonable range of alternatives to the proposed project that would feasibly attain most of the project's basic objectives, but that would avoid or substantially lessen any identified significant adverse environmental effects of the project. An EIR is not required to consider every conceivable alternative to a proposed project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation.

CEQA, the CEQA guidelines, and the case law on the subject have found that feasibility can be based on a range of factors and influences. CEQA guidelines section 15364 defines "feasibility" as "capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." CEQA guidelines section 15126.6(f)(1) states that the factors that may be taken into account when addressing the feasibility of alternatives include site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (if the site is not already owned by the proponent).

- "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and

public participation. An EIR is not required to consider alternatives which are infeasible." (CEQA guidelines section 15126.6(a))

- "[T]he discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly." (CEQA guidelines section 15126.6(b))
- "The range of potential alternatives shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects." (CEQA guidelines section 15126.6(c))
- "The specific alternative of 'no project' shall also be evaluated along with its impact." (CEQA guidelines section 15126.6(e)(1))
- "The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project. The range of feasible alternatives shall be selected and discussed in a manner to foster meaningful public participation and informed decision-making." (CEQA guidelines section 15126.6(f))

6.A.2 Project Objectives

As presented in Chapter 2, Project Description, the project sponsor seeks to achieve the following objectives by undertaking the proposed project, which are presented below for use in the identification, selection, and evaluation of alternatives:

- The project would increase the distance between the bridge's lowest point and the existing channel's water elevation to the maximum extent practicable. This would extend the useful life of the bridge by improving the bridge's resilience to the impacts of sea-level rise, avoiding the current recurring submersion of the bridge underdeck and flooding of the machine rooms, and reducing the bridge's exposure to seawater and sustained moisture.
- The project would address the existing bridge's seismic deficiencies by replacing it with a new bridge that is seismically adequate.
- The project's construction times would be minimized to the maximum practicable to reduce impacts to Bayview-Hunters Point residents. The Bayview-Hunters Point neighborhood has substantially larger percentage of Black/African American and Latinx residents when compared to San Francisco as a whole, and the per capita income is less than half of the average in San Francisco. The road and trackway over the bridge provides a vital connection between San Francisco's downtown and Mission Bay areas and Bayview-Hunters Point, whose residents would disproportionately experience transit delays and detours during project construction.
- The project would increase the serviceability of the bridge to improve multi-modal transportation safety and increase operational utility to Muni light rail operations.
- The project would maintain current geometric, construction, and structural standards required for the types and volume of projected traffic on the bridge over its design life to ensure continued access from the Bayview-Hunters Point neighborhood to the rest of San Francisco and the region. This is intended to ensure that the bridge is operationally and structurally adequate for its entire design life.

- A bicycle facility would be provided as part of the proposed project and could eventually be incorporated into the city's bicycle route planning.

6.A.3 Summary of Significant and Unavoidable Impacts

Chapter 4, Environmental Setting, Impacts, and Mitigation Measures, of this draft EIR identifies significant and unavoidable impacts after implementation of mitigation measures associated with historic architectural resources and transportation and circulation (construction-related transit delay). These significant and unavoidable impacts are summarized in the following subsections.

- **Historic Architectural Resources –** The proposed project would cause a substantial adverse change in the significance of a historical resource as defined in CEQA guidelines section 15064.5 (Section 4.B.5 of the Draft EIR).
- **Transportation and Circulation –** The proposed project would result in intensive and disruptive activities that could substantially delay public transit during construction. (Section 4.C.5 of the Draft EIR).

6.B Alternatives Selection

In accordance with CEQA guidelines section 15126.6(a), this draft EIR examines a reasonable range of alternatives to the proposed project. An alternative selected for analysis must meet the following three criteria: (1) attain most of the project's basic objectives, (2) avoid or substantially lessen the significant environmental impacts of the project, and (3) be potentially feasible. An EIR need not consider an alternative whose impact cannot be reasonably ascertained and whose implementation is remote and speculative. Furthermore, an EIR need not consider every conceivable alternative but must consider a reasonable range of alternatives to foster informed decision-making and public participation.

The planning department based the alternatives selection process on identifying alternatives that would avoid or lessen the significant and unavoidable impacts identified above. Strategies to avoid or lessen significant environmental impacts primarily involved minimizing the loss of the character-defining features of the existing bridge and reducing the construction time frame, thereby reducing significant impacts. The planning department then screened the potential alternatives for their feasibility and ability to meet most of the project objectives. This process resulted in the selection of the alternatives described in the following sections to be carried forward for detailed evaluation. These alternatives, along with the No Project Alternative, represent a reasonable range of alternatives described and analyzed in this draft EIR.

6.B.1 Alternatives Development

The Islais Creek Bridge Project is part of a comprehensive citywide strategy to address sea-level rise around Islais Creek. The following subsections provided information about these efforts and considerations, which also have informed the project's Alternatives development.

Islais Creek Southeast Mobility Adaptation Strategy

In 2019, San Francisco Planning Department, SFMTA, the Port of San Francisco, and the SFPUC led an effort to understand adaptation pathways to protect the Islais Creek shoreline and surrounding areas from inland and coastal flooding and sea-level rise through 2080. This effort is referred to as the Southeast Mobility Adaptation Strategy[55] and is intended to inform near-term flood protection measures that will aid the Islais

[55] Islais Creek Southeast Mobility Adaptation Strategy. June 2021. 210630-ICSMAS-Report-Final.indd (sfplanning.org)

Creek shoreline and surrounding areas to withstand rising tides through 2080. The strategy identified a recommendation that the Islais Creek Bridge be replaced at a higher elevation to take into account sea-level rise anticipated over the lifespan of the structure (approximately 75 years).

Islais Creek Bridge Planning Charette

On February 10, 2022, representatives from several city departments convened to discuss possible Islais Creek Bridge design options to increase the bridge's flood resilience as part of a planning charette. These representatives sought to further understand the constraints, benefits, opportunities of different bridge design concepts as well as the needs and uses of the concepts relative to each city department. As part of the charette, the representatives examined 22 different bridge configuration combinations as part of an initial screening process. The Islais Creek Bridge Planning Charette considered impacts to the historic bridge as part of design considerations during this process. The options were then narrowed to four options plus a "No Build" option for more detailed analysis. The options analyzed included construction of a new bascule bridge, construction of a new through-girder bridge at the same elevation as the existing bridge, construction of a new standard girder bridge at a raised elevation, and construction of a new through-girder bridge at a higher elevation. The latter is the option that was advanced as the proposed project. The remaining three options (new bascule bridge, construction of a new through-girder bridge at the same elevation as the existing bridge, and construction of a new standard girder bridge at a raised elevation) carried forward for further analysis and discussion during the charrette, as well as the reasons these options were later rejected, are described in Section 6.E, Alternatives Considered but Rejected.

Historic Resource Considerations

As described in Section 4.B, Historic Architectural Resources, the Islais Creek Bridge is considered a historical resource pursuant to CEQA as an example of the Art Moderne style applied to a bascule bridge, and for its design by L.H. Nishkian, the project engineer. The project team, consisting of planning department and Public Works staff, evaluated alternatives that would address the significant and unavoidable impact of the proposed project on historic architectural resources while still accomplishing most of the project objectives. In preparing the preservation alternatives, the planning department and Public Works explored several different approaches while considering the project objectives, character-defining features, and feasibility. Some of the design constraints discussed included the existing location and height of the control tower. Because the proposed project raises the height of the bridge and widens the sidewalk, it would affect the bridge's relationship and connection to the tower, which is a character-defining feature. Some early alternative explorations included cutting the tower at the basement level to relocate the tower onto the shore, raising the tower to match the elevated height of the bridge, or demolishing and rebuilding the tower in the same location but at a higher elevation to match the new elevation of the bridge.

The project team also examined another existing design constraint, which is the horizontal alignment reverse curve at the bridge approaches for light-rail service vehicles. Currently, light rail vehicles traversing the bridge must slow considerably to safely pass through the horizontal alignment reverse curve at the approaches and cross the three rail-joints of the open-grid steel deck where the bascule leaves separate during bridge operations. When developing alternatives, the project team considered replicating the center girder, including the riveted steel center box girder and Art Moderne-style teardrop bascule girder housing units. However, retention of a center girder would not increase utility for Muni light rail operations because it would replicate the existing jog in the rail tracks that slows trains. Retention of an additional center girder, which would require a total of five girders, would also result in a thicker deck structure. This would make the bridge more susceptible to sea-level rise because it would reduce the space between the bottom of the bridge and the channel water elevation (also known as freeboard). Inclusion of a faux center girder would

also require a wider bridge, which may in turn require the narrowing of the proposed pedestrian/bicycle paths to conform to the bridge approaches. The project team then considered a three-girder bridge to avoid widening the bridge to accommodate a center girder. However, this design would also require a thicker bridge deck to support the increased span between the girders and would reduce bridge freeboard in comparison to the proposed project, thus making the bridge more susceptible to sea-level rise.

The project team also explored the rehabilitation of the existing bridge but deemed this alternative infeasible due to the bridge's susceptibility to sea-level rise, the fact that the drawbridge function is less frequently used for marine traffic in the last 20 years, and the inefficiency of Muni operations on the bridge. This alternative is therefore no longer under consideration, but is described in more detail in Section 6.E, Alternatives Considered but Rejected.

The Preservation Alternative and the No Project Alternative were included in a preservation alternatives analysis memorandum prepared pursuant to HPC resolution No. 0746326. The project team presented the alternatives to the HPC on May 17, 2023 (see Appendix D).

The HPC's comments and suggested refinements to the Preservation Alternative are summarized as follows:[56]

- The HPC found the alternatives to be adequate and did not have any comments on the alternatives presented.
- One HPC commissioner asked if a different location across the creek was explored as an alternative, with the existing bridge left in place.
- The HPC suggested the installation of an interpretive panel to explain the historic significance of the bridge. Interpretation could include salvage and reinstallation of some elements of the existing bridge.
- Commissioners were supportive overall of the proposed project and understood the importance of this infrastructure upgrade.
- Commissioners did have questions about how the proposed bridge replacement project fits within the city's larger approach for addressing sea-level rise in the neighborhood.
- Commissioners expressed the importance of the T-Line in providing essential transportation for residents and the need to provide a better transit connection for Bayview residents.
- One Commissioner requested additional information about any community outreach that has been done as part of development of the proposed project, and expressed concern that the surrounding community needed to know about planning-related efforts to address sea-level rise along Islais Creek, including the proposed bridge.

Based on the input from the HPC on the alternatives, the project team did not make any changes to the Preservation Alternative.

With regard to the general project comments from the HPC, a mitigation measure that requires installation of a public interpretive program is included under Mitigation Measure M-CR-1c, and a salvage plan that would include salvage and reinstallation of some bridge elements as feasible is required under Mitigation Measure M-CR-1b.

[56] This summary is based on written comments from the HPC provided in a letter on June 12, 2023.

For a discussion of how the proposed bridge replacement project fits within the city's larger approach for addressing sea-level rise in the neighborhood, please refer to Section E.17, Hydrology and Water Quality in the initial study in Appendix B.

Transportation-Related Construction Considerations

As described in Section 4.C.5, the Islais Creek Bridge Project could substantially delay transit during project construction and result in a significant and unavoidable impact to the T-Third Street light rail line. The draft EIR identifies a feasible mitigation measure to reduce the significant impact to transit during project construction. However, because the evaluation is still ongoing and may be modified based on community input prior to being finalized, the planning department determined that this impact would remain significant and unavoidable even with mitigation. Other alternatives that would retain or partially retain the bridge, or would expedite the bridge's construction, and could also potentially reduce the significant impact to transit duration project construction are discussed below in Section 6.E, Alternatives Considered but Rejected.

6.C Description of Alternatives Selected

Based on the alternatives' development process described above, the following alternatives were selected for detailed analysis in this EIR:

- **No Project Alternative**, which assumes the Islais Creek Bridge would not be replaced
- **Preservation Alternative**, which assumes the construction of a new bridge, retention of the existing control tower in place, and retention or replication of other character-defining features

These alternatives represent an adequate range of potentially feasible alternatives required under CEQA for this project. These alternatives would lessen and, in some cases, avoid the significant and unavoidable adverse impacts related to historic architectural resources that were identified for the proposed project. A "No Project Alternative" is included as required by CEQA, even though it would not meet the basic project objectives. The Preservation Alternative is a potentially feasible option that would meet some of the project objectives. The descriptions and assumptions are based on the alternatives presented in the preservation alternatives memorandum.[57]

This chapter presents a detailed analysis of the potential environmental impacts of the selected alternatives compared to the proposed project. The following sections describe the alternatives, and analyze them in comparison to the proposed project.

Table 6.C-1 compares the project's objectives with the proposed project, the No Project Alternative, and the Preservation Alternative. The table summarizes the project objectives, and indicates whether they are met by each of the proposed projects and the alternatives. Table 6.C-2 summarizes which of the character-defining features of the bridge would be demolished, retained, or replicated under each of the alternatives in comparison to the proposed project.

[57] AECOM, Preservation Alternatives Memorandum – Islais Creek Bridge Project (Planning Department Case No. 2022-000112ENV), May 2023.

Table 6.C-1 Comparison of Project Objectives with Proposed Project and Alternatives Project Objectives

Project Objectives	Proposed Project	No Project Alternative	Preservation Alternative
Increase distance between the bridge's lowest point and existing channel's water elevation to the maximum extent practicable.	Meets	Does Not Meet	Meets
Address the existing bridge's seismic deficiencies by replacing it with a new bridge that is seismically adequate.	Meets	Does Not Meet	Meets
Minimize the project's construction times to the maximum practicable to reduce impacts to Bayview-Hunters Point residents.	Meets	N/A	Meets less than the proposed project
Increase the serviceability of the bridge to improve multi-modal transportation safety and increase operational utility to Muni light rail operations.	Meets	Does Not Meet	Meets
Maintain current geometric, construction, and structural standards required for the types and volume of projected traffic on the bridge over its design life to ensure continued access to San Francisco and the region.	Meets	Does Not Meet	Meets
Provide a bicycle facility that can be incorporated into the city's bicycle route planning as part of the proposed project.	Meets	Does Not Meet	Meets

Note:

Muni = San Francisco Municipal Transportation Agency

Table 6.C-2 Character-Defining Features Retained by the Proposed Project and Alternatives

Character-Defining Features Islais Creek Bridge	Proposed Project	No Project Alternative	Preservation Alternative
Bascule type bridge	Demolished	No Change	Demolished
Above-deck element – riveted steel center box girder	Demolished	No Change	Demolished; original center girder would be replicated as two girders to flank light-rail tracks along center of bridge
Above-deck element – riveted steel side box girders	Demolished	No Change	Replicated[1]
Above-deck element – Art Moderne quarter-round and teardrop bascule girder housing units	Demolished	No Change	Retained if feasible and replicated if not; replication of teardrop units for girder housing
Above-deck element – Art Moderne steel sidewalk guardrails	Demolished	No Change	Replicated with modifications to meet current safety standards
Steel hatch door on the eastern side of the south machinery pit	Demolished	No Change	Retained[2]
Control tower design and materials	Demolished	No Change	Retained and rehabilitated, if feasible
Control tower location	Demolished	No Change	Retained but somewhat diminished with the increase in bridge deck width

Notes:

[1] "Replicated" indicates that existing features that are too deteriorated to repair and would instead be replaced with copies of the features and installed on the new bridge.

[2] "Retained" indicates that the existing feature would be kept and reinstalled on the new bridge.

6.C.1 No Project Alternative

As required by CEQA guidelines section 15126.6(e), a No Project Alternative is evaluated in this draft EIR to allow decision-makers to compare the environmental effects of approving the proposed project or variant with the effects of not approving the project or variant. CEQA guidelines section 15126.6(e)(2) requires that the No Project Alternative analysis "discuss the existing conditions … as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and policies and consistent with the available infrastructure and community services." The No Project Alternative would not preclude development of the site by another project in the future. Currently, there are no other development proposals pending at the project site. Therefore, pursuant to CEQA guidelines section 15126.6(e)(3)(B), the No Project Alternative for purposes of this analysis is considered "no build," wherein the existing environmental setting is maintained and is "the circumstance in which the project does not proceed."

Description

The No Project Alternative would not demolish or construct improvements to the existing Islais Creek Bridge. The No Project Alternative would not meet the project objectives, which include the replacement of a seismically deficient bridge with a structurally adequate bridge and designing the bridge to be resilient to future sea-level rise impacts.

Impacts Analysis

Historic Architectural Resources

The No Project Alternative would not demolish or construct improvements to the existing Islais Creek Bridge. As shown in Table 6.C-2, there would be no change to the character-defining features of the Islais Creek Bridge; therefore, this alternative would not cause material impairment to a historical resource. This alternative would avoid the significant and unavoidable impact that would result from the demolition of the existing historic Islais Creek Bridge and mitigation measures M-CR-1a through M-CR-1d would not apply to the No Project Alternative. This alternative would not result in project-level impacts, nor contribute to any cumulative impacts related to historic architectural resources.

Transportation and Circulation

The No Project Alternative involves no demolition or construction of any improvements to the Islais Creek Bridge. Use of the existing bridge by vehicles, transit, and people walking or bicycling would not be interrupted, thus avoiding the significant and unavoidable transit-delay impact that would be experienced during project construction due to the bridge's two-year construction period.

Other Topics

Under the No Project Alternative, the project site would not be altered from its existing condition because there would be no modifications to the existing Islais Creek Bridge. Therefore, cultural resources (archeological resources and human remains), tribal cultural resources, air quality, noise, and biological resources impacts would not occur because no construction, ground-disturbing activities, or changes to operations would occur. Because all of these impacts would be avoided, none of the mitigation measures identified for the proposed project would be required under the No Project Alternative. Similarly, the proposed project's less-than-significant impact to energy, hazardous materials, hydrology, geology and soils, public services, utilities/service systems, recreation, greenhouse gases, land use/land use planning, and aesthetics would be reduced to no impact under the No Project Alternative.

As with the proposed project, the No Project Alternative would have no impacts on population and housing, wind, shadow, mineral resources, agriculture and forestry resources, and wildfire.

6.C.2 Preservation Alternative

The purpose of this alternative is to avoid or substantially reduce the significant and unavoidable impact on a historic resource that would occur under the proposed project. The Preservation Alternative would meet most of the project objectives. The Preservation Alternative is shown on Figure 6.C-1 and Figure 6.C-3; and for comparison purposes, Figure 6.C-2, and Figure 6.C-4 depict the proposed project.

Description

Under the Preservation Alternative, the bridge would be replaced at the same elevation as the proposed project (the bottom of bridge would be a minimum elevation of 15.2 feet and the top of deck minimum elevation of 18.6 feet), but would salvage, rehabilitate, and reinstall as many of the character-defining features of the original bridge as feasible. If it is determined by Public Works in consultation with planning department preservation staff, based on further inspection and evaluation, that any of the character-defining features are not salvageable for reinstallation, these elements would be replicated with substitute materials to recreate the historic appearance and reproduce historic paint colors and finishes based on physical evidence, in accordance with the Secretary's Standards.

Under the Preservation Alternative, the control tower would be retained. The extent of the retention of the tower features is dependent on further condition assessments and economic analysis, which would be conducted once the full extent of structural deterioration of the tower and of the corresponding extent of repairs needed are known. Foundation work for retaining the control tower is assumed to consist of adding four 5-foot-diameter, in-water cast-in-drilled-hole piles to the four corners of the existing control tower foundation, and increasing the size of the grade beams. This foundation support work would be additional in-water construction beyond the proposed project. This would include assessing whether access into the tower can be maintained, and the extent of retrofit needed to address the Americans with Disabilities Act and enable the tower's rehabilitation.

Similar to the proposed project, the Preservation Alternative would provide a center 26-foot-wide dedicated light rail trackway, two 11-foot-wide travel lanes in each direction, a 12-foot-wide Class I pedestrian path on the eastern side of the bridge, and a 16-foot-wide Class I shared pedestrian/bicycle path on the western side of the bridge. Both paths would be cantilevered off the exterior girders and would include a pedestrian/bicycle railing. The 12-foot-wide Class I pedestrian path on the eastern side of the bridge would maintain its width and transition to the width of the approach walkway/path as it passes the retained tower. However, the distance between the face of the tower and the edge of the new path would be approximately 2.5 feet; the new walkway would be at approximately the same elevation as the new bridge deck, or about 4.5 feet higher than the existing walkway surface. Consequently, the existing access to the door into the tower would not be functional, and the possibility of moving the access door would be considered in the conditions assessment discussed above. The existing Art Moderne-style sidewalk guardrails on the original bridge include horizontal gaps larger than allowed by current safety requirements, therefore, the sidewalk railings will be replaced with replicated railings meeting current gap opening requirements. These railings would be fabricated out of painted aluminum and would reproduce the finish of the existing railings based on physical evidence.

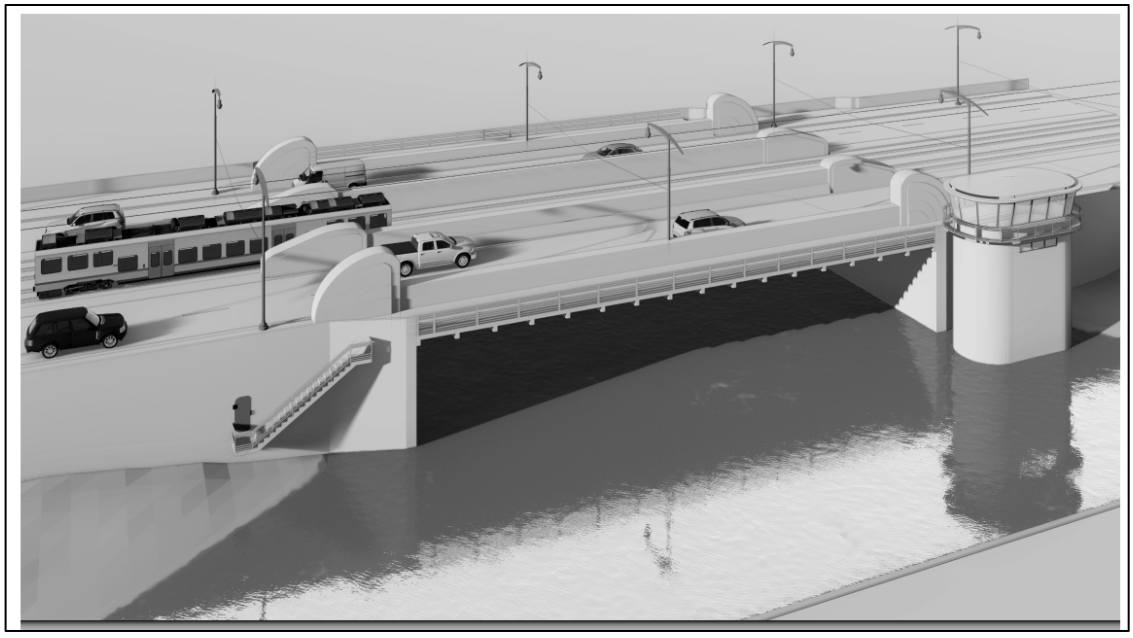

Figure 6.C-1 Oblique View of Preservation Alternative

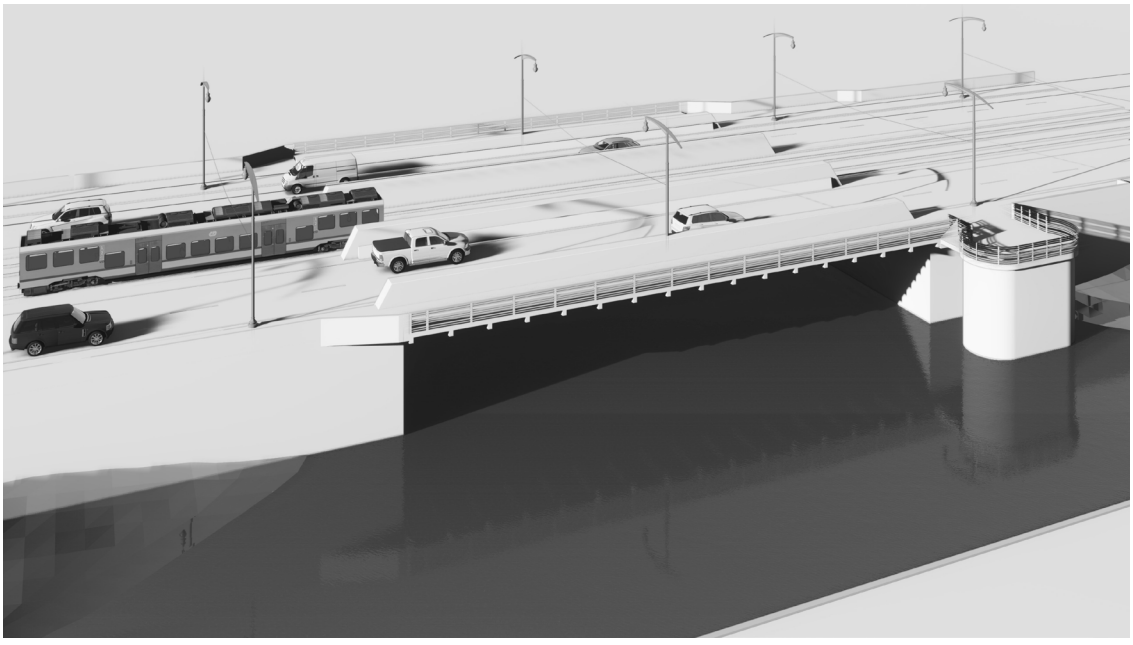

Figure 6.C-2 Oblique View of Proposed Project

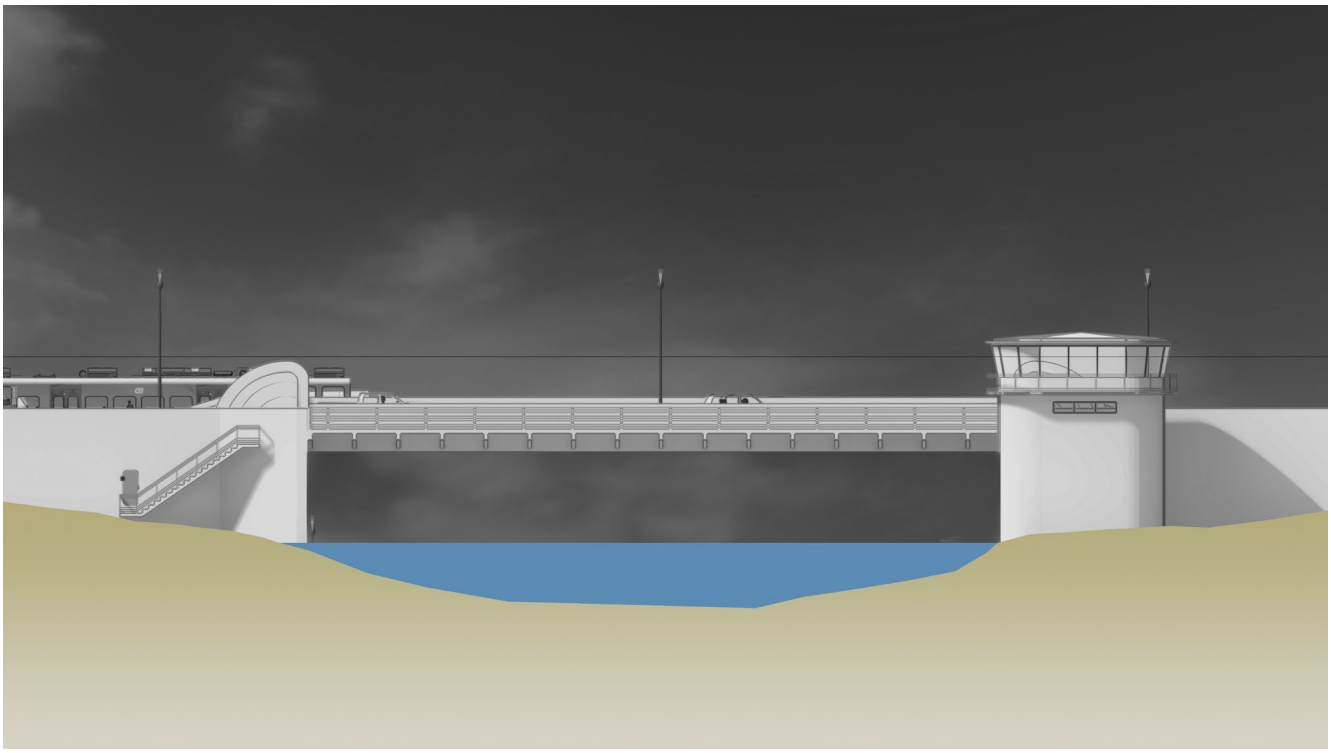

Figure 6.C-3 East Elevation View of Preservation Alternative

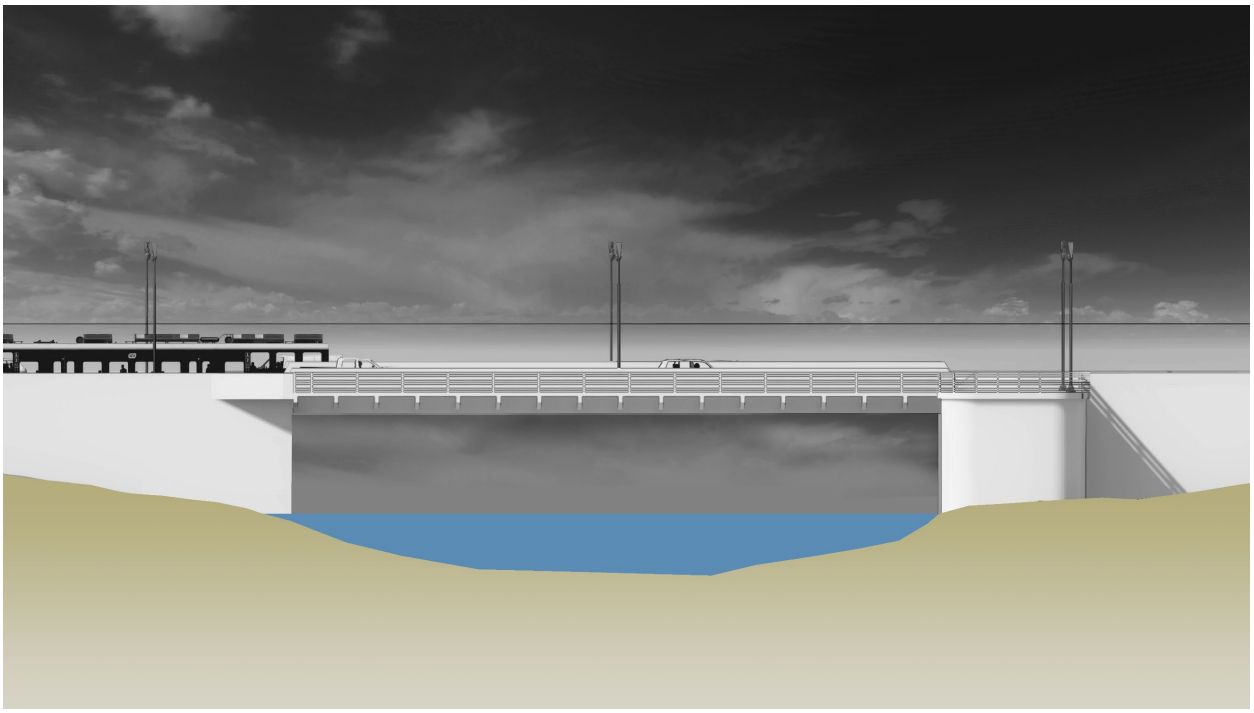

Figure 6.C-4 East Elevation View of Proposed Project

The existing Art Moderne-style quarter-round and teardrop bascule girder housing units would be removed from the bridge for salvage, rehabilitation, and reinstallation. Upon removal, inspection, and evaluation regarding the deterioration of materials and/or lead paint contamination, these elements would be assessed for reuse. If it is determined that the elements are not salvageable for reinstallation, they would be replicated with substitute materials to recreate the historic appearance and reproduce historic paint colors and finishes based on physical evidence.

The concrete abutment of the original bridge would remain in place under this alternative. The doorway void behind the steel hatch door on the eastern side of the south machinery pit of the abutment would be infilled with concrete to prevent water intrusion, and the steel hatch door would be reinstalled.

The riveted steel side box girders would also be removed and replaced with four new concrete through-girders. Although the new girders would be slightly wider and would rise higher above the bridge deck than the existing girders, their overall shape and details would be replicated to imitate the appearance of the original girders. Form liners would be used so that the new concrete girders would recreate the historic appearance of the riveted steel girders; historic paint colors and finishes would be used based on physical evidence, in accordance with the Secretary's Standards.

The Preservation Alternative meets most of the project objectives. The Preservation Alternative would increase the elevation of the bridge from the existing channel to reduce the bridge's exposure to seawater and sustained moisture; would replace a seismically deficient bridge with a structurally adequate bridge; would increase the serviceability of the bridge to improve multi-modal transportation safety and increase operational utility to Muni light-rail operations; and would maintain current geometric, construction, and structural standards required for the types and volume of projected traffic on the bridge over its design life, ensuring continued access from the Bayview-Hunters Point neighborhood to the rest of San Francisco and the region. Preservation measures such as salvaging original above-deck character-defining features for retention would require additional time (3 to 4 months) to remove the elements from the bridge; work to rehabilitate the features for retention and reuse; removal of lead paint; and repair of any inadvertent damage to the features during removal with like and in-kind materials and finishes. Overall, the Preservation Alternative meets most of the project objectives.

Impacts Analysis

Historic Architectural Resources

The Preservation Alternative would retain some of the character-defining features, where feasible, using replication where necessitated by reasons of safety, operational functionality, and accessibility. See Table 6.C-2 for a comparison. Although the Preservation Alternative would not retain the bascule bridge type, the above-deck elements such as the riveted steel box girders with Art Moderne quarter-round and teardrop bascule girder housing units would be retained/replicated. The Art Moderne steel sidewalk and machinery pit guardrails would be replicated, the steel hatch door on the south machinery pit in the concrete abutment would be sealed and retained in place, and the control tower would remain in place, although closer in relation to the bridge. Despite the retention and or replication of many of the character-defining features of the bridge, due to the fact that the Preservation Alternative requires removal of the existing operable bascule bridge and the construction of a new fixed-span bridge, it would cause material impairment to the bridge, which would no longer convey its significance as an Art Moderne-style drawbridge. Although the Preservation Alternative would reduce the impacts to the bridge in comparison with the proposed project, the impact would still be significant and unavoidable, and mitigation measures M-CR-1a through M-CR-1d would therefore apply to this alternative.

Transportation and Circulation Impacts

Transportation and Circulation impacts associated with the Preservation Alternative would be somewhat similar to the proposed project, because the Islais Creek Bridge would need to be closed during construction of this alternative, necessitating the rerouting of vehicle, transit, pedestrian, and bicycle traffic in the manner described for the proposed project. As described above, preservation measures would require additional time to remove the elements from the bridge, and work to rehabilitate the features for retention and reuse. If features are determined to be unsalvageable for reuse and require replication, the process to fabricate these replicated features would also increase project construction time. Therefore, these measures would increase the total construction time for the Preservation Alternative beyond that of the proposed project for a period of approximately 3 to 4 months. Consequently, this would also extend the duration of the Islais Creek Bridge closure and rerouting of vehicle, transit, pedestrian, and bicycle traffic around the bridge. Construction of Preservation Alternative would result in the need for a detour plan for three or four additional months in comparison with the proposed project; therefore, the impact would still be significant and unavoidable (albeit more severe), and Mitigation Measure M-TR-1 would therefore apply to this alternative. This impact would remain significant and unavoidable even with mitigation, and the impact would be slightly more than the proposed project due to the longer construction duration.

Biological Resources

Compared to the proposed project, the Preservation Alternative would have additional in-water foundation work due to the seismic retrofit of the control tower. This retrofit would consist of the construction of four 5-foot-diameter, in-water cast-in-drilled-hole piles to the four corners of the existing control tower foundation, as well as grade beams and pile caps. Installation of the piles would require the construction of a cofferdam made up of sheet piles, and dewatering of the creek channel. The cofferdam would result in areas of temporary impact to the channel bottom that fall outside of the existing footprint of the control tower, and potential temporary increases in turbidity in the project area. During construction, cofferdams have the potential to entrap fish and result in injury or mortality of threatened or endangered fish species, if they are present. As a result, implementation of the Preservation Alternative would require additional consultation with the National Marine Fisheries Service (NMFS) to obtain an incidental take permit for potential injury or mortality of CESA-listed fish. Entrapped threatened and endangered fish species may be injured or killed during dewatering which would constitute a significant biological impact. Unlike the Preservation Alternative, the proposed project does not include the seismic retrofit of the control tower. Therefore, potential impacts related to the use of a cofferdam would not occur under the proposed project. However, Mitigation Measures M-BI-1: Special-Status Species and Jurisdictional Waters Impact Avoidance, M-BI-2: Fish and Marine Mammal Protection during Pile Removal, M-BI-3: Avoidance and Minimization Measures for Bats, M-BI-4: Worker Environmental Awareness Program Training, and M-BI-5: Protection of Herring Spawn would still apply to the Preservation Alternative.

Mitigation Measure M-ALT-BI-1 is proposed for the Preservation Alternative to reduce impacts related to the installation of a cofferdam. Implementation of this measure would reduce the impact to special-status fish species to less than significant with mitigation.

> **Mitigation Measure M ALT-BI-1: Biological Monitoring of Dewatering and Cofferdam Activities**
>
> At least 30 days prior to the onset of cofferdam construction, the name(s) and credentials of the biologist(s) who would conduct preconstruction surveys and relocation activities for listed species shall be submitted to the appropriate regulatory agency or agencies (National Marine Fisheries Service [NMFS], U.S. Fish and Wildlife Service [USFWS] and/or California Department of Fish and Wildlife [CDFW]) for approval. No dewatering shall begin until the biologist(s) has received written

approval from the agencies to conduct the work. An agency-approved biologist (hereafter referred to as the approved biologist) shall be present on-site during the construction of the cofferdam, and prior to and during the dewatering activities. The approved biologist may stop work if that is deemed necessary for any reason to protect listed species and shall advise the project engineer or designee on how to proceed accordingly.

The channel-facing wall of the cofferdam shall be completed during low tide when the water level in the channel is lower. This will reduce the potential for the entrapment of fish as the cofferdam is completed.

Cofferdams shall affect no more of the stream channel than is necessary to support completion of the construction activity. Temporary cofferdams shall be installed and removed within a single work period between the dates of June 1 and November 30 in accordance with Mitigation Measure M-BI-2: Fish and Marine Mammal Protection during Pile Removal. Immediately upon completion of in-channel work, temporary fills, cofferdams, creek diversion systems, and other in-channel structures that will not remain in the stream shall be removed in a manner that minimizes disturbance to downstream flows and water quality.

Noise and Vibration

The SFPUC Southeast Treatment Plant and Booster Pump Station are southwest of the bridge. The outfall pipes from these facilities run below the creek on the bottom of the channel adjacent to the bridge. The cofferdam and foundation piles required for the seismic retrofit of the control tower (included as part of the Preservation Alternative) would be installed using a crane-mounted vibratory driver. SFPUC has stated that the plant outfall pipes that run below the creek adjacent to the bridge below Islais Creek Channel are highly susceptible to damage due to vibration impacts, and has required vibration threshold of 0.2 inch/second peak particle velocity. Vibration modeling has shown that installation of the cofferdam and foundation piles could result in significant impacts and therefore would require mitigation. Unlike the Preservation Alternative, the proposed project does not include the seismic retrofit of the control tower. Therefore, impacts to the outfall pipes would not occur.

Mitigation Measure M-ALT-NO-1 would be required to reduce this potential vibration impact to the outfall pipes to a less than significant level.

Mitigation Measure M-ALT-NO-1: Protection of Utility Structures and Vibration Monitoring During Construction

Prior to Public Works Commission approval, the project sponsor shall submit a project-specific pre-construction survey and vibration management and monitoring plan to the ERO or the ERO's designee for approval. The plan shall identify all feasible means to avoid damage to the SFPUC outfall pipes that run below Islais Creek adjacent to the bridge. The project sponsor shall ensure that the following requirements of the pre-construction survey and vibration management and monitoring plan are included in contract specifications, as necessary.

Pre-construction Survey. Prior to the start of any ground-disturbing activity, the project sponsor shall engage a consultant to undertake a pre-construction survey of potentially affected utility structures. The project sponsor shall submit the survey to the ERO or the officer's designee for review and approval prior to the start of vibration-generating construction activity.

Vibration Management and Monitoring Plan. The project sponsor shall undertake a monitoring plan to avoid or reduce proposed project-related construction vibration damage to utility structures and to

ensure that any such damage is documented and repaired. Prior to issuance of any demolition or building permit, the project sponsor shall submit the plan to the ERO for review and approval.

The vibration management and monitoring plan shall include, at a minimum, the following components, as applicable:

- *Maximum Vibration Level.* Based on the anticipated construction and condition of the affected utility structures, a qualified acoustical/vibration consultant in coordination with a civil engineer (or professional with similar qualifications) shall establish a maximum vibration level that shall not be exceeded at the utility structures, based on existing conditions, consultation with SFPUC, character-defining features, soil conditions, and anticipated construction practices.

- *Vibration-generating Equipment.* The plan shall identify all vibration-generating equipment to be used during construction (including but not limited to site preparation, pile driving, installation of cofferdams, clearing, demolition, excavation, shoring, foundation installation, and building construction).

- *Alternative Construction Equipment and Techniques.* The plan shall identify potential alternative equipment and techniques that could be implemented if construction vibration levels are observed in excess of the established standard (e.g., drilled shafts [caissons] could be substituted for driven piles, if feasible, based on soil conditions; or smaller, lighter equipment could be used in some cases).

- *Pile-Driving Requirements.* The project sponsor shall incorporate into project construction specifications a requirement that the construction contractor(s) use all feasible means to avoid or reduce damage to potentially affected utility structures. Such methods may include one or more of the following:

  - Incorporate "quiet" pile-driving technologies into project construction (such as drilled shafts, using sonic pile drivers, auger cast-in-place, or drilled-displacement), as feasible; and/or

  - Ensure appropriate excavation shoring methods to prevent the movement of utility structures.

- *Buffer Distances.* The plan shall identify buffer distances to be maintained based on vibration levels and site constraints between the operation of vibration-generating construction equipment and the potentially affected utility structures to avoid damage to the extent possible.

- *Vibration Monitoring.* The plan shall identify the method and equipment for vibration monitoring to ensure that construction vibration levels do not exceed the established standards identified in the plan.

  - Should construction vibration levels be observed in excess of the standards established in the plan, the contractor(s) shall halt construction and put alternative construction techniques identified in the plan into practice, to the extent feasible.

  - The qualified civil engineer shall inspect each affected utility structure (as allowed by property owners) in the event the construction activities exceed the vibration levels identified in the plan.

  - The civil structural engineer shall submit monthly reports to the ERO during vibration-inducing activity periods that identify and summarize any vibration level exceedances and describe the actions taken to reduce vibration.

  - If vibration has damaged utility structures, the civil engineer shall immediately notify the ERO and prepare a damage report documenting the features of the utility structure that has been damaged.

  - Following incorporation of the alternative construction techniques and/or planning department review of the damage report, vibration monitoring shall recommence to ensure that vibration levels at each utility structure are not exceeded.

- *Periodic Inspections.* The plan shall identify the intervals and parties responsible for periodic inspections. The qualified civil engineer shall conduct regular periodic inspections of each affected utility structure (as allowed by property owners) during vibration-generating construction activity on the project site. The plan will specify how often inspections would occur.

  - *Repair Damage.* The plan shall also identify provisions to be followed should damage to any utility structure occur due to construction-related vibration. The utility structures shall be remediated to their pre-construction condition (as allowed by property owners) at the conclusion of vibration-generating activity on the site.

- **Vibration Monitoring Results Report.** After construction is complete, the project sponsor shall submit to the ERO a final report from the qualified civil engineer. The report shall include, at a minimum, collected monitoring records, structure condition summaries, descriptions of all instances of vibration level exceedance, identification of damage incurred due to vibration, and corrective actions taken to restore damaged utility structures. The ERO shall review and approve the vibration monitoring results report.

Other Environmental Topics

The Preservation Alternative would include a replacement bridge at the same elevation as the proposed project, but would salvage, rehabilitate, and reinstall many of the character-defining features of the original bridge, as feasible.

Impacts of the Preservation Alternative would be similar to those of the proposed project for the following topics: the Preservation Alternative would have no impacts on agriculture and forestry resources, population and housing, wind, shadow, mineral resources, and wildfire. The Preservation Alternative would have less-than-significant impacts on land use and planning, aesthetics, greenhouse gas emissions, recreation, utilities and service systems, public services, geology and soils, hydrology and water quality, hazards and hazardous materials, and energy; and, with mitigation incorporated, less-than-significant impacts related to air quality, cultural resources (archeological resources and human remains), and tribal cultural resources. The Preservation Alternative would have similar but increased impact to the following topics, compared to the proposed project: cultural resources (archeological resources, and human remains), and tribal cultural resources due to the increase in ground disturbance related to the retrofit of the control tower.

6.D Comparison of Alternatives and Environmentally Superior Alternative

6.D.1 Comparison and Summary of Impacts of Alternatives and their Ability to Meet Project Objectives

The impacts of alternatives and the ability of each alternative to meet the project objectives are discussed below and summarized in Table 6.C-1 (in Section 6.C) and Table 6.D-1.

Table 6.D-1 Comparison of Environmental Impacts of the Islais Creek Bridge Project to Impacts of the Alternatives

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Cultural Resources			
Impact CR-1: The proposed project would cause a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Significant and Unavoidable (SUM)	No impact (NI)	Less than the Proposed Project (SUM)
Impact CR-2: The proposed project would not result in a substantial adverse change in the significance of any adjacent historical resources pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact CR-3: The proposed project could cause a substantial adverse change in the significance of an archeological resource pursuant to CEQA Guidelines section 15064.5, and could disturb human remains, including those interred outside of formal cemeteries.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Slightly more than the Proposed Project (LTSM)
Impact C-CR-1: The proposed project, in combination with cumulative projects, would not result in cumulative impacts to historic architectural resources and would not result in a substantial adverse change in the significance of a historical resource pursuant to section 15064.5, including those resources listed in article 10 or article 11 of the San Francisco Planning Code.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-CR-2: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts to cultural resources.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Transportation and Circulation			
Impact TR-1: Construction of the proposed project would result in intensive and disruptive activities that would not create potentially hazardous conditions for people driving, walking, or bicycling, or for public transit operations, but could substantially delay public transit.	Significant and Unavoidable with Mitigation (SUM)	No impact (NI)	Slightly more than the Proposed Project (SUM)
Impact TR-2: Operation of the proposed project would not create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional vehicle miles traveled (VMT), substantially induce automobile travel, or result in substantial loading or parking deficits.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-TR-1: The construction of the proposed project, in combination with cumulative projects, would have cumulative impacts related to traffic delays during project construction. The proposed project, in combination with cumulative projects, would not contribute to potentially hazardous conditions for people walking, bicycling, or driving, or public transit operations, or interfere with emergency access or accessibility for people walking or bicycling	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact C-TR-2: The operation of the proposed project, in combination with cumulative projects, would not create potentially hazardous conditions, interfere with accessibility, substantially delay public transit, cause substantial additional VMT or substantially induce automobile travel, or result in substantial loading or parking impacts.	No impact (NI)	No impact (NI)	Similar to Proposed Project (NI)
Land Use and Planning			
Impact LU-1: The proposed project would not physically divide an established community.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact LU-2: The proposed project would not cause a significant physical environmental impact due to a conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-LU-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to land use and planning.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Aesthetics			
Impact AE-1: The proposed project would not have a substantial adverse effect on a scenic vista.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AE-2: The proposed project would not substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings on a state scenic highway.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact AE-3: The proposed project would not conflict with applicable zoning and other regulations governing scenic quality.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AE-4: The proposed project would not create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-AE-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative aesthetic impact.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Population and Housing			
Impact PH-1: The proposed project would not induce substantial unplanned population growth, either directly or indirectly.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact PH-2: The proposed project would not displace substantial numbers of existing people or housing units, necessitating the construction of replacement housing.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-PH-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to population and housing.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Tribal Cultural Resources			
Impact TCR-1: The proposed project could result in a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources, or that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Slightly more than the Proposed Project (LTSM)
Impact C-TCR-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on tribal cultural resources.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Noise			
Impact NO-1: Construction of the proposed project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the proposed project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Less Than Significant (LTS)	No impact (NI)	Greater impacts than the Proposed Project (LTS)
Impact NO-2: The proposed project would not generate excessive groundborne vibration or groundborne noise levels.	Less Than Significant (LTS)	No impact (NI)	Greater impacts than the Proposed Project (LTSM)
Impact NO-3: Operation of the proposed project would not generate noise levels in excess of standards in the local general plan or noise ordinance and would not result in a substantial increase in ambient noise levels in the project vicinity.	No impact (NI)	No impact (NI)	Similar to Proposed Project (NI)
Impact C-NO-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative noise or vibration impacts.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Air Quality			
Impact AQ-1: The proposed project could conflict with or obstruct implementation of the applicable air quality plan.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AQ-2: The proposed project would not result in a cumulatively considerable net increase in nonattainment criteria air pollutants.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact AQ-3: The proposed project would generate toxic air contaminants, including diesel particulate matter, and could expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Similar to the Proposed Project (LTSM)
Impact AQ-4: The proposed project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-AQ-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on air quality.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Similar to the Proposed Project (LTSM)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Greenhouse Gas Emissions			
Impacts C-GG-1: The proposed project would generate greenhouse gas emissions, but not at levels that would result in a significant impact on the environment or conflict with any policy, plan, or regulation adopted for the purpose of reducing greenhouse gas emissions.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Wind			
Impact WI-1: The proposed project would not create wind hazards in publicly accessible areas of substantial pedestrian use.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-WI-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to wind.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Shadow			
Impact SH-1: The proposed project would not create new shadow that substantially and adversely affects the use and enjoyment of publicly accessible open spaces.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-SH-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to shadow.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Recreation			
Impact RE-1: The proposed project would not increase the use of existing neighborhood and regional parks and other recreational facilities to such an extent that substantial physical deterioration of the facilities would occur or be accelerated.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact RE-2: The proposed project would not include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Impact C-RE-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts related to recreation.	No impact (NI)	No impact (NI)	Similar to the Proposed Project (NI)
Utilities and Service Systems			
Impact UT-1: The proposed project would not require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact UT-2: The proposed project would have sufficient water supplies available to serve the proposed project and reasonably foreseeable future development during normal, dry, and multiple dry years.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact UT-3: The proposed project would not result in a determination by the wastewater treatment provider that serves or may serve the proposed project that it has inadequate capacity to serve the proposed project's projected demand in addition to the provider's existing commitments.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact UT-4: The proposed project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, and would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-UT 1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts on utilities and service systems.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Public Services			
Impact PS-1: The proposed project would not increase the demand for public services, and the construction of new or physically altered facilities would not be required.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-PS-1: The proposed project, combined with cumulative projects, would not result in significant cumulative impacts on police, fire, and school district services such that new or physically altered facilities, the construction of which could cause significant environmental impacts, would be required to maintain acceptable levels of service.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Biological Resources			
Impact BI-1: Project construction could have a substantial adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or United States Fish and Wildlife Service.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Greater impacts than the Proposed Project (LTSM)
Impact BI-2: The proposed project could 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 CDFW or United States Fish and Wildlife Service.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Greater impacts than the Proposed Project (LTSM)
Impact BI-3: The proposed project would not have a substantial adverse effect on federally protected wetlands (including but not limited to marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact BI-4: The proposed project could 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.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact BI-5: The proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-BI-1: The proposed project, in combination with cumulative projects, could result in significant cumulative impacts on biological resources.	Less Than Significant with Mitigation (LTSM)	No impact (NI)	Similar to the Proposed Project (LTSM)

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Geology and Soils			
Impact GE-1: The proposed project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving fault rupture; strong seismic ground shaking; seismically induced ground failure, including liquefaction; or landslides.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-2: The proposed project would not result in substantial erosion or loss of topsoil.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-3: The proposed project would not result in on- or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse by being on a geologic unit or soil that is unstable or that could become unstable.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-4: The proposed project would not create substantial risks to life or property by being located on expansive soils.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact GE-5: The proposed project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-GE 1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts on geology, soils, or paleontological resources.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Hydrology and Water Quality			
Impact HY-1: The proposed project would not violate any water quality standards or waste discharge requirements and would result in less-than-significant impacts to water quality.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact HY-2: The proposed project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would result in substantial erosion, siltation, or flooding on- or offsite; that would 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; or that would impede or redirect flood flows.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact HY-3: The proposed project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact HY-4: The proposed project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-HY-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact on hydrology and water quality.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Hazards and Hazardous Materials			

Environmental Impacts	Islais Creek Bridge Project	No Project Alternative	Preservation Alternative
Impact HZ-1: The proposed project would not create a significant hazard through the routine transport, use, or disposal of hazardous materials or be 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.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact HZ-2: The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-HZ-1: The proposed project, in combination with cumulative projects, would not result in a significant cumulative impact related to hazards and hazardous materials.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Mineral Resources			
NA	NA	NA	NA
Energy			
Impact EN-1: The proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy resources during construction or operation.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact EN-2: The proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Impact C-EN-1: The proposed project, in combination with cumulative projects, would not result in significant cumulative impacts related to the wasteful, inefficient, or unnecessary consumption of energy resources, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	Less Than Significant (LTS)	No impact (NI)	Similar to the Proposed Project (LTS)
Agriculture and Forestry Resources			
NA	NA	NA	NA
Wildfire			
NA	NA	NA	NA

Significance Definitions:

LTSM = Less than Significant with Mitigation
LTS = Less than Significant
NA = Not Applicable
NI = No Impact
S = Significant
SUM = Significant and Unavoidable with Mitigation

No Project Alternative

Under the No Project Alternative, there would be no demolition, construction, or improvement to the existing bridge. Impacts to historical resources and transportation and circulation (construction-related transit delay) during the construction of the proposed project would not occur. The No Project Alternative would not meet most of the project objectives listed in Section 6.A.2, Project Objectives, because the existing bridge's structural and seismic deficiencies would remain, the bridge's resilience to impacts of sea-level rise would not be improved, and multi-modal transportation safety and the operational utility of Muni light rail operations would not be enhanced.

Preservation Alternative

The Preservation Alternative would meet most of the project objectives of addressing the structural and seismic deficiencies of the existing bridge by replacing it with a new bridge. The new bridge under this alternative would be resilient to impacts of sea-level rise, and multi-modal transportation safety and the operational utility of Muni light rail operations would be enhanced. However, this alternative would result in a longer construction duration by 3 to 4 months and would not fully meet the objective to minimize the project's construction times less than the proposed project.

6.D.2 Environmentally Superior Alternative

CEQA guidelines section 15126.6(a) requires an EIR to identify the alternative to the proposed project that would have the least adverse environmental impacts (i.e., the "environmentally superior alternative"). The No Project Alternative would be the environmentally superior alternative because it would avoid any impacts related to the construction of the proposed project, including the significant and unavoidable impacts related to transportation and circulation and historic architectural resources, as well as the less-than-significant and less-than-significant with mitigation impacts to archaeological resources and human remains, energy, hazardous materials, hydrology, geology and soils, public services, utilities/service systems, recreation, greenhouse gases, land use/land use planning, aesthetics, air quality, tribal cultural resources, noise, air quality and biological resources.

However, CEQA Guidelines section 15126.6(e)(2) states that if the environmentally superior alternative is the No Project Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. In this case, the Preservation Alternative is considered the environmentally superior alternative because it would reduce impacts to historic architectural resources in comparison with the proposed project; however, the impact would still be significant and unavoidable even with mitigation. Compared to the proposed project, the Preservation Alternative would have greater impacts to biological resources and noise and vibration because this alternative requires more in-water work to support the foundation of the control tower compared to the proposed project. These significant effects to noise and vibration and biological resources under the Preservation Alternative would require implementation of Mitigation Measure M-ALT-NO-1: Protection of Utility Structures and Vibration Monitoring During Construction; and Mitigation Measure M-ALT-BI-1: Biological Monitoring of Dewatering and Cofferdam Activities. The Preservation Alternative would have similar but increased impacts to the following topics, compared to the proposed project: cultural resources (archeological resources, and human remains), and tribal cultural resources. The Preservation Alternative would have similar but reduced air quality impacts due to the longer construction duration. The Preservation Alternative meets most of the project sponsor's objectives because it would increase the elevation of the bridge from the existing channel to reduce the bridge's exposure to seawater and sustained moisture; would replace a seismically deficient bridge with a structurally adequate bridge; would increase the serviceability of the bridge to improve multi-modal transportation safety and

increase operational utility to Muni light rail operations; and would maintain current geometric, construction, and structural standards required for the types and volume of projected traffic on the bridge over its design life, ensuring continued access from the Bayview-Hunters Point neighborhood to the rest of San Francisco and the region. However, this alternative would result in a construction duration that is longer by three to four months and would not fully meet the objective to minimize the project's construction duration to less than that of the proposed project.

6.E Alternatives Considered but Rejected

CEQA guidelines section 15126(c) requires an EIR to identify alternatives that were considered by the lead agency throughout the planning process but rejected due to infeasibility. Section 15126.6(c) provides that among the factors that may be used to eliminate alternatives from detailed consideration are (1) failure to meet most of the basic project objectives, (2) infeasibility, or (3) inability to avoid significant environmental impacts.

As described above in Section 6.B, the alternatives selection process for the proposed project focused on identifying strategies that address the significant impacts of the proposed project while still accomplishing most of the project objectives. In determining feasible preservation alternatives, the project team considered six different alternatives but ultimately rejected them as infeasible, as described below.

6.E.1 New Bridge at Different Location

During the May 17, 2023, HPC hearing on the Islais Creek Bridge preservation alternatives, one of the HPC commissioners asked whether the project team evaluated leaving the existing bridge in place and constructing a new bridge in a different location across Islais Creek.

Construction of a new bridge at a different location would require the acquisition of new right-of-way from parcels adjacent to Third Street to construct the approaches to the new bridge. This would result in the permanent displacement of existing businesses along Third Street and substantially increase project costs. Depending on the configuration and location of the new bridge, the new approaches could also impact existing recreational resources along the channel, including Bayview Gateway, Tulare Park, and Islais Creek Park.

In addition, leaving the existing bridge in place would not meet the project objectives. It would not address the existing bridge's seismic deficiencies, increase freeboard or the lifespan of the bridge relative to sea-level rise, increase operational utility to Muni light rail operations, or increase the serviceability of the bridge.

Even with the construction of a new bridge at a different location, the existing bridge would still require rehabilitation similar to the Full Preservation Alternative – Bridge Rehabilitation (described in Section 6.E.3) to address the existing seismic and structural deficiencies. This would essentially result in the construction of two bridges rather than one as with the proposed project.

For the above reasons, the New Bridge at Different Location alternative is not considered a feasible alternative.

6.E.2 Full Preservation Alternative – Bridge Rehabilitation

In 2018, Public Works proposed a project to rehabilitate the existing Islais Creek Bridge (Federal Aid Project No. BHLO-5934168, Planning Department Case No. 2017-006843ENV), which for the purpose of alternatives consideration is called the Full Preservation Alternative.[58]

Under the Full Preservation Alternative, deteriorated features of the bridge would be rehabilitated and, if the severity of the deterioration required replacement, new materials would match the original in design, color, texture, and materials, where possible. The bridge's design would remain largely unchanged, including the structure's movable leaves, its machinery pit, and control tower. As part of the Full Preservation Alternative, the bridge's movable leaves and open grate roadway deck would be replaced in kind, and the Art Moderne style elements on top of the bridge would be rehabilitated in a manner consistent with the Secretary's Standards.

The bridge railings would be replaced with railings that are historically appropriate and retain their Art Moderne design. The new railings would match the existing railings to the extent possible. The bridge's Art Moderne-style teardrop and quarter-round girder housings, which are attached to the abutment machinery pits, would be removed and repaired or replaced in kind. The Full Preservation Alternative would retrofit the control tower window system and the control tower foundation, and repair spalled and damaged concrete on the control tower.

Public Works developed the Full Preservation Alternative project through 65% design and obtained both National Environmental Policy Act and CEQA approvals; however, Public Works paused the project's development due to design cost and scope increases, increased construction cost estimates, and concern regarding unresolved coordination and constructability risks.[59] In addition, new information regarding sea-level rise at the site, budget constraints, and stakeholder interests resulted in a reexamination of the project objectives and functional need for continued drawbridge operability. Public Works evaluated the Full Preservation Alternative's design and determined that there was no ability to adapt the existing bridge to future sea-level rise projections. The existing top of deck is at 15.7 feet (as a comparison, the top of deck for the proposed project is 18.6 feet), and maintaining the current deck configuration would result in the machinery pits and bottom of steel girders being submerged between 1.8 feet and 4.2 feet during flooding by 2075.

Therefore, upon reexamination in 2021, Public Works concluded that a fixed-span bridge, rather than an operable drawbridge, "aligns better with the interests of the department and the city as a whole, addresses sea-level rise concerns, and would be more economical to construct to reduce future maintenance needs and costs."[60] Therefore, the Full Preservation Alternative was considered and rejected because it would not meet project objectives.

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[58] For more information on this prior project, visit *https://sfplanninggis.org/pim/* and type in "2017-006843ENV" into the "Search by address, parcel, or planning application number" field.

[59] San Francisco Public Works, Memorandum re: Islais Creek Bridge Rehabilitation – Federal Aid Project No. BHLO-5934(168) Public Works Authorization to Change to a "Fixed-Span" Bridge Design, August 18, 2021.

[60] San Francisco Public Works, Memorandum re: Islais Creek Bridge Rehabilitation – Federal Aid Project No. BHLO-5934(168) Public Works Authorization to Change to a "Fixed-Span" Bridge Design, August 18, 2021.

6.E.3 New Bascule Bridge

A new bascule bridge was one of the four options considered as part of the planning charette described in Section 6.B. Under this alternative, a new bascule bridge (with either operable or nonoperable drawbridge functions) would be constructed to replace the existing bridge. The new bascule bridge would be constructed at the same elevation as the existing bridge and would include a center dedicated light rail trackway, two travel lanes in each direction, and a shared pedestrian/bicycle path on both sides of the bridge. The street work included in this alternative would be minimal and would include the abutments or approaches and street decks over the bascule pier on both sides of the bridge.

The project team eliminated the new bascule bridge from future consideration for reasons similar to those for the full Preservation Alternative: a new bascule bridge alternative would not increase freeboard or the lifespan of the bridge relative to sea-level rise because it would be constructed at the same elevation as the existing bridge. A new bascule bridge would have the same flood risk as the existing bridge. Furthermore, compared to the proposed project, the operable bridge option would be more vulnerable to flood risk due to the low elevation of the mechanical equipment.

In addition, the drawbridge of the existing structure was operated regularly to allow large ships to pass through the channel and access the copra cranes upstream of Third Street. That industry ceased operations in the mid-1970s, after which there were no longer any maritime functions necessitating drawbridge access. Review of the past 10 years of Bridge Stationary Engineer logs indicate no requests for drawbridge lifts other than those used for routine inspection of the drawbridge function itself.[61]

Because the new bascule bridge would not meet most of the project objectives, this alternative was not considered further.

6.E.4 New Through-Girder Bridge, Same Elevation

A new through-girder bridge at the same elevation as the existing bridge was one of the four options considered as part of the planning charette described in Section 6.B. This alternative would include the construction of a new through-girder bridge similar to the proposed project, but with the same length and elevation as the existing bridge. Similar to the proposed project, the new bridge would include a center dedicated light rail trackway, two travel lanes in each direction, and a shared pedestrian/bicycle path on both sides of the bridge. However, the new cross section of the bridge would allow for a wider roadway than the existing bridge. The street work for this alternative would include the abutment modifications to support the new girders at both sides of the bridge, as well as additional reinforcements to support the additional width of the new cross section. Although the bridge under this alternative would be constructed at the same elevation as the existing bridge, it would have a higher clearance due to the use of through-girders.

Although this alternative would increase freeboard and the lifespan of the bridge relative to sea-level rise and increase the structural seismic resiliency and serviceability of the bridge, it was eliminated from future consideration. This is because it would not increase bridge freeboard to the maximum extent feasible and would therefore not meet most project objectives. Furthermore, this alternative would not reduce impacts

[61] Email from John La Monte (San Francisco Public Works Yard Stationary Engineer) to Thomas Roitman (San Francisco Public Works). SUBJ: Re: Islais Creek Bridge – Lift Logs. April 24, 2020.

to historic architectural resources as the existing bridge would need to be demolished. For these reasons, a new through-girder bridge was not considered further.

6.E.5 New Standard-Girder Bridge, Raised

A new standard-girder bridge at raised elevation was one of the four options considered as part of the planning charette described in Section 6.B. This alternative would include the construction of a new standard-girder bridge at an elevation higher than that of the existing bridge. Similar to the proposed project, the new bridge would include a center dedicated light rail trackway, two travel lanes in each direction, and a shared pedestrian/bicycle path on both sides of the bridge. However, the cross section of the proposed bridge would be wider than that of the existing bridge. The street work included in this alternative would include abutment modifications to support the new girders, and to strengthen the deck over the existing bascule pier to support the fill at both sides of the bridge. Because the bridge would be raised, the approaches would also need to be regraded.

Although this alternative would increase freeboard and the lifespan of the bridge relative to sea-level rise as well as increase the structural seismic resiliency and serviceability of the bridge, it was eliminated from future consideration because it would not increase bridge freeboard to the maximum extent practicable, and would therefore not meet most project objectives. Additionally, this alternative would not reduce impacts to historic architectural resources, because the existing bridge would need to be demolished. For these reasons, a new standard-girder bridge at raised elevation was not considered further.

6.E.6 24-Hour, 7-Days-a-Week Construction of Islais Creek Bridge

During the public comment period for the NOP, the planning department received a comment inquiring about a 24-hour, 7-days-a-week construction schedule for the Islais Creek Bridge Project to reduce the construction duration and the secondary transportation impacts associated with the bridge closure.

Bridge construction is by nature dangerous work because it requires heavy equipment, materials moving above ground, and multiple personnel working concurrently in a constrained space and over water. Any effort to compress the schedule increases the risk of injury to construction personnel, city staff, and the public. Several of these factors are outlined in further detail below.

Safety Considerations: Working at night reduces visibility. Although this can be somewhat mitigated by adding construction lighting, the risk of an accident or human error due to reduced visibility at night is higher compared to working during the daytime. In addition, night work at this location is made more complex by the need to conduct work in or adjacent to a body of water. Furthermore, data from the Centers for Disease Control and Prevention show that more construction and driving accidents occur at night due to fatigue and people being less alert when trying to operate outside of their circadian rhythm.[62]

Nighttime Noise levels: Bridge construction work would result in increased noise levels in the project area. Performing work at night as part of a 24-hour, 7-days-a-week construction schedule could result in substantial noise increases to nearby sensitive receptors at nighttime, when the impacts from noise and vibration are more detrimental and can result in sleep disturbance. Sleep disturbance can occur when

[62] See *https://ehssafetynewsamerica.com/2015/07/07/the-health-hazards-of-shift-work/*; *https://www.osha.gov/worker-fatigue/hazards*; and Overtime and Extended Work Shifts: Recent Findings on Illnesses, Injuries, and Health Behaviors - DHHS (NIOSH) Pub No. 2004-143 (*cdc.gov)* for further information on night work hazards.

continuous indoor noise levels exceed 30 A-weighted decibels (dBA) or when intermittent interior noise levels reach 45 dBA, particularly if the background noise level is low.[63] Maintaining noise levels within the recommended levels during the first part of the night is believed to be effective in helping people to initially fall asleep.

For the above reasons, 24-Hour, 7-Days-a-Week construction of Islais Creek Bridge is not considered to be a feasible alternative. In addition to issues regarding noise levels and safety concerns, there are additional safety, efficiency, and physical space concerns regarding the use of multiple work shifts for a 24-hour, 7-day-a-week construction activity.[64]

[63] World Health Organization, Guidelines for Community Noise, Chapter 3, p. 46, April 1999, *http://www.who.int/docstore/peh/noise/guidelines2.html*, accessed August 14, 2017.

[64] Email from Thomas Roitman (San Francisco Public Works) to Elizabeth White (San Francisco Planning Department). SUBJECT: Islais Creek Bridge Replacement – 24/7 Shift Work Consideration, August 23, 2023.

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Appendix A
NOTICE OF PREPARATION

Appendix B
INITIAL STUDY

Appendix C

HISTORIC RESOURCE STATUS OF ISLAIS CREEK BRIDGE MEMORANDUM

Appendix D

ISLAIS CREEK BRIDGE PRESERVATION ALTERNATIVE MEMORANDUM

Appendix E

PUBLIC WORKS STANDARD CONSTRUCTION MEASURES