ATTACHMENT B

San Francisco Planning

AGREEMENT TO IMPLEMENT MITIGATION MONITORING AND REPORTING PROGRAM

Record No.:	2023-005370ENV	*Block/Lot:*	Various
Project Title:	PG&E Power Asset Acquisition Project	*Lot Size:*	Various
BPA Nos:	Various	*Project Sponsor:*	San Francisco Public Utilities Commission – Sue Chau – 415.554.3238
Zoning:	Various	*Lead Agency:*	San Francisco Planning Department
		Staff Contact:	Julie Moore – 628.652.7566; CPC.PGEPowerAssetsEIR@sfgov.org

The table below indicates when compliance with each mitigation measure must occur. Some mitigation measures span multiple phases. Substantive descriptions of each mitigation measure's requirements are provided on the following pages in the Mitigation Monitoring and Reporting Program.

Adopted Mitigation Measure	Period of Compliance			Compliance with Mitigation Measure Completed?
	Prior to the Start of Construction*	During Construction**	Post-construction or Operational	
Mitigation Measure M-NO-1: Construction Noise Control for Nighttime Generator Operations		X		
Mitigation Measure M-NO-2: Construction Noise Control for the Martin Substation, Daly City Yard Staging, and New City Substation	X	X		
Mitigation Measure M-NO-3a: Operational Noise Analysis and Attenuation for Stationary Noise Sources	X			
Mitigation Measure M-NO-3b: Operational Noise Analysis and Attenuation for Service Yards	X			
Mitigation Measure M-NO-4a: Protection of Adjacent Buildings/Structures and Vibration Monitoring During Construction	X	X	X	
Mitigation Measure M-NO-4b: Paving Vibration Minimization	X	X	X	
Mitigation Measure M-AQ-2a: Basic Best Management Practices for Construction-Related Fugitive Dust Emissions	X	X		
Mitigation Measure M-AQ-2b: Clean Construction Equipment	X	X		
Mitigation Measure M-CR-1a: Martin Substation Historic Resources Setting Protection	X			
Mitigation Measure M-CR-1b: Historic Resources Protection Program	X	X		
Mitigation Measure M-CR-1c: Historic Resources Impact Minimization within Historic Resources and Historic Districts	X	X		
Mitigation Measure M-CR-1d: Historic Resources Impact Minimization for Adaptive Reuse	X			
Mitigation Measure M-CR-1e: Historic Resources Impact Minimization for Service Yards Improvements	X	X		

Adopted Mitigation Measure	Period of Compliance			Compliance with Mitigation Measure Completed?
	Prior to the Start of Construction*	During Construction**	Post-construction or Operational	
Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance		X	X	
Mitigation Measure M-CR-2b: Archeological Testing Program	X	X		
Mitigation Measure M-CR-2c: Archeological Monitoring Program	X	X		
Mitigation Measure M-CR-2d: Archeological Treatment Program	X	X		
Mitigation Measure M-TCR-1: Public Interpretation Land Acknowledgement		X	X	
Mitigation Measure M-BI-1a: Worker Environmental Awareness Program Training	X	X		
Mitigation Measure M-BI-1b: Avoidance and Minimization Measures for Northwestern Pond Turtle	X	X		
Mitigation Measure M-BI-1c: Special-Status Butterfly Protection Measures	X	X	X	
Mitigation Measure M-BI-1d: Control Measures for Spread of Invasive Plants	X	X		
Mitigation Measure M-BI-3a: Restoration of Freshwater Emergent Marsh Wetlands	X	X	X	
Mitigation Measure M-BI-3b: Compensation for Permanent Fill of Wetlands and Waters	X	X	X	
Mitigation Measure M-BI-4: Nesting Bird Protection Measures	X	X		
Mitigation Measure M-BI-5: Avoidance and Minimization Measures for Bat Maternity Roosts	X	X		
Mitigation Measure M-GE-5: Inadvertent Discovery of Paleontological Resources During Construction	X	X		

NOTES:

* Prior to any ground disturbing activities at the project site.

** Construction is broadly defined to include any physical activities associated with construction of a development project including, but not limited to: site preparation, clearing, demolition, excavation, shoring, foundation installation, and building construction.

Note to sponsor: Please contact CPC.EnvironmentalMonitoring@sfgov.org to begin the environmental monitoring process prior to construction.

MITIGATION MONITORING AND REPORTING PROGRAM

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
MITIGATION MEASURES AGREED TO BY SFPUC[1]					
NOISE AND VIBRATION					
Mitigation Measure M-NO-1: Construction Noise Control for Nighttime Generator Operations. *This measure applies to: Distribution Express Feeders (if trenchless construction method is used within 65 feet of a residential property plane between 8 p.m. and 7 a.m.)* Prior to construction, the SFPUC shall submit documentation to the Environmental Review Officer (ERO) or the ERO's designee, demonstrating with reasonable certainty that the nighttime operation of generators associated with dewatering of jack-and-bore pits meets San Francisco Police Code section 2908 requirements (i.e., does not create noise exceeding the ambient noise level by 5 dBA at the nearest property plane). The dewatering approach shall be designed to meet a performance standard of no more than 5 dBA above ambient levels by implementing one or more of the following available measures: 1. Select "quiet" generators for dewatering of trenchless construction pits; and/or 2. Provide acoustical enclosures for generators.	Distribution Express Feeders (if trenchless method is used)	SFPUC, SFPUC's qualified acoustical consultant	Construction, prior to the commencement of dewatering activities	Planning Department	Considered complete upon submission of documentation to Planning Department demonstrating generator noise meets code requirements, and implementing noise reduction strategies.
Mitigation Measure M-NO-2: Construction Noise Control for the Martin Substation, Daly City Yard Staging, and New City Substation. *This measure applies to: Martin Substation Separation (including Daly City Yard Staging), New City Substation (Project Variant)*	Martin Substation (including Daly City Yard Staging)	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents include preparation and implementation of Construction Noise Control Plan.

[1] The San Francisco Public Utilities Commission (SFPUC) and/or or its designee could undertake project construction. The term "SFPUC" is used herein for brevity. Refer to notes at the end of the table for additional definitions.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
The SFPUC shall submit a project-specific construction noise control plan to the Environmental Review Officer (ERO) or the ERO's designee for approval prior to the start of construction for the Martin Substation separation and the new City Substation. The construction noise control plan shall apply to construction activities at the Martin Substation and the new City Substation. The construction noise control plan shall be prepared by a qualified acoustical engineer, with input from the construction contractor, and include noise control measures that meet a performance target of construction activities not resulting in a noise level greater than 90 dBA 1-hour L_{eq}, and 10 dBA above the ambient noise level at noise sensitive receptors (residences, hospitals, convalescent homes, schools, churches, hotels and motels). The SFPUC shall ensure that requirements for the development and implementation of the construction noise control plan are included in contract specifications. The construction noise control plan shall include, but not be limited to the following measures to reduce construction noise levels and meet a performance target of construction activities not resulting in a noise level greater than 90 dBA 1-hour L_{eq}, and 10 dBA above the ambient noise level at noise sensitive receptors: • Use construction equipment that is in good working order, and inspect mufflers for proper functionality; • Select "quiet" construction methods and equipment (e.g., improved mufflers, use of intake silencers, engine enclosures); • Use construction equipment with lower noise emission ratings whenever possible, particularly for air compressors; • Prohibit the idling of inactive construction equipment for more than five minutes; • Locate stationary noise sources (such as compressors) as far from nearby noise sensitive receptors as possible, and muffle such noise sources; • Avoid placing stationary noise-generating equipment (e.g., generators, compressors) within noise-sensitive buffer areas (as determined by the acoustical engineer) immediately adjacent to neighbors;	New City Substation (Project Variant)	2. SFPUC CM Team (qualified acoustical engineer)	2. Design, prior to mobilization	2. SFPUC EMG, ERO	2. Prepare Construction Noise Control Plan, submit for ERO review and approval.
		3. SFPUC CM Team	3. Construction	3. SFPUC EMG	3. Monitor to ensure that the contractor implements the Construction Noise Control Plan. Report noncompliance and ensure corrective action.
		4. SFPUC CM Team	4. Construction	4. SFPUC EMG	4. Designate on-site construction noise manager.
		5. SFPUC CM Team	5. Construction	5. SFPUC EMG	5. Notify neighboring noise sensitive receptors at least 30 days in advance of high-intensity noise activities (10 dBA above ambient).
		6. SFPUC CM Team	6. Construction	6. SFPUC EMG	6. Post sign specifying construction timing and noise complaint procedures.
		7. SFPUC CM Team	7. Construction	7. SFPUC EMG	7. Develop measures to respond and track construction noise complaints.
		8. SFPUC CM Team (qualified noise consultant)	8. Construction	8. SFPUC EMG	8. Monitor noise prior to and at beginning of major construction phases and during high-intensity activities. If necessary, implement additional noise control measures.

Adopted Mitigation Measure	Monitoring and Reporting Program				
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• Enclose or shield stationary noise sources from neighboring noise-sensitive properties with noise barriers to the extent feasible; and • Install temporary barriers, barrier-backed sound curtains and/or acoustical panels around working powered impact equipment and, if necessary, around the project site perimeter, where needed. When temporary barrier units are joined together, the mating surfaces shall be flush with each other. Gaps between barrier units, and between the bottom edge of the barrier panels and the ground, shall be closed with material that completely closes the gaps, and dense enough to attenuate noise; • Where access to alternative sources of power are available, portable diesel engines shall be prohibited. The construction noise control plan shall include the following measures, with input from SFPUC Public Outreach, including notifying the public of construction activities, complaint procedures and monitoring of construction noise levels: • Designation of an on-site construction noise manager for the project; • Notification of neighboring noise sensitive receptors within 300 feet of the project construction area at least 30 days in advance of high-intensity noise-generating activities (e.g., pier drilling, pile driving, and other activities that may generate noise levels greater than 90 dBA at noise sensitive receptors or 100 dBA at commercial receptors) about the estimated duration of the activity; • A procedure for notifying the planning department of any noise complaints within one week of receiving a complaint; • A list of measures for responding to and tracking complaints pertaining to construction noise. Such measures may include the evaluation and implementation of additional noise controls at sensitive receptors; and • Conduct noise monitoring (measurements) at the beginning of major construction phases (e.g., demolition, grading, excavation) and during high-intensity construction activities to determine the effectiveness of noise attenuation measures and, if necessary, implement additional noise control measures. The program shall be set up to alert the construction manager or other designated		9. SFPUC CM Team	9. Construction	9. SFPUC EMG	9. Maintain documentation of complaints received, corrective actions taken to reduce noise and construction noise levels monitored during construction.

Adopted Mitigation Measure	Monitoring and Reporting Program				
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person(s) when noise levels exceed allowable limits (10 dBA above established ambient levels or 90 dBA). If noise levels are found to exceed applicable noise limits due to construction-related activities, corrective action shall be taken, such as moving specific construction activities if feasible, fixing faulty or poorly operating equipment, or installing stationary or portable barriers. The construction noise control plan shall include the following additional measures during pile-driving activities: • When pile driving is to occur within 600 feet of a noise-sensitive receptor, implement "quiet" pile-driving technology (such as pre-drilling of piles, sonic pile drivers, auger cast-in-place, or drilled-displacement, or the use of more than one pile driver to shorten the total pile-driving duration or other applicable methods [only if such measure is preferable to reduce impacts to sensitive receptors]), where feasible in consideration of geotechnical and structural requirements and conditions; and • Where the use of driven impact piles cannot be avoided due to geotechnical and structural requirements and conditions, properly fit impact pile driving equipment with an intake and exhaust muffler and a sound-attenuating shroud, as specified by the manufacturer.					
Mitigation Measure M-NO-3a: Operational Noise Analysis and Attenuation for Stationary Noise Sources. *This measure applies to: Stationary Noise Sources at Martin Substation, New City Substation (Project Variant), and the Operations Control Center* Prior to construction at the Martin Substation, new City Substation (project variant), and operations control center, the SFPUC shall submit documentation to the Environmental Review Officer (ERO) or the ERO's designee, demonstrating with reasonable certainty that the proposed approach to the installation, replacement, or renovation of stationary source equipment meets the noise levels as follows: • Martin Substation: At the northern property plane, southern property plane, and Daly City Yard western property plane, stationary source equipment shall meet the exterior noise standards of section 2909(b) of the City and County of	Stationary Noise Sources at Martin Substation New City Substation (Project Variant) Operations Control Center	SFPUC Qualified acoustical engineer or engineering consultant	Design and prior to installation of the HVAC system	Planning Department	Considered complete upon approval of documentation

Adopted Mitigation Measure	Monitoring and Reporting Program				
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San Francisco Police Code (i.e., an 8 dB increase above the ambient L90 noise level at the property plane for noise from commercial or industrial uses). At the eastern property plane, stationary source equipment shall meet the exterior noise standard of Section 8.28.040 of the Brisbane Municipal Code (i.e., no more than a 10 dBA increase above ambient noise for more than 10 minutes per hour, no more than a 20 dBA increase above ambient for more than 3 minutes per hour, and not more than a 30 dBA increase above ambient at any point). • New City Substation: At the Daly City Yard's northern, southern, and western property planes, stationary source equipment shall meet the exterior and interior noise standards of section 2909(b) of the San Francisco Police Code. At the Martin Substation eastern property plane, stationary source equipment shall meet the exterior standard of Brisbane Municipal Code Section 8.28.040. • Operations Control Center: At all operation control center property planes, stationary source equipment shall meet the exterior and interior noise standards of section 2909(b) and 2909(d), respectively, of the San Francisco Police Code. Acoustical treatments required to meet the San Francisco Police Code and/or the Brisbane Municipal Code requirements may include but are not limited to: • Enclosing noise-generating mechanical equipment; • Installing relatively quiet models of air handlers, exhaust fans, and other mechanical equipment; • Using mufflers or silencers on equipment exhaust fans; • Optimizing transformer design with low-noise core materials or custom-designed transformer enclosures; • Orienting or shielding equipment to protect noise sensitive receptors (residences, hospitals, convalescent homes, schools, churches, hotels and motels, and sensitive wildlife habitat) to the greatest extent feasible; • Increasing the distance between noise-generating equipment and noise-sensitive receptors; and/or • Placing barriers around the equipment to reduce noise.					

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Mitigation Measure M-NO-3b: Operational Noise Analysis and Attenuation for Service Yards. *This measure applies to: Operations and Maintenance Service Yards, if service yard property is within 400 feet of residences and loading operations would occur before 7 a.m.* Prior to occupation and operation of new service yards, the SFPUC shall submit documentation to the Environmental Review Officer (ERO) or the ERO's designee, demonstrating with reasonable certainty that loading operations prior to 7 a.m. within 400 feet of residences can meet the noise limits specified in section 2909 of the San Francisco Police Code (i.e., an 8 dB increase above the ambient noise level at the property plane for noise from commercial or industrial uses; and interior noise limits of 55 dBA and 45 dBA for daytime and nighttime hours inside any sleeping or living room in a nearby dwelling unit on a residential property assuming windows open, respectively). Acoustical treatments required to meet the San Francisco Police Code may include but are not limited to: • Enclosing noise-generating stationary mechanical equipment; • Orienting or shielding equipment to protect noise sensitive receptors (residences, hospitals, convalescent homes, schools, churches, hotels and motels) to the greatest extent feasible; • Increasing the distance between noise-generating equipment and noise-sensitive receptors; and/or • Placing barriers around the equipment or along the property boundary to reduce noise.	Operations and Maintenance Service Yards	SFPUC Qualified acoustical engineer or engineering consultant	Design	Planning Department	Considered complete upon approval of documentation
Mitigation Measure M-NO-4a: Protection of Adjacent Buildings/ Structures and Vibration Monitoring During Construction *This measure applies to: Martin Substation Separation; Project Variant – New City Substation; Distribution Express Feeders if and where trenchless methods are used; Modifications to Retain PG&E Access to Non-Electrical Facilities at Potrero Substation; Operations Control Center; and Operations and Maintenance Service Yards*	Martin Substation Separation New City Substation (Project Variant)	1. SFPUC, qualified professional (e.g., a licensed engineer or acoustical consultant)	1. Design	1. Planning Department	1. Complete and submit Pre-construction Survey to Planning Department for approval where equipment would be used within the specified buffers

<table>
<tr><th rowspan="2">Adopted Mitigation Measure</th><th colspan="5">Monitoring and Reporting Program</th></tr>
<tr><th>Applicable To</th><th>Implementation Responsibility</th><th>Mitigation Schedule</th><th>Monitoring/ Reporting Responsibility</th><th>Monitoring Actions/ Completion Criteria</th></tr>
<tr><td>Prior to construction, the SFPUC shall submit a project-specific Pre-construction Survey and Vibration Management and Monitoring Plan to the ERO or the ERO's designee for approval if construction would occur within buffer distances specified below. The plan shall identify all feasible means to avoid damage to potentially affected buildings. The SFPUC shall ensure that the following requirements of the Pre-Construction Survey and Vibration Management and Monitoring Plan are included in the construction contract specifications.

Buffer Distances: SFPUC construction contract specifications shall require contractors to avoid use of vibratory equipment within the following buffer distances, to the extent feasible:

<table>
<tr><th>Component</th><th>Equipment</th><th>Buffer from Buildings</th></tr>
<tr><td>Martin Substation separation;</td><td>12-ton vibratory roller</td><td>8 feet</td></tr>
<tr><td>New City Substation (Project Variant)</td><td>12-ton vibratory roller</td><td>8 feet</td></tr>
<tr><td>New City Substation (Project Variant)</td><td>Impact pile driver</td><td>60 feet</td></tr>
<tr><td>Distribution Express Feeders at trenchless construction pits only</td><td>Sheet pile driver (i.e., vibratory hammer)</td><td>60 feet</td></tr>
<tr><td>Operations Control Center excavation</td><td>12-ton vibratory roller</td><td>8 feet</td></tr>
<tr><td>Operations and Maintenance Service Yards</td><td>Jackhammer</td><td>8 feet</td></tr>
</table>
If the equipment buffers in the table above can be met, the remainder of this measure is not applicable. If vibratory equipment must be used within the vibration buffer distances above, the following additional measures shall be required.

Pre-construction Survey. Prior to the start of any ground-disturbing activity, SFPUC shall undertake a pre-construction survey to identify the age and photo-document the existing condition of potentially affected buildings at and within the above vibration buffer distances and shall document existing damage, such as cracks and loose or damaged features (as allowed by property owners). The survey shall</td><td>Distribution Express Feeders if and where trenchless method is used

Modifications to Retain PG&E Access to Non-electrical Facilities at Potrero Substation

Operations Control Center

Operations and Maintenance Service Yards</td><td>2. SFPUC, qualified professional (e.g., a licensed engineer or acoustical consultant)</td><td>2. Design</td><td>2. Planning Department</td><td>2. Prepare and submit Vibration Management and Monitoring Plan to Planning Department for approval.</td></tr>
<tr><td></td><td></td><td>3. SFPUC CM Team</td><td>3. Construction</td><td>3. SFPUC CM Team</td><td>3. Monitor vibration consistent with Vibration Management and Monitoring Plan. Report noncompliance and ensure corrective action.</td></tr>
<tr><td></td><td></td><td>4. SFPUC CM Team</td><td>4. Post-Construction</td><td>4. SFPUC CM Team</td><td>4. Repair damage if required consistent with Vibration Management and Monitoring Plan.</td></tr>
<tr><td></td><td></td><td>5. SFPUC CM Team</td><td>5. Post-Construction</td><td>5. Planning Department</td><td>5. Complete and submit Vibration Monitoring Results Report.</td></tr>
</table>

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
be done by a qualified professional (e.g., a licensed engineer or acoustical consultant). If nearby affected buildings are potentially historic, the pre-construction survey shall additionally include descriptions and photographs of all identified historic and potentially historic buildings by a qualified historic preservation professional including all façades, roofs, and details of the character-defining features that could be damaged during construction. The SFPUC shall submit the survey for review and approval prior to the start of vibration-generating construction activity. ***Vibration Management and Monitoring Plan.*** The Vibration Management and Monitoring Plan shall include, at a minimum, the following components, as applicable: • Maximum Vibration Level. Based on the anticipated construction methods and condition of the affected buildings and/or structures on adjacent properties, a qualified acoustical/vibration consultant in coordination with a qualified professional shall establish a maximum vibration level that shall not be exceeded at each building/structure on adjacent properties, based on existing conditions, character-defining features, soil conditions, and anticipated construction practices. Common criteria are a peak particle velocity [PPV] of 0.25 inch per second for historic and some old buildings (i.e., non-engineered timber and masonry buildings), a PPV of 0.3 inch per second for older residential structures (i.e., engineered concrete and masonry (no plaster), and a PPV of 0.5 inch per second for new residential structures and modern industrial/commercial buildings (reinforced concrete, steel or timber (no plaster)). • Buffer Distances. The plan shall identify buffer distances to be maintained based on vibration levels and site conditions between the operation of vibration-generating construction equipment and the potentially affected building and/or structure to avoid damage to the extent possible. • Vibration-generating Equipment. The plan shall identify all vibration-generating equipment to be used during construction at applicable locations and identify potential alternative equipment and techniques that could be implemented if construction vibration levels are observed to meet or exceed the established					

Adopted Mitigation Measure	Monitoring and Reporting Program				
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criterion based on soil conditions. Such methods may include one or more of the following: – Use a smaller 8-ton roller, a vibratory roller with reduced vibration amplitude settings, or hand-held "jumping jack" compactor. – Incorporate non vibratory shoring methods and/or "quiet" pile-driving technologies into project construction (such as pre-drilled shafts drilled shafts, hydraulic pile driving methods, sonic pile drivers, auger cast-in-place, variable speed vibratory, micro-piling, or drilled-displacement), as feasible; and/or as needed to meet established criteria. – Ensure appropriate excavation shoring methods to prevent the movement of adjacent structures. • Vibration Monitoring. The plan shall identify the method and equipment for vibration monitoring to ensure that construction vibration levels do not exceed the established criteria identified in the plan. – Should construction vibration levels be observed to meet or exceed the criteria established in the plan, the contractor(s) shall halt the vibration-generating construction activity causing the exceedance and put alternative construction techniques identified in the plan into practice. – If vibration has damaged nearby buildings and/or structures that are not historic, a qualified professional shall prepare a damage report documenting the features of the building and/or structure that has been damaged. – If vibration has damaged nearby buildings and/or structures that are historic, the historic preservation consultant or other qualified professional shall immediately notify the ERO or the ERO's designee and prepare a damage report documenting the features of the building and/or structure that has been damaged. • Repair Damage. The plan shall also identify provisions to be followed should damage to any building and/or structure occur due to construction-related vibration. The building(s) and/or structure(s) shall be remediated to their preconstruction condition (as allowed by property owners) at the conclusion of vibration-					

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generating activity on the site and, for historical buildings, remediated in compliance with Secretary of the Interior's Standards for the Treatment of Historic Properties, in consultation with the qualified historic preservation professional and planning department preservation staff. ***Vibration Monitoring Results Report.*** After construction is complete, SFPUC shall submit to the ERO or the ERO's designee a final report documenting the monitoring records, building and/or 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 buildings and structures.					
Mitigation Measure M-NO-4b: Paving Vibration Minimization *This measure applies to: Distribution Express Feeders, Local System Separation, System Reinforcements* SFPUC construction contract specifications shall require contractors to avoid use of 12-ton vibratory rollers within 8 feet of buildings, to the extent feasible. If 12-ton roller would be used within the vibration buffer distance of 8 feet, prior to construction, the SFPUC or its designee shall conduct a pre-construction assessment of all structures within 8 feet of the work area. If vibratory rollers are required within 8 feet of structures, a smaller 8-ton roller, or vibratory roller with reduced vibration amplitude settings, shall be required. Equipment or setting selection must be adequate to ensure that a peak particle velocity [PPV] of 0.25 inch per second is not met or exceeded. A post-construction conditions assessment by a qualified structural engineer or other professional with similar qualifications (e.g., civil engineer, acoustical engineer) shall be required for all buildings where a 12-ton roller or larger would occur within the vibration buffer distance if damage is reported by the property owner. Any damage shall be reported to the ERO or the ERO's designee and any damage to building(s) and/or structures(s) shall be remediated to their pre-construction condition (as allowed by property owners) and, for historic buildings, remediated in compliance with Secretary of the Interior's Standards for the Treatment of Historic Properties in consultation with a qualified historic preservation professional and planning department preservation staff.	Distribution Express Feeders Local Distribution System Separation System Reinforcements	1. SFPUC	1. Pre-construction	1. SFPUC EMG	1. Ensure contract documents require contractors to avoid use of 12-ton vibratory rollers if possible.
		2. SFPUC, qualified professional	2. Pre-construction	2. SFPUC CM Team	2. Complete pre-construction assessment of structures within 8 feet of work area if 12-ton rollers cannot be avoided.
		3. SFPUC CM Team	3. Construction	3. SFPUC CM Team	3. Ensure equipment used within 8 feet of buildings meet vibration criteria.
		4. SFPUC, qualified professional	4. Post-construction	4. Planning Department	4. Complete post-construction conditions assessment and report damage to the Planning Department.
		5. SFPUC, qualified professional	5. Post-construction	5. SFPUC EMG	5. Repair damage if needed consistent with Secretary of the Interior's Standards.

Adopted Mitigation Measure	Monitoring and Reporting Program				
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AIR QUALITY					
Mitigation Measure M-AQ-2a: Basic Best Management Practices for Construction-Related Fugitive Dust Emissions. *This measure applies to: Martin Substation Separation, Distribution Express Feeders, Local Distribution System Separation, System Reinforcements, New City Substation (Project Variant)* All construction activities occurring outside San Francisco and involving excavation and ground disturbance that have the potential to create dust or to expose or disturb more than 10 cubic yards or 500 square feet of soil shall implement the following fugitive dust control measures. • All exposed surfaces (e.g., unpaved parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. • All haul trucks transporting soil, sand, or other loose material off-site shall be covered. • All visible mud or dirt trackout onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. • All vehicle speeds on unpaved roads shall be limited to 15 mph. • All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. • All excavation, grading, or demolition activities shall be suspended when average wind speeds exceed 20 mph. • All trucks and equipment, including their tires, shall be washed off prior to leaving the construction site. • Unpaved roads providing access to sites located 100 feet or further from a paved road shall be treated with a 6- to 12-inch layer of compacted layer of wood chips, mulch, or gravel. • Publicly visible signs shall be posted with the telephone number and name of the person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's General Air Pollution Complaints number shall also be visible to ensure compliance with applicable regulations.	Martin Substation Separation Distribution Express Feeders Local Distribution System Separation System Reinforcements New City Substation (Project Variant)	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents for the affected components in San Mateo County include fugitive dust emission minimization requirements.
		2. SFPUC CM Team	2. Construction	2. SFPUC EMG	2. Monitor to ensure the contractor complies with fugitive dust best management practices. Report noncompliance and ensure corrective action.

Adopted Mitigation Measure	Monitoring and Reporting Program				
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Mitigation Measure M-AQ-2b: Clean Construction Equipment. *This measure applies to: All project components* ***A. Engine Requirements.*** 1. All off-road equipment shall have engines that meet the U.S. EPA or California Air Resources Board Tier 4 Final off-road emission standards 2. Where access to alternative sources of power are available, portable diesel engines shall be prohibited. 3. Diesel engines, whether for off-road on 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, safe operating conditions). The SFPUC 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. If the majority of the SFPUC's construction staff speak a language other than these, then the signs shall be posted in that language as well. 4. The SFPUC shall instruct construction workers and equipment operators on the maintenance and tuning of construction equipment and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer's specifications. 5. Any other best available technology in the future may be included, provided that the SFPUC submits documentation to the planning department demonstrating that (1) the technology would result in emissions reductions and (2) it would not increase other pollutant emissions or result in other additional impacts, such as noise. This may include new alternative fuels or engine technology for off-road or other construction equipment (such as electric or hydrogen fuel cell equipment) that is not available as of 2024.	All project components	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents include construction emissions minimization requirements.
		2. SFPUC CM Team	2. Construction	2. SFPUC EMG	2. Monitor to ensure the contractor complies with Tier 4 Final engine requirements or next cleanest off-road equipment, as required. Report noncompliance and ensure corrective action.
		3. SFPUC CM Team	3. Construction	3. SFPUC EMG, Planning Department	3. Obtain off-road equipment waiver as per mitigation measure, if needed. Maintain records in project file documenting compliance with equipment waiver requirements, including demonstrating non-exceedance of NOx significance threshold (54 pounds/day).

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
B. Waivers. The environmental review officer (ERO) may waive the requirement of subsection (A)(2) regarding an alternative source of power if an alternative source is limited or infeasible at the project site. If the ERO grants the waiver, the SFPUC must submit documentation that the equipment used for onsite power generation meets the engine requirements of subsection (A)(1). The ERO may waive the equipment requirements of subsection (A)(1) if a particular piece of Tier 4 Final off-road equipment is technically not feasible, the equipment would not produce the desired emissions reduction because of expected operating modes, or a compelling emergency requires the use off-road equipment that is not Tier 4 compliant. In seeking an exception, the SFPUC shall demonstrate that the project shall use the cleanest piece of construction equipment available and feasible and submit documentation that average daily construction emissions of ROG, NOx, PM2.5 would not exceed 54 pounds per day, and PM10 emissions would not exceed 82 pounds per day. In addition, the SFPUC shall demonstrate that maximum project-level health risks with the use of waivers would not exceed a threshold of 7 in one million for incremental lifetime cancer risk and an annual average PM2.5 concentration of 0.2 $\mu g/m^3$. ***C. Construction Emissions Minimization Plan*** Before starting onsite construction activities, the SFPUC shall submit a Construction Emissions Minimization Plan (Plan) to the ERO for review and approval. The Plan shall state, in reasonable detail, how the SFPUC will meet the engine requirements of Section A. • 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 offroad equipment using alternative fuels, the description shall also specify the type of alternative fuel being used.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• The SFPUC shall ensure that all applicable requirements of the Plan have been incorporated into the SFPUC's contract specifications. The Plan shall include a certification statement that the SFPUC's contractors agree to comply fully with the Plan. • The SFPUC shall make the Plan available to the public for review onsite during working hours. The SFPUC 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 project at any time during working hours and shall explain how to request to inspect the Plan. The SFPUC 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. ***D. Monitoring*** • After start of construction activities, the SFPUC shall submit a final report to the ERO documenting compliance with the Plan. After completion of construction activities, the SFPUC shall submit to the ERO a final report summarizing construction activities, including the start and end dates, duration of each construction phase, and the specific information required in the Plan.					
CULTURAL RESOURCES					
Mitigation Measure M-CR-1a: Martin Substation Historic Resources Setting Protection. *This measure applies to: Martin Substation separation* Where the project includes placement of new, permanent, aboveground structures, those structures shall be located at a distance that minimizes impacts on the setting of adjacent historic resources. At a minimum, new buildings shall be set back at least 20 feet from any historic resource and at least 30 feet from Geneva Avenue. This measure applies to the Martin Substation separation where a new control building and two switchgear buildings would be installed. Other locations for new aboveground structures near historic resources, if proposed, would be subject to review and approval by San Francisco Planning Department preservation staff to ensure conformance with Secretary of the Interior's Standards for the Treatment of Historic Properties regarding the setting of the historic resource.	Martin Substation Separation	SFPUC	Design	Planning Department	Ensure design of proposed buildings are approved by Planning Department preservation staff.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Mitigation Measure M-CR-1b: Historic Resources Protection Program. *This measure applies to: Martin Substation separation, New City Substation (Project Variant), Modifications to Retain PG&E Access to Non-Electrical Facilities at Potrero Substation* To protect historic resources that are adjacent to construction activities (activities such as excavation, trenching, and new building construction), the SFPUC shall protect and avoid damage to onsite and adjacent historic resources. Contract specifications shall be reviewed and approved by San Francisco Planning Department preservation staff prior to the start of construction. Specifications shall include, but not be limited to, the following: • If aerial work would occur above the roofline of adjacent historic buildings and have the potential to cause building damage from falling objects, the roof of the adjacent structure shall be covered to avoid damage. • A buffer zone of 20 feet between historic resources and heavy equipment use and/or staging of equipment and materials shall be established and maintained, if feasible. • If a minimum buffer zone of 20 feet is not possible, barriers or construction monitoring shall be included to ensure no damage to historic resources occurs. • Any damage to historic resources incurred as a result of construction activities shall be immediately reported to the ERO or the ERO's designee, and any damage to the historic resource shall be repaired to match pre-construction conditions per the Secretary of the Interior's Standards for the Treatment of Historic Properties in consultation with a qualified historic resources professional and San Francisco Planning Department preservation staff.	Marin Substation Separation New City Substation (Project Variant) Modifications to Retain PG&E Access to Non-Electrical Facilities at Potrero Substation	1. SFPUC EMB	1. Design	1. SFPUC EMG, Planning Department	1. Ensure contract specifications include historic resources protection requirements identified in the measure.
		2. SFPUC CM Team	2. Construction	2. SFPUC EMG	2. Monitor to ensure the contractor complies with historic resources protection measures, as required. Report noncompliance or damage to Planning Department and ensure corrective action.
		3. SFPUC CM Team	3. Construction	3. SFPUC EMG, Planning Department	3. Complete repairs to match pre-construction conditions, if needed. Maintain records in project file documenting compliance with repairs requirements.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Mitigation Measure M-CR-1c: Historic Resources Impact Minimization within Historic Resources and Historic Districts. *This measure applies to: Local Distribution System Separation (Broderick-Terry Duel site); System Reinforcements (Balboa Terrace Historic District, Ingleside Terrace Historic District; Little Hollywood Historic District)* For project components that would occur within historic resources or historic districts that have distinctive features within the public right-of-way (unusual sidewalk and roadway elements including brick surfacing, brick gutters, gutters lined with former cemetery furniture [broken head and foot stones], granite curbs, cobblestones, railway and streetcar rails, sidewalk lights, street lamps, street furniture, monuments or plaques and/or utility plates), and where these character-defining features appear to be 45 years or older, the SFPUC shall treat such features as potentially character-defining features of their setting. For those locations, historic materials shall be protected in place. Where protection in place is not possible, materials shall be salvaged and reinstalled, or replaced in-kind to match the existing color, texture, material, and character of the feature. For project components that would occur within historic resources or historic districts that have character-defining features related to setting, placement of new poles and/or installation of new electrical or telecommunications equipment shall be in locations that follow established patterns. If maintenance of the current pattern of poles and equipment installation is not possible, locations for new poles, if proposed, would be subject to review and approval by San Francisco Planning Department preservation staff to ensure conformance with Secretary of the Interior's Standards for the Treatment of Historic Properties regarding the setting of the historic resource.	Local Distribution System Separation (Broderick-Terry Duel site) System Reinforcements (Balboa Terrace Historic District, Ingleside Terrace Historic District; Little Hollywood Historic District)	1. SFPUC EMB, qualified professional	1. Design	1. SFPUC EMG	1. Identify distinctive features and ensure contract specifications include historic resources protection requirements identified in the measure.
		2. SFPUC EMB	2. Design	2. Planning Department	2. If new poles are proposed in historic resources or historic districts where electric equipment is not currently underground, submit designs to Planning Department showing pole locations.
		3. SFPUC CM Team	3. Construction	3. SFPUC EMG	3. Monitor to ensure the contractor complies with historic resources protection measures, as required. Report noncompliance or damage to Planning Department and ensure corrective action.
		4. SFPUC CM Team	4. Construction	4. SFPUC EMG, Planning Department	4. Complete reconstruction or replacement to match pre-construction conditions, if needed. Maintain records in project file documenting compliance with replacement requirements.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Mitigation Measure M-CR-1d: Historic Resources Impact Minimization for Adaptive Reuse. *This measure applies to: Operations Control Center* After selection of a proposed building for the operations control center, the SFPUC shall notify the ERO of the selected building. If required based upon ERO and preservation staff review, the SFPUC shall engage a qualified architectural historian to evaluate the historic significance of the operations control center building and provide the relevant historic resource documentation to the ERO. If the building is a historic resource, then the character-defining features of the historic resource shall be preserved or reconstructed consistent with Secretary of the Interior's Standards for the Treatment of Historic Properties. The SFPUC shall submit proposed renovation plans to the ERO for review and approval prior to construction to ensure the work conforms to the Secretary of the Interior's Standards for the Treatment of Historic Properties.	Operations Control Center	1. SFPUC EMG (qualified architectural historian)	1. Design	1. SFPUC EMG, Planning Department	1. If needed, evaluate the selected building and submit to Planning Department for review and approval.
		2. SFPUC EMB	2. Design	2. SFPUC EMG, Planning Department	2. Prepare and submit renovation plans showing preservation or reconstruction of character defining features. Complete when ERO approves renovation plans.
Mitigation Measure M-CR-1e: Historic Resources Impact Minimization for Service Yards Improvements. *This measure applies to: Operations and Maintenance Service Yards within 20 feet of buildings* After selection of proposed service yard locations, the SFPUC shall engage a qualified architectural historian to evaluate the historic significance of buildings on surrounding parcels of the service yards' location. If historic resources are identified on adjacent parcels, then the SFPUC shall incorporate into contract specifications a requirement that the contractor(s) protect and avoid damage to adjacent historic resources. These contract specifications shall be reviewed and approved by the San Francisco Planning Department preservation staff prior to the start of construction. Specifications shall include the following: • If aerial work would occur above the roofline of adjacent historic buildings and would have the potential to cause building damage from falling objects, the roof of the adjacent structure shall be covered to avoid damage.	Operations and Maintenance Service Yards within 20 feet of buildings	1. SFPUC EMG (qualified architectural historian)	1. Design	1. SFPUC EMG, Planning Department	1. If needed, evaluate the adjacent buildings and submit documentation to Planning Department for review and approval.
		2. SFPUC EMB	2. Design	2. SFPUC EMG, Planning Department	2. Ensure contract documents for the affected component include historic resources protection requirements identified in the measure.
		3. SFPUC EMB	3. Design	3. SFPUC EMG, Planning Department	3. Prepare and submit renovation plans showing preservation or reconstruction of character defining features.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• A buffer zone of 20 feet between historic resources and heavy equipment use and/or staging of equipment and materials shall be established and maintained, if feasible. • If a minimum buffer zone of 20 feet is not possible, barriers or construction monitoring shall be included to ensure no damage to historic resources occurs. • Any damage to historic resources incurred as a result of construction activities shall be immediately reported to the ERO or the ERO's designee, and any damage to the historic resource shall be repaired to match pre-construction conditions per the Secretary of the Interior's Standards for the Treatment of Historic Properties in consultation with a qualified historic resources professional and San Francisco Planning Department preservation staff.		4. SFPUC CM Team	4. Construction	4. SFPUC EMG	4. Monitor to ensure the contractor complies with historic resources protection measures, as required. Report noncompliance or damage to Planning Department and ensure corrective action.
		5. SFPUC CM Team	5. Construction	5. SFPUC EMG, Planning Department	5. Complete repairs to match pre-construction conditions, if needed. Maintain records in project file documenting compliance with repairs requirements.
Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance. *This measure applies to: All project components during ground disturbance* The SFPUC shall implement the following measures. • ***ALERT sheet***. The SFPUC shall distribute the planning department archeological resource "ALERT" sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile driving, etc. firms); or utilities firm involved in soils-disturbing activities within the project site. The "ALERT" sheet will provide information on cultural resources, including regulations and protocol in the event of an unanticipated discovery. Prior to any soils-disturbing activities being undertaken, each contractor is responsible for ensuring that the "ALERT" sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The SFPUC shall provide the environmental review officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor(s), and utilities firm) confirming that all field personnel involved in soil-disturbing activities have received copies of the "ALERT" sheet.	All project components during ground disturbance Martin Substation Separation New City Substation (Project Variant)	SFPUC	Construction, prior to and during soils-disturbing activities	Planning Department cultural resources staff	Considered complete when Planning Department receives the signed affidavit

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• ***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 SFPUC shall immediately notify the ERO and shall immediately suspend any soils-disturbing activities within 25 feet 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. • ***Archeological Consultant Identification***. If the preliminary archeological review did not require archeological monitoring or testing, an archeological discovery during construction occurs prior to the identification of a project archeologist, and the ERO determines that the discovery may represent a significant archeological resource, then the SFPUC shall retain the services of an archeological consultant (hereinafter "project archeologist") either listed on the Qualified Archeological Consultant list maintained by the department or as otherwise approved by the ERO to identify, document, and evaluate the resource, under the direction of the ERO. The SFPUC 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***. If an archeological find is encountered during construction or archeological monitoring or testing, the project archeologist shall redirect soil-disturbing and heavy equipment activity in the vicinity away from the find. If in the case of pile driving activity (e.g., foundation, shoring, etc.), the project archeologist has cause to believe that the pile driving activity may affect an archeological resource, the SFPUC shall ensure that pile driving is halted until an appropriate evaluation of the resource has been made. The ERO		SFPUC, archeological consultant/project archeologist, Planning Department	Construction, during soils-disturbing activities if archeological resources are encountered	Planning Department cultural resources staff	Considered complete when archeological consultant completes additional measures as directed by the Planning Department as warranted

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	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
may also require that the SFPUC immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions. • ***Initial documentation and assessment***. The project archeologist shall document the find and make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit through sampling or testing, as needed. The SFPUC shall make provisions to ensure that the project archeologist can safely enter the excavation, if feasible, and in compliance with a site-specific health and safety plan developed for archeological investigations. The SFPUC 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 significance 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, then the ERO shall consult with the SFPUC 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.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• ***Submerged Paleosols***. Should a submerged paleosol[2] 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 is complete, the project archeologist shall prepare an archeological site record or primary record (Department of Parks and Recreation [DPR] 523 series) for each documented resource, unless the Planning Department determines that documenting the discovery in the final report is adequate. In addition, a primary record shall 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 SFPUC 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 section 15064.5 or Public Resources Code section 21083.2(g).					

[2] Paleosols represent landforms in the past that were stable and thus suitable for human habitation prior to subsequent sediment deposition. Paleosols have the potential to preserve archaeological resources if humans occupied or settled the area.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• ***Preservation-in-Place Consideration***. Should an archeological resource that meets California Register significance criteria be discovered during soil disturbing activities including archeological testing, preservation-in-place (i.e., permanently protecting 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 SFPUC and, for Native American archeological resources, with tribal representatives, if requested, to consider the feasibility of permanently preserving the resource in place. The ERO's determination of feasibility shall be based upon the ability to relocate or redesign proposed project activities to avoid the identified resource and preserve its historical significance. Preservation options that shall be considered for feasibility include redesign of the project to place open space over the resource location; foundation redesign to avoid the soil disturbance within the sensitive area; and a plan to expose and conserve the resource in place and include it in an on-site interpretive exhibit. If the ERO determines that preservation in place is feasible and effective, then 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. The SFPUC shall ensure that the approved plan is implemented and shall coordinate with the planning 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, then archeological data recovery, public interpretation of the resource, and archeological testing or monitoring if necessary to further characterize or protect the resource during project activities shall be carried out, as detailed below.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• ***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 to the representative of the descendant group. • ***Compensation.*** Following the initial tribal consultation, the ERO, SFPUC 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, artwork). 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 the project impacts on the archeological resource will be reduced by archeological data recovery. When the ERO makes such a determination, the project archeologist, SFPUC, 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		SFPUC, project archeologist, Planning Department, tribal representative (if requested)	Construction, after determination by the Planning Department that an archeological data recovery program is required	Planning Department cultural resources staff	Considered complete upon approval of archeological data recovery program by Planning Department

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
archeological data recovery plan would result in a significant construction delay, the scope of data recovery may instead be agreed upon in consultation between the project archeologist and the ERO and documented by the project archeologist in a memo to the ERO and the ADRP will be finalized during the data recovery and subsequent analysis. The archeological data recovery plan/ memo shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the archeological data recovery plan/ memo will identify what scientific/historical research questions are applicable to the expected or discovered 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. • The archeological data recovery plan/memo 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 SFPUC – 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					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• 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 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.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• ***Treatment of Human Remains and Funerary Objects***. If human remains or suspected human remains are encountered during construction, the contractor and SFPUC shall ensure that ground-disturbing work within 25 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 SFPUC of the find. • In the event of the Medical Examiner's determination that the human remains are Native American remains, the Medical Examiner shall notify the California State Native American Heritage Commission, which will appoint a Most Likely Descendant (MLD). The MLD will complete his or her inspection of the remains and make recommendations or preferences for treatment within 48 hours of being granted access to the site (Public Resources Code section 5097.98(a)). • The landowner shall then make all reasonable efforts to develop a burial agreement (agreement) with the MLD, 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, then 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.		SFPUC, archeological consultant in consultation with the San Francisco Medical Examiner, Planning Department, and Native American Heritage Commission and most likely descendant as warranted.	Construction, discovery of human remains	Planning Department cultural resources staff, Medical Examiner, and Native American Heritage Commission and most likely descendant as warranted.	Considered complete on finding by the Planning Department that all state laws regarding human remains/burial objects have been adhered to, consultation with the most likely descendant is completed as warranted, and disposition of human remains has occurred as specified in agreement

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• If the landowner or designee and the MLD are not able to reach an agreement on the treatment of the remains and/or funerary objects, then the ERO, in consultation with the SFPUC 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 SFPUC, 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 in consultation with Native American representatives for Native American archeological resources, 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		Archeological consultant at the direction of the Planning Department will prepare Cultural Resources Public Interpretation Plan. Measures laid out in Cultural Resources Public Interpretation Plan are implemented by SFPUC	Construction or post-construction. Following completion of treatment and analysis of significant archeological resource by archeological consultant	Planning Department cultural resources staff	Cultural Resources Public Interpretation Plan is complete on review and approval of Planning Department. Interpretive program is complete on notification to Planning Department from SFPUC that program has been implemented

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
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 ERO for review and approval. The SFPUC 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, then 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		Archeological consultant at the direction of the Planning Department	Construction or post-construction. Following completion of treatment by archeological consultant as determined by the Planning Department	Planning Department cultural resources staff	Complete on certification to Planning Department that copies of the approved Archeological Resources Report have been distributed

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
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, then the project archeologist and the SFPUC 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 SFPUC or archeologist shall provide a copy of the signed curatorial agreement to the ERO.		Project archeologist prepares collection for curation and SFPUC pays for curation costs	In the event a significant archeological resource is discovered and upon acceptance by the Planning Department of the Archeological Resources Report	Planning Department cultural resources staff	Considered complete upon acceptance of the collection by the curatorial facility
Mitigation Measure M-CR-2b: Archeological Testing Program. *This measure applies to: Martin Substation Separation; New City Substation (Project Variant)* The project archeologist shall develop and implement an archeological testing program prior to construction at the Martin Substation and New City Substation in Daly City as specified herein, and shall conduct an archeological monitoring and/or data recovery program if required to address archeological discoveries during testing or the assessed potential for archeological discoveries during construction, pursuant to this measure and Mitigation Measure M-CR-2a: Procedures for Discovery of Archeological Resources for Projects Involving Soil Disturbance. ***Qualified Archeologist Identification***. Prior to construction or as directed by the ERO, the SFPUC shall contact the department archeologist to obtain the names and contact information for qualified archeological consultants on the department's list or as otherwise approved by the ERO and shall retain a qualified archeologist (hereinafter "project archeologist") from this list of three to develop and implement the archeological testing program.		SFPUC/ archeological consultant at the direction of the Planning Department	Preconstruction/ construction	Planning Department cultural resources staff	Complete when SFPUC retains qualified archeological consultant

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Construction Crew Archeological Awareness. Prior to any soils-disturbing activities being undertaken where monitoring is required, the project 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 project archeologist also shall distribute an "Alert" wallet card, based on the department's "ALERT" sheet, that summarizes stop work requirements and provides necessary contact information for the project archeologist, SFPUC and the to all field personnel involved in soil disturbing activities, including machine operators, field crew, pile drivers, supervisory personnel, etc., have received. The project archeologist shall repeat the training at intervals during construction, as determined necessary by the project archaeologist or as directed by the 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, for sites at which the ERO has determined that there is the potential for the discovery of Native American archeological resources or if requested by a tribe pursuant to the department's tribal cultural resources notification process, the SFPUC shall ensure that a Native American representative is afforded the opportunity to provide a Native American cultural resources sensitivity training to all construction personnel.		Project archeologist for awareness training, Native American representative for Native American cultural resources sensitivity training (if requested)	Construction, Prior to any soil-disturbing activity at affected components	Planning Department cultural resources staff	Considered complete when all trainings conducted
Archeological Testing Program. The project archeologist shall develop and undertake an archeological testing program as specified herein to determine to the extent possible the presence or absence of archeological resources in areas of project soil disturbance and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. In addition, the consultant shall be available to conduct an archeological monitoring and/or data recovery program if required to address archeological discoveries during testing or the assessed potential for archeological discoveries during construction, pursuant to this measure. The SFPUC shall make provisions to ensure that the		Project archeologist at the direction of the Planning Department	Pre-construction / Construction	Planning Department cultural resources staff	After consultation with and approval by the Planning Department of Archeological Testing Plan and review and approval of archeological testing results memo by Planning Department.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
project archeologist can safely undertake the testing program or monitoring/data recovery program in compliance with a site-specific health and safety plan developed for archeological investigations. ***Archeological Testing Plan***. The project archeologist shall consult with the ERO reasonably prior to the commencement of any project-related soils disturbing activities to determine the appropriate scope of archeological testing. The archeological testing program shall be conducted in accordance with an approved Archeological Testing Plan, prepared by the project archeologist consistent with the approved scope of work. The Archeological Testing Plan shall be submitted first and directly to the ERO for review and comment and shall be considered a draft subject to revision until final approval by the ERO. Project-related soils disturbing activities shall not commence where testing is required until the testing plan has been approved and any testing scope to occur in advance of construction has been completed. The project archeologist shall implement the testing as specified in the approved Archeological Testing Plan prior to and/or during construction. The Archeological Testing Plan shall include the following: • *Project Description*: Description of all anticipated soil disturbing activities, with locations and depths of disturbance, including foundation and utility demolition, hazardous soils remediation, site grading, shoring excavations, piles or soil improvements, and foundation, elevator, utility and landscaping excavations, with project plans and profiles, as needed, to illustrate the locations of anticipated soil disturbance. • *Site Specific Environmental and Cultural Context*: Pre-contact and historic environmental and cultural setting of the project site as pertinent to potential Native American use and historic period development, any available information pertaining to past soil disturbance; soils information, such as stratigraphic and water table data from prior geotechnical testing. As appropriate based on the scale and scope of the project, the Archeological Testing Plan should include historic maps as a basis for predicting resource types that might be encountered and their potential locations. An overlay of the project site on the city's prehistoric sensitivity model mapping should be included, as should the					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
locations of all known archeological sites within 0.25 mile of the project site. • *Brief Research Design*: Scientific/historical research questions applicable to the expected resource(s), what data classes potential resources may be expected to possess, and how the expected data classes would address the applicable research questions. • *Anticipated Resources or Resource Types*: Likely resources that might be encountered and at what locations and depths, based on known resources in the vicinity, the site's predevelopment setting and development history, and the anticipated depth and extent of project soil disturbances. • *Proposed Scope of Archeological Testing and Rationale*: Testing methods to be used (e.g., coring, mechanical trenching, manual excavation, or combination of methods); locations and depths of testing in relation to anticipated project soil disturbance; strata to be investigated; any uncertainties on stratigraphy that would affect locations or depths of tests and might require archeological monitoring of construction excavations subsequent to testing. • *Resource Documentation and Significance Assessment Procedures*: ERO and Native American consultation requirements upon making a discovery; pre-data recovery assessment process, burial treatment procedures, and reporting and curation requirements, consistent with the specifications of Mitigation Measure M-CR-2a. ***Archeological Testing Results Memo***. Irrespective of whether archeological resources are discovered, the project archeologist shall submit a written summary of the findings to the ERO at the completion of the archeological testing program. The findings report/ memo shall describe each resource, provide an initial assessment of the integrity and significance of encountered archeological deposits encountered during testing, and provide recommendations for subsequent treatment of any resources encountered.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Resource Evaluation and Treatment Determination. Upon discovery of a suspected archeological resource during archeological testing, Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations shall be implemented as specified in that measure. ***Additional Applicable Measures.*** If a significant archeological resource is identified, and data recovery is required under Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations, the following additional measures identified in the Mitigation Measure M-CR-2a shall be implemented as specified in that measure: • Archeological Data Recovery Program • Treatment of Human Remains and Funerary Objects (as applicable) • Coordination of Archeological Data Recovery Investigations • Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable) • Archeological Resources Report • Curation		Project archeologist at the direction of the Planning Department	Construction, upon discovery of suspected archeological resource	Planning Department cultural resources staff	Completed when Planning Department concurs that the status of the additional measures identified in Mitigation Measure M-CR-2a are completed
Mitigation Measure M-CR-2c: Archeological Monitoring Program. *This measure applies to: Distribution Express Feeders (in the locations specified in measure)* The project archeologist shall develop and implement an archeological monitoring program as specified herein and, in the event of a discovery during monitoring, shall conduct an archeological testing and/or data recovery program if required by the ERO to address archeological discoveries or the assessed potential for archeological discoveries, pursuant to this measure and Mitigation Measure M-CR-2a. Archeological monitoring shall be completed for the distribution express feeders at the following locations: 1) Geneva Avenue between Bayshore Boulevard to Talbert Street; 2) Huron Avenue between Geneva Avenue and Mt. Vernon Avenue; 3) Geneva Avenue between Esquina Drive and Parque Drive; 4) Huron Avenue near intersection of Moneta Way; and 5) Sickles Avenue near San Jose Avenue.	Distribution Express Feeders (in the locations specified in measure)	SFPUC/ archeological consultant at the direction of the Planning Department	Pre-construction/ Construction	Planning Department cultural resources staff	Complete when SFPUC retains qualified archeological consultant

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Qualified Archeologist Identification. Prior to construction or as directed by the environmental review officer (ERO), the SFPUC shall retain an archeological consultant ("project archeologist") to develop and implement an archeological monitoring program under the direction of the ERO.					
Construction Crew Archeological Awareness. Prior to any soil-disturbing activity where monitoring is required, the project 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 project archeologist also shall distribute an "Alert" wallet card (based on the department's "ALERT" sheet) to all field personnel (e.g., machine operators, field crew, pile drivers, supervisory personnel) involved in soil disturbing activities, which summarizes stop work requirements and provides information on how to contact the project archeologist and ERO. The project archeologist shall repeat the training at intervals during construction, as determined necessary by the project archaeologist or as directed by the 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 the archeological awareness training, for sites at which the ERO has determined that there is the potential for the discovery of Native American archeological resources or if requested by a tribe pursuant to the department's tribal cultural resources notification process, the SFPUC shall ensure that a Native American representative is afforded the opportunity to provide a Native American cultural resources sensitivity training to all construction personnel.		Project archeologist for awareness training, Native American representative for Native American cultural resources sensitivity training (if requested)	Construction, prior to any soil-disturbing activity of distribution express feeders	Planning Department cultural resources staff	Considered complete when all trainings conducted
Archeological Monitoring Program. Based on the results of information provided in the preliminary archeological review and additional historical research as needed, the project archeologist shall consult with the ERO prior to the commencement of any project-related soils disturbing activities to determine the appropriate scope of archeological monitoring, allowing for required document preparation and review time. The SFPUC shall make provisions to ensure that the project archeologist can safely monitor and in		Project archeologist at the direction of the Planning Department	Construction, prior to issuance of construction permits and throughout the construction period	Planning Department cultural resources staff	After implementation of Archeological Monitoring Plan approved by the Planning Department

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
compliance with a site-specific health and safety plan developed for archeological investigations. The archeological monitoring program shall be set forth in an Archeological Monitoring Plan, as detailed below. • The project archeologist shall be present on the project site according to a schedule agreed upon by the project archeologist and the ERO until the ERO has, in consultation with the project archeologist, determined that project construction activities could have no effects on significant archeological deposits. The project archeologist shall prepare a daily monitoring log documenting activities and locations monitored, soil disturbance depth, stratigraphy, and findings. • The project archeologist has the authority to temporarily stop soil disturbing construction activity in the vicinity of a suspected find to document the resource, collect samples as needed, and assess its significance. The SFPUC shall ensure that the find is protected in place in accordance with the archeologist's direction, and that it remains protected until the archeologist, after consultation with the ERO, notifies the SFPUC that assessment and any subsequent mitigation are complete. The SFPUC shall also ensure that the construction foreperson or other on-site delegee, is aware of the stop work and protection requirements. In the event of a discovery of a potentially significant archeological resources during monitoring or construction, the project archeologist shall conduct preliminary investigation of the discovery, including the collection of soil samples and artifactual/ecofactual material, as needed to assess potential significance and integrity. Once this initial assessment has been made, the project archeologist shall consult with the ERO on the results of the assessment. If the resource is assessed as potentially significant, the SFPUC shall ensure that soil disturbance remains halted at the discovery location until appropriate treatment has been determined in consultation with the ERO and implemented, as detailed below. ***Archeological Monitoring Plan***. The archeological monitoring plan shall include the following provisions:					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• *Project Description*: Description of all anticipated soil disturbing activities (e.g., foundation and utility demolition, hazardous soils remediation, site grading, shoring excavations, piles or soil improvements, and foundation, elevator, utility, and landscaping excavations), with project plans and profiles, as needed, to illustrate the anticipated soil disturbance. • *Site Specific Environmental and Cultural Context*: Pre-contact and historic environmental and cultural setting of the project site as pertains to potential Native American use and historic period development; any available information pertaining to subsequent soil disturbance, current knowledge of soil stratigraphy. As appropriate based on the scale and scope of the project, the Archeological Monitoring Plan should include historic maps, as a basis for predicting resource types that might be encountered and their potential locations. An overlay of the project site on the city's prehistoric sensitivity model mapping should be included, as should the locations of all known archeological sites within 0.25 mile of the project site. • *Anticipated Resources or Resource Types*: Likely resources that might be encountered and at what locations and depths, based on known resources in the vicinity, the site's predevelopment setting and development history, and the anticipated depth and extent of project soil disturbances. • *Proposed Scope of Archeological Monitoring*: Include soil-disturbing activities/ disturbance depths to be monitored and relevant measures or activities required pursuant to the site-specific health and safety plan developed for archeological investigations. • *Synopsis of Required Procedures*: For the assessment and treatment of discoveries, ERO and Native American consultation requirements; burial treatment procedures; and reporting and curation requirements, consistent with the specifications of Mitigation Measure M-CR-2a.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Resource Evaluation and Treatment Determination. Upon discovery of a suspected archeological resource during construction or archeological monitoring, Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations shall be implemented as specified in that measure. ***Additional Applicable Measures.*** If a significant archeological resource is identified, and data recovery is required under Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations, the following additional measures identified in Mitigation Measure M-CR-2a shall be implemented as specified in that measure: • Archeological Data Recovery Program • Treatment of Human Remains and Funerary Objects (as applicable) • Coordination of Archeological Data Recovery Investigations • Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable) • Archeological Resources Report • Curation		Project archeologist at the direction of the Planning Department	Construction, upon discovery of suspected archeological resource	Planning Department cultural resources staff	Completed when Planning Department concurs that the status of the additional measures identified in Mitigation Measure M-CR-2a are completed
Mitigation Measure M-CR-2d: Archeological Treatment Program *This measure applies to: Local Distribution System Separation, System Reinforcements, Operations Control Center, Operation and Maintenance Service Yards* The following mitigation measure shall be implemented for any program-level component located in an area for which the preliminary archeological review conducted by qualified San Francisco Planning Department archeological staff identifies the potential for significant archeological impacts. The archeological consultant's work shall be conducted in accordance with this measure at the direction of the Environmental Planning (EP) Archeologist. All scopes, plans, and reports prepared by the consultant as specified herein shall be submitted first and directly to the EP Archeologist for review and comment and shall be considered draft reports subject to revision until final approval by the EP Archaeologist.	Local Distribution System Separation System Reinforcements Operations Control Center Operation and Maintenance Service Yards	SFPUC, archeological consultant, Environmental Planning Archeologist, and the Planning Department	Preconstruction; Construction, in the event that the potential for significant archaeological impacts is identified.	Planning Department cultural resources staff	After complete implementation of treatment program by SFPUC identified in approved treatment program memo

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Archeological Treatment Plan. The archeological treatment program shall be conducted in accordance with an approved Archeological Treatment Plan. Once program-level components are developed to a project level the SFPUC shall contract with an archeological consultant to prepare an Archeological Treatment Plan for these components. The archeological consultant must have experience in historic era and Native American archaeology in the Bay Area and California who meets the Secretary of the Interior's Professional Qualifications Standards (36 CFR 61). The archeological consultant will be selected by SFPUC in consultation with the Environmental Planning Archeologist (EP Archeologist) in regard to qualifications. As part of the Archeological Treatment Plan, the archeological consultant shall determine locations that merit archeological monitoring or testing through a screening process. No screening is required for activities that do not entail ground disturbance. Ground disturbance includes, but is not limited to augering, trenching, and demolition of existing infrastructure that extends below the ground surface. If the project has ground disturbance, it will be subject to archeological screening. In conjunction with the submission of the project application, the SFPUC will provide the archeological consultant with a project description, relevant figures, and available geotechnical information. As part of the Archeological Treatment Plan the archeological consultant shall screen projects with the below criteria to determine if the project could impact potentially significant archeological resources: • If a records search has not been completed in the past five years, the archeological consultant shall conduct an updated record search at the Northwest Information Center for recorded archeological resources within the programmatic areas that will have ground disturbance. Results of the record search including resource shapefiles shall be shared with the EP Archeologist. The archeological consultant shall use the results to determine if the project would impact recorded archeological sites or within 50 feet of a recorded site.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• Second, the archeological consultant will determine if the project would impact historic-period archeological resources within the public right-or-way dating to the mid-19th century (pre-1870) as identified in the Cultural Resource Review. If the project does not meet one or both the criteria, then inadvertent discovery procedures would apply to the project (consistent with the procedures laid out in Mitigation Measure M-CR-2a). If the project could impact a known archeological resource and/or a potential historic-period resource, then archeological monitoring, in accordance with Mitigation Measure M-CR-2c, shall be conducted at locations where potentially significant archeological resources could be impacted by the project. If SFPUC and the EP Archeologist determine that testing is preferable or more feasible, then testing would be implemented in accordance with Mitigation Measure M-CR-2b. A Native American monitor will be present for all areas with Native American sensitivity. The scope of the Archeological Treatment Plan generally shall include the following elements, at minimum: • Results of the record search • Historical context for project location including historical maps and photographs • Discussion of property types of the expected archeological resource(s) that potentially could be adversely affected by the proposed project • Reference applicable scientific/ historical research questions in the Housing Element EIR Volume I (Section 4.2) • Project activities to be archeologically monitored or tested, intensity of monitoring or testing, and location of monitoring or testing; • Procedures for the documentation, data recovery, significance and integrity assessment, interpretation and reporting of the types of resources likely to be encountered following provisions in Mitigation Measure M-CR-2a. • Ground disturbing activities in archeologically sensitive areas, as identified through the above screening, shall not begin until the Archeological Treatment Plan has been finalized.					

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Additional Applicable Measures. If a significant archeological resource is identified, and data recovery is required under Mitigation Measure M-CR-2a's Resource Evaluation and Treatment Determination stipulations, the following additional measures identified in the Mitigation Measure M-CR-2a shall be implemented as specified in that measure: • Archeological Data Recovery Program • Treatment of Human Remains and Funerary Objects (as applicable) • Cultural Resources Public Interpretation Plan and Land Acknowledgement (as applicable) • Archeological Resources Report • Curation • Consultation with Descendant Communities					
TRIBAL CULTURAL RESOURCES					
Mitigation Measure M-TCR-1: Public Interpretation Land Acknowledgement. *This measure applies to: All project components* The SFPUC shall, in consultation with local Native American representatives, design and implement public interpretation acknowledging that this project is built on traditional Ohlone land. The public interpretive land acknowledgement program may include a land acknowledgement, information on local Native Americans, or artwork, preferably by local Native American artists, to be included as part of public outreach and education about the project, such as project notifications sent to the public or project websites. Prior to completion of project construction, the SFPUC shall prepare and implement an interpretation plan in consultation with affiliated local Native American representatives and the ERO to guide the acknowledgment program. The plan shall identify, as appropriate, the proposed location or distribution for the acknowledgement program to include project outreach materials such as project webpages or other online project education or notification outreach and the proposed content of the land acknowledgement public interpretation program. The detailed content, media, and other characteristics of such an interpretive program shall be coordinated	All project components	SFPUC in consultation with local Native American representatives, and the Planning Department	Preparation shall occur prior to completion of construction; distribution shall occur following the agreed upon schedule in the interpretation and land acknowledgement plan	Planning Department cultural resources staff	Considered complete upon review and approval of the interpretive program by the local Native American representatives and the Planning Department

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
and approved by the local Native American representatives and the ERO. The final components of the public interpretation program shall be distributed following the agreed upon schedule in the public interpretation land acknowledgement plan. Tribal representatives shall be compensated for their work as identified in the agreed upon scope of work.					
BIOLOGICAL RESOURCES					
Mitigation Measure M-BI-1a: Worker Environmental Awareness Program Training. *This measure applies to: Local Distribution System Separation, System Reinforcements, Distribution Express Feeders, New City Substation (Project Variant)* A project-specific Worker Environmental Awareness Program (WEAP) training shall be developed by a qualified biologist and implemented by SFPUC for the project and attended by all construction personnel prior to beginning work onsite for the local distribution system separation and system reinforcements. The training could consist of a recorded presentation that could be reused for new personnel. The WEAP training shall generally include but not be limited to the following: • Applicable state and federal laws, environmental regulations, project permit conditions, and penalties for non-compliance; • Special-status animal species with potential to occur on or in the vicinity of the project areas, avoidance measures, and a protocol for encountering such species (or their host plants) including a communication chain; • Preconstruction surveys and biological monitoring requirements associated with certain work activities (e.g., vegetation, ground disturbance, tree trimming, etc.) or near certain locations (e.g., Impound Lake, San Bruno Mountain);	Local Distribution System Separation System Reinforcements Distribution Express Feeders New City Substation (Project Variant)	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents include for the affected components, requirements for all construction personnel to attend Worker Environmental Awareness Program training in work areas that could affect sensitive species.
		2. SFPUC CM Team	2. Pre-construction/ Construction	2. SFPUC EMG	2. Prepare a project-specific biological-resources awareness training program. Include documentation of qualifications of the biologist developing the training program (e.g., resume). Refer to mitigation measure for specific worker environmental training requirements.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• Known sensitive resource areas in the project vicinity that are to be avoided and/or protected (e.g., wetlands) as well as approved project work areas; and • Best Management Practices (e.g., silt fencing/species exclusion fencing, straw wattles) and their location in the project areas for erosion control and/or species exclusion		3. SFPUC CM Team	3. Construction	3. SFPUC EMG	3. Document to ensure that all personnel attend training prior to beginning work, and sign training sign-in sheet. Maintain file of sign-in sheets in project record. Report noncompliance and ensure corrective action.
Mitigation Measure M-BI-1b: Avoidance and Minimization Measures for Northwestern Pond Turtle. *This measure applies to: Local Distribution System Separation, System Reinforcements* The SFPUC shall ensure a biological monitor is present during construction activities requiring vegetation removal or ground disturbance within 50 feet of the Impound Lake shoreline associated with the local distribution system separation and system reinforcements. Also, the following measures shall be implemented: • Any erosion and sediment control materials used onsite shall be free of plastic monofilament material that could cause animal entanglement. • A qualified biologist shall survey the project areas within 48 hours before the start of initial ground-disturbing activities and shall be present during all vegetation clearing and ground-disturbing activities within 50 feet of the Impound Lake shoreline. • If northwestern pond turtles are found during construction, construction activity that poses a threat to the individual shall be halted in the vicinity as determined by the qualified biologist. If possible, the individual shall be allowed to move out of the work area of its own volition. Only a qualified biologist approved by regulatory agencies with authority over this species shall relocate turtles to the nearest suitable habitat should they not leave the	Local Distribution System Separation System Reinforcements	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents for the affected components include requirements for northwestern pond turtle avoidance and biological resources supervision if work is within 50 feet of Impound Lake
		2. SFPUC CM Team (qualified biologist)	2. Pre-construction or Construction	2. SFPUC EMG	2. Qualified biologist to survey the affected project area within 48 hours before the start of initial ground-disturbing activities and be present during initial vegetation clearing
		3. SFPUC CM Team (qualified biologist)	3. Construction	3. SFPUC EMG	3. Qualified biologist present during initial vegetation clearing in affected project areas and other activities identified in mitigation measure.

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	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
work area of their own accord. Construction shall resume after the individual is out of harm's way, as determined by a biologist. • Excavations deeper than 6 inches that cannot be backfilled or covered at the end of the work day shall have a sloping escape ramp of earth or a wooden plank installed at a 3:1 rise to allow species to escape. • Openings, such as pipes, where northwestern pond turtles might seek refuge shall be covered when not in use (e.g., if staged overnight). • All trash that may attract predators or hide northwestern pond turtles shall be properly contained, removed from the worksite, and disposed of at the end of each work day. Following site construction, the contractor shall remove all trash and construction debris from the work areas and revegetate any disturbed areas to preconstruction conditions, unless otherwise authorized by regulatory permits and authorizations issued for this work.		4. SFPUC CM Team (qualified biologist)	4. Construction	4. SFPUC EMG	4. If potential western pond turtles are found and cannot be avoided, qualified biologist and contractor to implement actions specified in mitigation measure.
		5. SFPUC CM Team (qualified biologist)	5. Construction	5. SFPUC EMG	5. Construction compliance contractor or qualified biologist to monitor weekly to ensure that the contractor implements avoidance and minimization measures in contract documents. Report noncompliance to project manager and ensure corrective action.
Mitigation Measure M-BI-1c: Special-Status Butterfly Protection Measures. *This measure applies to: Local Distribution System Separation, System Reinforcements* The following measures shall apply to project construction activities for the local distribution system separation and system reinforcements within suitable grassland habitat for special-status butterflies within the Daly City easement adjacent to San Bruno Mountain State and County Park, undeveloped grasslands east of the park, and grasslands associated with Icehouse Hill.	Local Distribution System Separation System Reinforcements	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents for the affected components include requirements for special-status butterfly avoidance and biological resources supervision if work is anticipated in butterfly habitat areas.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• **Habitat Delineation Survey.** A qualified biologist shall conduct preconstruction surveys of grassland habitat during the period of identification for mission blue butterfly host plants (*Lupinus albifrons var. collinus, Lupinus littoralis var. variicolor* [April – July]; *Lupinus formosus* [June-October]) and callippe silverspot butterfly host plants (*Viola pedunculata* [February – April]). i. Surveys shall occur during the blooming season prior to or overlapping the construction schedule for work at these locations to ensure potential host plants are identified and can be protected. Preconstruction surveys to confirm prior survey results or identify additional plants shall be conducted again within 7 days prior to project construction activities in these locations, as appropriate. ii. The surveys shall identify and delineate the boundaries of host plant populations for mission blue butterfly (*Lupinus albifrons var. collinus, Lupinus formosus* and *Lupinus littoralis var. variicolor*), and callippe silverspot butterfly (*Viola pedunculata*) within 100 feet of the disturbance footprint (i.e., access, staging, equipment, excavation, etc.). • **Avoidance During Construction.** A minimum 20-ft no disturbance buffer shall be established around host plant populations identified during preconstruction surveys, or unless otherwise permitted by applicable regulatory agencies. • **Habitat Monitoring During Construction.** All work occurring within 100 feet of host plant populations shall be monitored by a qualified biologist. • **Habitat Occupation Survey.** If the SFPUC determines that ground disturbance must occur within 20 feet or less of habitat identified in the habitat delineation survey, and if the habitat delineation survey did not determine habitat occupancy, then a qualified biologist shall conduct habitat occupation surveys of host plant populations to evaluate whether mission blue and callippe silverspot butterflies actively occupy the host plant populations within the project area where work would occur. Surveys shall be appropriately timed (conducted between March 1 and June 30) to identify the presence of adults, larvae, eggs, and/or feeding damage on host plants which would indicate occupation.		2. SFPUC CM Team (qualified biologist)	2. Pre-construction	2. SFPUC EMG	2. Qualified biologist to survey the affected project area during the period of identification for butterfly host plants and again within 7 days prior to project construction activities.
		3. SFPUC CM Team (qualified biologist)	3. Construction	3. SFPUC EMG	3. Qualified biologist to establish buffers, if required, and monitor work within 100 feet of host plant populations.
		4. SFPUC CM Team (qualified biologist)	4. Construction	4. SFPUC EMG	4. If occupied host plants are present or rare butterflies are presumed to be present and cannot be avoided, qualified biologist to implement measures specified in mitigation measure.
		5. SFPUC, SFPUC's qualified biologist	5. Post-construction	5. SFPUC EMG	5. Implement restoration plan if required. Considered complete when at least 75 percent of the plantings or seeding areas show good or better plant vigor without the need for supplemental water or maintenance

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Documentation of survey results shall be prepared by the qualified biologist and maintained by the SFPUC. i. **No Occupied Habitat Present.** If the qualified biologist conclusively determines the absence of rare butterflies within the survey area, host plant removal shall be minimized and area restored to preconstruction conditions, including reseeding with butterfly host plants. SFPUC will confirm successful establishment of the host plants within 1-2 years of restoration. ii. **Occupied Habitat within 20 feet of Work.** If work would occur within 20 feet of occupied habitat but would not remove habitat, SFPUC shall implement avoidance and minimization measures including but not limited to: dust control during construction activity, scheduling construction to avoid flight season, and clearly demarcating the habitat to be avoided with flags and fencing. iii. **Occupied Habitat within Work Area.** If the qualified biologist determines through surveys that the host plant population is occupied and cannot be avoided, or if the qualified biologists determines rare butterflies are otherwise presumed to be present due to known occupation of host plants adjacent to the project area(s), the SFPUC shall implement a Restoration Plan, described in greater detail below, and confer with the U.S. Fish and Wildlife Service if potential "take" of the species[3] cannot be avoided through further project modifications, seasonal construction timing, or pre-planting of host plants nearby prior to ground disturbance. Compensatory mitigation to offset project impacts on the protected butterflies from loss of host plants within an occupied population shall be satisfied through habitat enhancement activities described in a Restoration Plan, which may include seed salvage, host plant relocation, and/or plantings, implemented at a 1:1 ratio for the acreage of habitat impacted to acreage of habitat enhanced, or as determined in any consultation with the U.S. Fish and Wildlife Service. The following elements shall be incorporated into the Restoration Plan:					

[3] Section 3 of the federal Endangered Species Act defines the term 'take' as "…means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
1) Host plant relocation shall be conducted under the direction of a qualified restoration specialist or botanist, by a contractor experienced in plant salvage and restoration activities. The Restoration Plan shall describe site preparation specifications, a plant palette, planting procedures, development of reasonable success criteria, appropriate monitoring and reporting protocols, implementation timelines, and contingency measures in the event of restoration failure. 2) Host plants within the work area may either be relocated to nearby suitable grassland habitat that would remain undisturbed by project activities or temporarily retained off-site and replanted within the disturbance footprint. 3) Planting areas shall be monitored by a qualified biologist twice a year for a period of five years following planting or seeding to provide recommendations for site improvements such as changes to the watering schedule, reseeding, replanting, or control of weeds. If plantings experience 20 percent mortality or greater in any monitoring year, the SFPUC shall implement habitat enhancement activities, such as invasive species removal and/or seeding host plant species. Monitoring shall be deemed complete when at least 75 percent of the plantings or seeding areas show good or better plant vigor without the need for supplemental water or maintenance.					
Mitigation Measure M-BI-1d: Control Measures for Spread of Invasive Plants. *This measure applies to: Local Distribution System Separation, System Reinforcements* The following measures shall apply to construction of the local distribution system separation and system reinforcements within suitable grassland habitat for special-status butterflies within the Daly City easement adjacent to San Bruno Mountain State and County Park, undeveloped grasslands east of the park, and grasslands associated with Icehouse Hill. Construction best management practices shall be implemented in all construction areas to prevent the spread of invasive plants, seed, propagules, and pathogens through the following actions:	Local Distribution System Separation System Reinforcements	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents for the affected components include requirements for all construction personnel to implement control measures for spread of invasive plants.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
• Avoid driving in or operating equipment in weed-infested areas and restrict travel to established roads and trails whenever possible. • Avoid leaving piles of exposed soil or construction materials in areas with the potential for invasive plants. Cover inactive earthen stockpiles with plastic or a comparable material. • Clean tools, equipment, and vehicles before transporting materials and before entering and leaving worksites (e.g., wheel washing stations at SFPUC yards or access points). Inspect vehicles and equipment for weed seeds and/or propagules stuck in tire treads or mud on the vehicle to minimize the risk of carrying them to unaffected areas. Designate areas within active construction sites or the operations and maintenance yards for cleaning and inspections.		2. SFPUC CM Team	2. Construction	2. SFPUC EMG	2. Monitor to ensure construction best management practices are implemented in affected areas. Report noncompliance and ensure corrective action.
Mitigation Measure M-BI-3a: Restoration of Freshwater Emergent Marsh Wetlands. *This measure applies to: Local Distribution System Separation, System Reinforcements* Freshwater emergent marsh wetlands within Visitacion Creek Marsh or the two unnamed freshwater emergent wetlands east of Industrial Way that may be temporarily affected during construction to facilitate implementation of local distribution system separation and system reinforcements work shall be restored in-place to pre-project conditions. A Wetland Restoration and Mitigation Monitoring Plan shall be prepared for the affected areas, subject to approval by the appropriate regulatory agencies, and shall include, but not be limited to, the following: • A final grading plan for the affected freshwater emergent wetlands that would restore the topography of the affected areas to pre-project conditions. • A planting plan, composed of native freshwater emergent wetland plant species, consistent with the surrounding community of the affected area. • A weed control plan that prevents the spread of invasive non-native plant species on the project areas. • Performance criteria for the revegetated areas that establish success thresholds over a specific amount of time (typically five	Local Distribution System Separation System Reinforcements	1. SFPUC CM Team (Qualified Biologist)	1. Along with U.S. Army Corps, Regional Water Quality Control Board, California Department of Fish and Wildlife permits (pre-construction)	1. SFPUC EMG	1. If work would occur within freshwater emergency marsh wetlands, develop a Riparian and Wetland Restoration and Mitigation Monitoring Plan.
		2. SFPUC EMG (Qualified Biologist)	2. Post-construction	2. SFPUC EMG	2. Conduct post-construction monitoring consistent with monitoring and reporting program requirements.
		3. SFPUC EMG (Qualified Biologist)	3. Post-construction	3. SFPUC EMG	3. Prepare annual report documenting monitoring results and submit to regulatory agencies consistent with monitoring and reporting program requirements.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
years) as determined by the regulatory agencies with jurisdiction over the affected areas. • A monitoring and reporting program under which progress of the revegetated areas shall be tracked to ensure survival of the mitigation plantings. The program shall document overall health and vigor of mitigation plantings throughout the monitoring period and provide recommendations for adaptive management as needed to ensure the site is successful, according to the established performance criteria. An annual report documenting monitoring results and providing recommendations for improvement throughout the year shall be provided to the regulatory agencies. • A best management practices element describing erosion control measures to be installed around the affected areas following mitigation planting in order to avoid sediment runoff into the adjacent waters (as applicable).					
Mitigation Measure M-BI-3b: Compensation for Permanent Fill of Wetlands and Waters. *This measure applies to: Local Distribution System Separation, System Reinforcements* If impacts on wetlands and waters cannot be avoided, the SFPUC shall obtain the required permits and authorizations from the U.S. Army Corps of Engineers, San Francisco Bay Regional Water Quality Control Board, California Department of Fish and Wildlife, and San Francisco Bay Conservation and Development Commission for project impacts on aquatic resources regulated by these entities. The SFPUC shall provide adequate compensatory mitigation for permanent placement of fill associated with installation of new electrical system infrastructure in jurisdictional wetlands and waters. Compensatory mitigation shall achieve at least a 1:1 ratio of acreage impacted to acreage created/restored/enhanced, or greater, and as required by regulatory agencies with jurisdiction over the impacted aquatic resources, to ensure no-net-loss of wetlands and waters. Compensatory mitigation obligations from permanent project fill could be satisfied through onsite or offsite creation, restoration, or enhancement of waters, wetlands and/or riparian habitat, or payment into an approved mitigation bank for in-kind habitat credits, or other compensatory actions that avoid a net loss of these aquatic resources and as determined in consultation with these regulatory agencies.	Local Distribution System Separation System Reinforcements	1. SFPUC EMG (Qualified Biologist)	1. Along with U.S. Army Corps, Regional Water Quality Control Board, California Department of Fish and Wildlife permits (pre-construction)	1. SFPUC EMG	1. Develop compensatory mitigation that achieves at least at a 1:1 ratio of acreage impacted to acreage created/restored/ enhanced to ensure no-net-loss of aquatic resources and submit to regulatory agencies along with permit applications
		2. SFPUC or its designee	2. Pre-construction, construction or post construction	2. SFPUC EMG	2. Implement and monitor compensatory mitigation consistent with permit conditions.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
Mitigation Measure M-BI-4: Nesting Bird Protection Measures. *This measure applies to: Distribution Express Feeders; Local Distribution System Separation; System Reinforcements; New City Substation (Project Variant)* Nesting birds and their nests shall be protected during construction of the local distribution system separation, system reinforcements, distribution express feeders, and new City Substation (project variant) through the implementation of the following measures: a. To the extent feasible as determined by the SFPUC with their contractor, ground disturbance, vegetation removal, tree trimming, and other construction activities that may compromise breeding birds or the success of their nests shall be conducted from September 1 to January 31, which is outside of nesting season. b. If the SFPUC and their contractor determine construction activities must occur during bird nesting season (i.e., from February 1 to August 31), a qualified wildlife biologist shall conduct preconstruction nesting surveys within seven days prior to the start of construction. Surveys shall be performed for the individual project areas and suitable habitat within 250 feet of where work would occur or an appropriate distance as determined by the qualified biologist under the project or project variant to locate any active nests. c. If active nests are located during the preconstruction bird nesting surveys, a qualified biologist shall evaluate whether the schedule of construction activities could affect the active nests and shall apply the following measures: i) If construction is not likely to affect the active nest, it may proceed without restriction; however, a biologist shall regularly monitor the nest to confirm there is no adverse effect and may revise their determination at any time during the nesting season. ii) If construction may affect the active nest, the qualified biologist shall establish a no-disturbance buffer around the nest(s) and all project work shall halt within the buffer until a qualified biologist determines it is no longer in use. Typically, these buffer distances are 250 feet for passerines and 500 feet for raptors; however, nest buffers may be increased or decreased by a qualified biologist based on factors such as the	Distribution Express Feeders Local Distribution System Separation System Reinforcements New City Substation (Project Variant)	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents for the affected components include protection measures for nesting birds.
		2. SFPUC CM Team (qualified biologist)	2. Pre-construction/ Construction	2. SFPUC EMG	2. Conduct surveys within seven days prior to project activities and after any work break of 7 days or more if activities occur within 250 feet of habitat and during nesting season, or buffer distance identified by qualified biologist.
		3. SFPUC CM Team (qualified biologist)	3. Pre-Construction/ Construction	3. SFPUC EMG	3. If active nests found, qualified biologist to establish no-disturbance buffer. Halt project work until qualified biologist indicates the nest is inactive and work may resume. Monitor to ensure compliance. Report noncompliance and ensure corrective action.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
type of work occurring, line of sight from the nest to construction activities, and sensitivity of the bird species, so long as the buffer distance is sufficient to avoid impacts on the nesting bird. Removing or relocating active nests shall be coordinated with the California Department of Fish and Wildlife and/or U.S. Fish and Wildlife Service, as appropriate, given the nests that are found on the site. iii) Any work that the SFPUC and their contractor determine must occur within established no-disturbance buffers around active nests and is deemed appropriate by the qualified biologist (e.g., vegetation removal, grading, work with hand tools, etc.) shall be monitored by a qualified biologist. If adverse effects in response to project work within the buffer are observed and could compromise the nest, work shall halt until the nest fledges. d. Any birds that begin nesting within the project areas and survey buffers amid construction activities are assumed to be habituated to construction-related or similar noise and disturbance levels so exclusion zones around nests may be reduced or eliminated in these cases as determined by the qualified biologist. Work may proceed around these active nests as long as they and their occupants are not directly affected. Protective buffers shall be established around such nests at any time if project-related adverse effects on birds, nests, or nestlings are observed.					
Mitigation Measure M-BI-5: Avoidance and Minimization Measures for Bat Maternity Roosts. *This measure applies to: Distribution Express Feeders; Local Distribution System Separation; System Reinforcements; Operations Control Center* The following measures shall apply to project construction activities related to the distribution express feeders, local distribution system separation, system reinforcements, and the operations control center requiring tree trimming. A qualified biologist experienced in the identification of bats shall conduct a preconstruction survey and assessment of potential bat habitat in advance of any tree trimming to identify signs of an active maternity colony or active roost sites. Identified bat maternity colonies shall be avoided, if feasible, as determined by the SFPUC and their contractor. Should potential	Distribution Express Feeders Local Distribution System Separation System Reinforcements Operations Control Center	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents for the affected components include avoidance and minimization measures for bat maternity roosts, and requirement for contractor.
		2. SFPUC CM Team (qualified biologist)	2. Pre-construction/ Construction (prior to tree trimming or removal)	2. SFPUC EMG	2. Conduct pre-construction bat survey before tree trimming/removal.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
maternity colonies or active bat roosts be found in trees but cannot be avoided, the following measures shall be implemented under the supervision of a qualified biologist: a. Trees shall be trimmed or bat exclusion devices shall be installed when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of the bat maternity roosting season (approximately April 15 to August 15) if a maternity roost is present; and outside the months of winter torpor (approximately October 15 to February 28, or as determined by a qualified biologist experienced in the identification of special-status bats). b. If tree trimming is not feasible during the periods when bats are active, and bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the tree trimming, a qualified biologist shall delineate a no-disturbance buffer around these roost sites until they are no longer in use as maternity or hibernation roosts or the young are capable of flight. c. Based on the professional opinion of a qualified biologist, buffer distances may be adjusted around roosts depending on the level of surrounding ambient activity (e.g., if the subject tree is adjacent to a busy road) or if an obstruction, such as a building, is within the line-of-sight between the roost and construction. d. A biologist experienced in the identification of special-status bats shall be present during tree trimming (and removal, if needed) if bat roosts are present. Project activities shall disturb trees with roosts only when no rain is occurring or rain is not forecast to occur for three days and when daytime temperatures are at least 50 degrees Fahrenheit. e. Under the supervision of the qualified biologist, trees containing or suspected to contain roost sites shall be trimmed over two days. On the first day, branches and limbs not containing cavities or fissures in which bats could roost shall be cut using chainsaws. The following day, branches or limbs containing roost sites shall be trimmed with chainsaws, under the supervision of the biologist.		3. SFPUC CM Team (qualified biologist)	3. Pre-construction/ Construction	3. SFPUC EMG	3. If potential maternity colonies, roosting habitat, or active bat roosts are found in trees but cannot be avoided, implement measures specified in mitigation measure. Monitor to ensure that the contractor implements avoidance and minimization measures in contract documents. Report noncompliance and ensure corrective action.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
GEOLOGY AND SOILS					
Mitigation Measure M-GE-5: Inadvertent Discovery of Paleontological Resources During Construction. *This measure applies to: Martin Substation separation, Distribution Express Feeders, Local Distribution System Separation, System Reinforcements, Operations Control Center (utility connections), and New City Substation (Project Variant)* **Worker Awareness Training.** Prior to commencing construction, and ongoing throughout ground disturbing activities (e.g., excavation, utility installation), the SFPUC and/or their designee shall engage a qualified professional (paleontologist, archeologist, or cultural resources specialist) to train all project construction workers regarding how to recognize paleontological resources and on the contents of the paleontological resources alert sheet, as provided by the Planning Department. The paleontological resources alert sheet shall be prominently displayed at the construction site during ground-disturbing activities for reference regarding potential paleontological resources. In addition, the qualified professional shall inform the contractor and construction personnel of the immediate stop work procedures and other procedures to be followed if bones or other potential fossils are unearthed at the project areas. Should new workers that will be involved in ground-disturbing construction activities begin employment after the initial training has occurred, the construction supervisor shall ensure that they receive the worker awareness training as described above. **Paleontological Resource Discoveries.** In the event of the discovery of an unanticipated paleontological resource during project construction, ground-disturbing activities shall temporarily be halted within 25 feet of the find until the discovery is examined by a qualified paleontologist as recommended by the Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 2010) and best practices in mitigation paleontology (Murphey et al. 2019). The paleontologist shall consult the Environmental Review Officer (ERO). Work within the sensitive area shall resume only when deemed	Martin Substation Separation Distribution Express Feeders Local Distribution System Separation System Reinforcements Operations Control Center (utility connections) New City Substation (Project Variant)	1. SFPUC EMB	1. Design	1. SFPUC EMG	1. Ensure contract documents for the affected components include requirements for all construction personnel to attend training measures applicable to accidental discoveries.
		2. SFPUC CM Team (qualified professional)	2. Pre-construction and during ground-disturbing activities	2. SFPUC EMG	2. Document that personnel attend training prior to beginning work and sign training sign-in sheet. Maintain file of signature sheets
		3. SFPUC CM Team	3. Construction	3. SFPUC EMG, Planning Department	3. Monitor to ensure that the contractor implements measures in contract documents, report noncompliance, and ensure corrective action. In the event of a potential discovery, ensure contractor suspends activities within 25 feet are temporarily halted, notify the Planning Department, and mobilize a qualified paleontologist.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
appropriate by the qualified paleontologist in consultation with the ERO. The qualified paleontologist shall determine 1) if the discovery is scientifically significant; 2) the necessity for involving other responsible or resource agencies and stakeholders, if required or determined applicable; and 3) methods for resource recovery. If a paleontological resource assessment results in a determination that the resource is not scientifically important, this conclusion shall be documented in a paleontological evaluation letter to demonstrate compliance with applicable statutory requirements (e.g., Federal Antiquities Act of 1906, CEQA Guidelines section 15064.5, Public Resources Code Chapter 17, section 5097.5, Paleontological Resources Preservation Act 2009). The paleontological evaluation letter shall be submitted to the ERO for review within 30 calendar days of the discovery. If in consultation with the ERO the qualified paleontologist determines that a paleontological resource is of scientific importance, the qualified paleontologist shall make a recommendation as to what action, if any, is warranted and prepare a paleontological mitigation program. The mitigation program shall include measures to fully document the resource of scientific importance. It shall include: 1) procedures for construction monitoring at the project areas; 2) fossil preparation and identification procedures; 3) curation of paleontological resources of scientific importance into an appropriate repository; and 4) preparation of a Paleontological Resources Report (report or paleontology report) at the conclusion of ground-disturbing activities. The qualified paleontologist shall submit the mitigation program to the ERO for review and approval within ten business days of the discovery. To avoid construction delays, fully exposed fossils will be immediately removed by the paleontologist to the extent feasible. Consistent with the Society of Vertebrate Paleontology 2010 guidelines, samples of the soil matrix where the discovery occurred may need to be removed from the project areas and processed elsewhere. Mitigation required by this measure could suspend construction within an appropriate buffer zone around a discovered paleontological resource or area for up to a maximum of four weeks.		4. SFPUC CM Team (qualified paleontologist)	4. Construction	4. SFPUC EMG, Planning Department	4. Qualified paleontologist to evaluate the find and advise Planning Department as to the significance of the discovery. If not significant, work may resume once approved by the Planning Department.
		5. SFPUC CM Team (qualified paleontologist)	5. Construction	5. SFPUC EMG, Planning Department	5. If the discovery is significant, prepare and submit a Paleontological Mitigation Program to the Planning Department within 10 business days of the discovery.
		6. SFPUC CM Team (qualified paleontologist)	6. Construction	6. SFPUC EMG, Planning Department	6. Prepare and submit a Paleontological Mitigation Results Report to the Planning Department within 30 business days of the conclusion of ground-disturbing activities, or as negotiated with the Planning Department.

Adopted Mitigation Measure	Monitoring and Reporting Program				
	Applicable To	Implementation Responsibility	Mitigation Schedule	Monitoring/ Reporting Responsibility	Monitoring Actions/ Completion Criteria
At the direction of the ERO and in coordination with the SFPUC, the suspension of construction may be extended beyond four weeks for a reasonable time required to implement appropriate mitigation only if such a suspension is the only feasible means to reduce potential effects on a significant paleontological resource to a less-than-significant level. Upon approval by the ERO, ground-disturbing activities in the project area shall resume and be monitored as determined by the qualified paleontologist for the duration of such activities. The paleontology report shall include dates of field work, results of monitoring, fossil identifications to the lowest possible taxonomic level, analysis of the fossil collection, a discussion of the scientific significance of the fossil collection, conclusions, locality forms, an itemized list of specimens, and a repository receipt from the curation facility. The SFPUC shall be responsible for the preparation and implementation of the mitigation program, in addition to any costs necessary to prepare and identify collected fossils, and for any curation fees charged by the paleontological repository. The paleontology report shall be submitted to the ERO for review within 30 business days from conclusion of ground-disturbing activities, or as negotiated following consultation with the ERO.					

NOTES:

Definitions of MMRP Column Headings:

Adopted Mitigation and Improvements Measures: Full text of the mitigation measure(s) copied verbatim from the final CEQA document.

Feasible: Feasible in this table has the same meaning as that used in CEQA: "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 15364).

Implementation Responsibility: Entity who is responsible for implementing the mitigation measure.

Mitigation Schedule: Identifies milestones for when the actions in the mitigation measure need to be implemented.

Monitoring/Reporting Responsibility: Identifies who is responsible for monitoring compliance with the mitigation measure and any reporting responsibilities

Monitoring Actions/Completion Criteria: Identifies the milestone at which the mitigation measure is considered complete. This may also identify requirements for verifying compliance.

Acronyms or Abbreviations Used in Table:

ERO = (San Francisco Planning Department) Environmental Review Officer or Planning Department designee

Planning Department = San Francisco Planning Department

SFPUC = San Francisco Public Utilities Commission and/or or its designee

SFPUC EMG = Environmental Management Group

SFPUC CM Team = Construction Management Team

SFPUC EMB = Engineering Management Bureau

SFPUC PMB = Project Management Bureau

Per CEQA guidelines 15097(a): A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation. Where applicable, implementation responsibility to another agency is subject to acceptance.