Meeting Date: 06/05/23
Application Number: 3655
Staff: K. Connor

Staff Report 28

APPLICANT:

Bandwidth IG, LLC

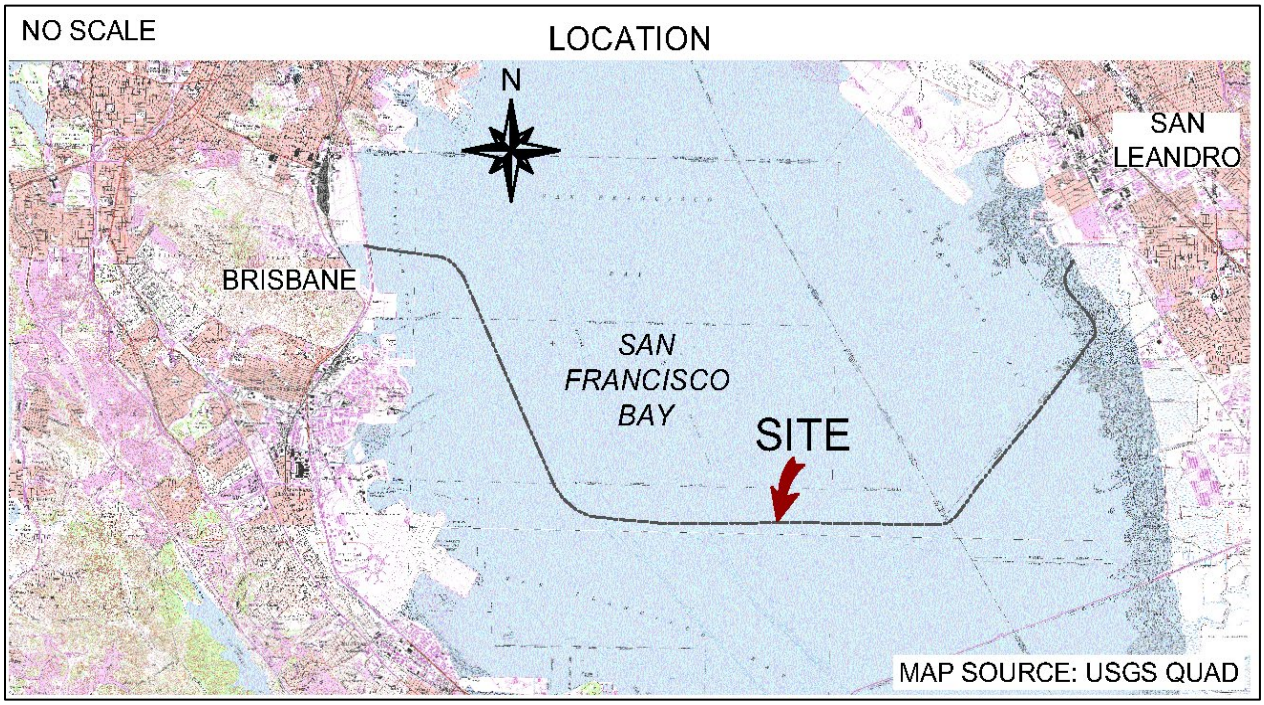
PROPOSED ACTION:

Consider adoption of a Mitigated Negative Declaration (MND), adoption of a Mitigation Monitoring Program, and Issuance of a General Lease – Right-of-Way Use

AREA, LAND TYPE, AND LOCATION:

Sovereign tide and submerged land in the San Francisco Bay (SF Bay), between Brisbane in San Mateo County and San Leandro in Alameda County (as shown in Figure 1).

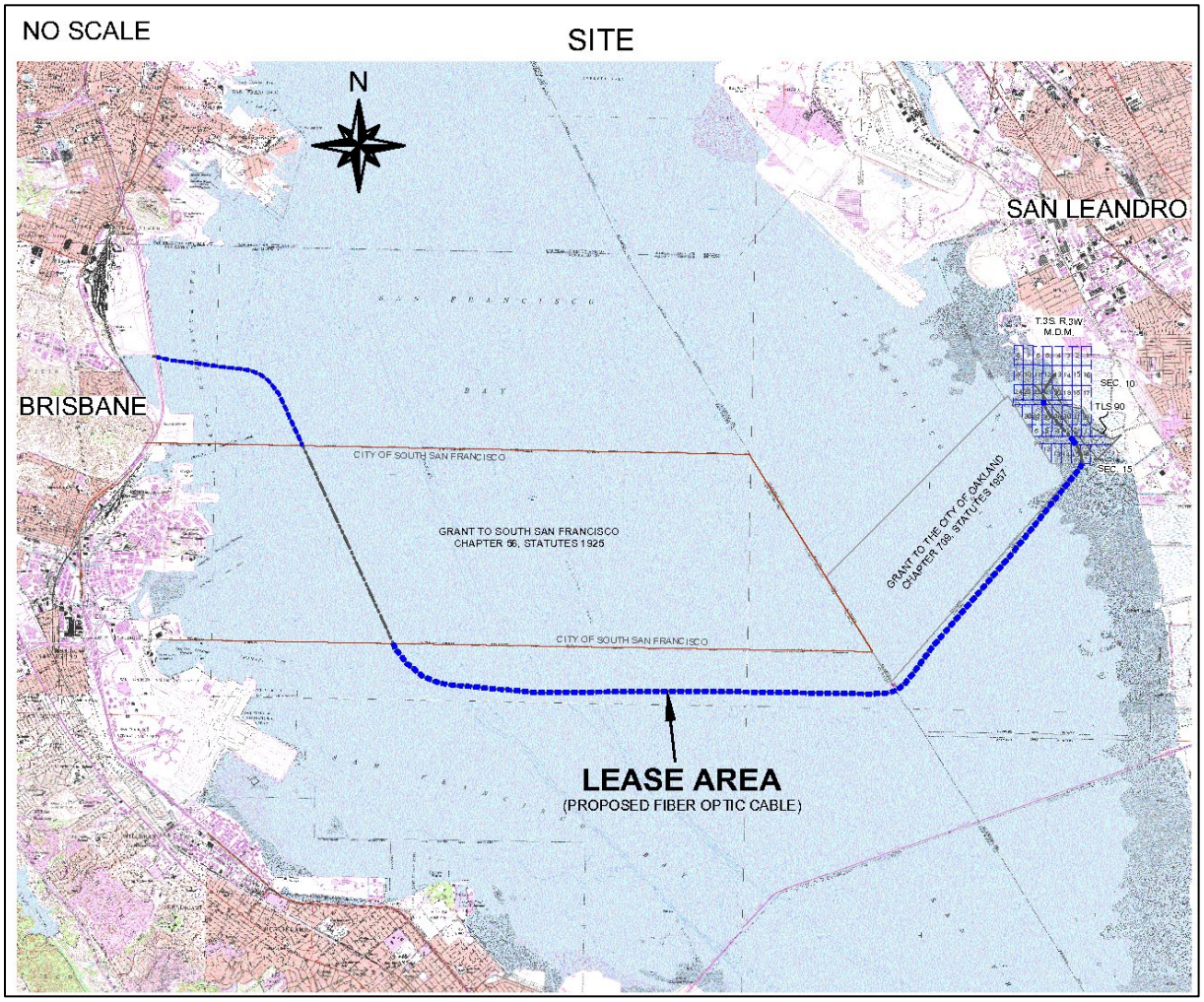
Figure 1. Location



AUTHORIZED USE:

Installation and use of two 2-inch-diameter buried fiber optic cables and one 8-inch-diameter high-density polyethylene (HDPE) conduit (as shown in Figure 2).

Figure 2. Site Map



NOTE: This depiction of the lease premises is based on unverified information provided by the applicant or other parties and is not a waiver or limitation of any State interest in the subject or any other property.

TERM:

25 years, beginning June 5, 2023.

CONSIDERATION:
$342,452 per year, with an annual Consumer Price Index adjustment and the State reserving the right to fix a different rent periodically during the lease term, as provided for in the lease.

SPECIFIC LEASE PROVISIONS:
- Liability insurance in an amount no less than $1,000,000 per occurrence.
- Contractor liability insurance in an amount no less than $5,000,000 per occurrence.
- Bond or other surety in the amount of $5,000,000, to be reviewed every five years.
- At least 60 days prior to the start of the Project, Lessee shall provide for Lessor's review: engineering drawings as issued for construction, certified (stamped, signed, and dated) by a California Registered Civil/Engineer; a site-specific geotechnical report certified by a California Registered Geotechnical Engineer; and a set of horizontal directional drilling calculations, certified by a California Civil/Structural Engineer.
- At least 30 days prior to start of the Project, Lessee shall provide for Lessor's review: a detailed drilling program with detailed specifications of the boring machine; detailed specifications of the mud system; detailed inadvertent return contingency plan; and abandonment contingency plan for operations should work be suspended; construction contractor's work plan; a specific hazardous spill contingency plan; a critical operations and curtailment plan; a vessel anchoring plan; a construction schedule timeline; and written consent from each utility owner of all crossings.
- Within 60 days of completing construction, Lessee shall submit: a set of "as built" drawings for the entire Project certified (stamped, signed, and dated) by a California registered Civil/Structural Engineer and showing all design changes or other amendments to the construction drawings as originally approved; a bay floor survey map that shows the final cable locations, conduits, crossings, and burial depths; a post construction diver video survey; and a post construction written narrative report.
- Based on the "as-built" drawings received, Lessor shall then replace Lease Exhibit A (Land Description) and Exhibit B (Site and Location Map) as necessary to accurately reflect the final location of the authorized improvements within the Commission's jurisdiction. Once approved by Lessor's Executive Officer or designee and Lessee, the revised Exhibits shall replace the Exhibits incorporated

in the Lease at the time of Lease execution. The replaced Exhibits shall be incorporated in the Lease as though fully set forth therein.

- Should staff's review of the as-built plans and survey identify a change in the improvements that necessitates a change in the annual rent, Lessee agrees to submit an application, within 60 days following notice from Lessor's staff, to request a lease amendment to reflect such changes.
- Within 12 months of completing construction, Lessee shall perform a cable burial depth survey in areas where water depths are between 0 and 15 feet below the Ordinary High-Water Mark.

BACKGROUND:

As the world relies on faster and more bandwidth-intensive data transmission, the data transferring infrastructure, such as fiber optic cables, needs to be upgraded to keep up with technical advancements to transmit uninterrupted data. Virtually all communications and data transmissions are converted to digital data and transmitted across fiber optic cables. Even though radio and satellites can transmit data over long distances, only fiber optic cables presently supply the volume, speed, reliability, and cost efficiency to meet current and expected data demands.

STAFF ANALYSIS AND RECOMMENDATION:

AUTHORITY:

Public Resources Code sections 6005, 6216, 6301, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

CALIFORNIA ENVIRONMENTAL QUALITY ACT:

The Commission, as the lead agency for the proposed Project pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.), conducted an Initial Study to determine if the Project may have a significant effect on the environment (State CEQA Guidelines, § 15063). The Initial Study identified potentially significant impacts to Air Quality; Biological Resources; Cultural Resources; Cultural Resources – Tribal; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Recreation; and Transportation. However, mitigation measures were proposed and agreed to by the Applicant prior to public review of the draft MND that would avoid or mitigate the identified

potentially significant impacts "to a point where clearly no significant effects would occur" (State CEQA Guidelines, § 15070, subd. (b)(1)). Consequently, the Initial Study concluded that "there is no substantial evidence, in light of the whole record before the agency, that the Project as revised may have a significant effect on the environment" (State CEQA Guidelines, § 15070, subd. (b)(2)), and a Mitigated Negative Declaration (MND) was prepared.

Pursuant to the Commission's delegation of authority and the State CEQA Guidelines (Cal. Code Regs., tit. 14, § 15025), staff prepared an MND identified as California State Lands Commission MND No. 813, State Clearinghouse No. 2023040125. The proposed MND and Initial Study were circulated for a 30-day public review period from Thursday April 6, 2023, to Monday, May 8, 2023. Staff received comments from the Department of Fish and Wildlife (CDFW), California Department of Transportation (Caltrans), and East Bay Dischargers Authority. The comments and staff's responses are contained in the attached Exhibit B.

As requested in CDFW's comment letter, staff revised certain sections in the MND and Mitigation Measure (MM) BIO-6 and MM BIO-7 to address concerns about impacts to longfin smelt. CDFW staff provided evidence that longfin smelt are present within the Project location year-round and thus an in-water work window, as required by MM BIO-6, would be ineffective for that species. A smaller screen-size on the jet intake, as required by revised MM BIO-7, would prevent or mitigate potential harm to longfin smelt, if present during construction. The MMs as revised are more protective of longfin smelt. Staff determined that these changes do not constitute a "substantial revision," as defined in State CEQA Guidelines section 15073.5, subdivision (b), and that recirculation of the MND prior to Commission consideration is not required pursuant to in State CEQA Guidelines section 15073.5, subdivision (c).

Based upon the Initial Study, the MND, and the comments received in response thereto, there is no substantial evidence that the Project will have a significant effect on the environment. (Cal. Code Regs, tit. 14, § 15074, subd. (b).) A Mitigation Monitoring Program has been prepared in conformance with the provisions of CEQA (Pub. Resources Code, § 21081.6), and is contained in the attached Exhibit A.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

The proposed lease area consists of tide and submerged land situated in SF Bay, adjacent to the cities of San Leandro and Brisbane, in Alameda and San Mateo Counties. The Applicant proposes to utilize rights-of-way for the installation and use of two nonlinear, parallel, and close proximity fiber optic cables between cable

landing sites[1] in Brisbane and San Leandro as part of a transbay cable system. Construction would include installation of two buried fiber optic cables, and two HDPE pipeline conduits, one on either side of SF Bay, as analyzed in the MND.

A majority of the Project components, including the HDD section in Brisbane (western side) and buried sections, would be under the Commission's jurisdiction. However, a portion of the buried cable, and the San Leandro HDD section (eastern side), including the second conduit would be outside of the Commission's jurisdiction on legislatively granted tide and submerged lands or on tidelands lots sold to private parties in the 1800s and now owned by the City of San Leandro. The landing sites would be located above the OHWM and outside of Commission jurisdiction.

The Project would connect into a partially complete terrestrial cable network that has independent utility from the Project analyzed in this MND[2]. This network extends throughout the SF Bay region and would connect to the Project at the landing vaults.

The Project would enhance telecommunication capacity within the greater SF Bay Area and connected regions by adding a direct telecommunications link across SF Bay. This telecommunications link would help to:

- Increase telecommunications reliability,
- Increase diversity of telecommunication pathways,
- Increase data transmission capacity and speeds to satisfy growing demand,
- Respond to increasing demand for connectivity.

The two cable landing sites would be used as staging areas to park vehicles, store communication equipment for terrestrial and marine-based work, and conduct horizontal directional drilling (HDD) to install the HDPE conduits. The landing sites would be approximately 66 feet by 66 feet. The two landing vaults, one on either side of SF Bay, would be precast concrete vaults measuring 12 feet long, 9 feet wide, and 10 feet deep, and would be installed at each cable landing site with a cast-iron vault cover. These vaults would provide access to the fiber optic cables and HDPE conduit for maintenance after construction.

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[1] The landing site would be the general area where the HDD would enter into the ground and exit into SF Bay. The landing site would be used for staging during construction, and then a permanent landing vault would be installed that would be flush with the ground.

[2] As the MND explains, the Applicant (Corporate ID U7336C) will complete this terrestrial network project under California Public Utilities Commission authorization.

One new 8-inch-diameter HDPE conduit would be installed using HDD in Brisbane and another conduit of the same size would be installed in San Leandro of the SF Bay to house the two fiber optic cables near the shore. Even though the MND analysis included a proposed site and three alternatives for the western side, the Applicant will be building out Alternative 3[3] since it was preferred by Caltrans. Once the HDPE conduits are installed, the fiber optic cables would be pulled through starting from the western side of SF Bay and going towards the eastern side of the SF Bay.

The eastern HDPE conduit would be approximately 202 feet long and would exit at an average water depth of 0 feet and would then be buried under 5 feet of nearshore sediment during and after installation except when exposed to pull the fiber optic cables through. The eastern HDPE conduit would be installed seaward of the landing vault at a minimum depth of 6.5 feet under the cable landing site and shoreline using HDD to the exit point within SF Bay.

Once the HDPE conduits are installed, a portion of the fiber optic cables would be pulled through and housed in them. The rest of the fiber optic cables would be buried 3 to 6 feet deep without conduit in the SF Bay floor using a cable-lay vessel (with the help of two anchor-lay vessels) and jetting sled. A jetting sled is a burial tool that would be deployed by the cable-lay vessel. Close to the HDD exit points, the fiber optic cables would be installed via divers (with a dive support boat) with hand-jetting techniques.

The new lease will require the Applicant to conduct a cable burial verification inspection within 12 months following cable installation, and every 12 months thereafter on or before the anniversary date of the lease, and after major storm events. The new lease will also require the Applicant to submit a set of as-built plans that show where the improvements have been placed. If Lessor's staff review of the as-built plans identify a significant change in the improvements, a lease amendment would be required.

The landing conduits and fiber optic cables would be buried below the SF Bay floor within State waters and would not impede surface use or interfere with Public Trust needs and values at this location, at this time, and for the foreseeable term of the

[3] The MND analysis included four possible options for the western side: a proposed Western Cable Landing Site (along the Bay Trail at the southern corner of Lagoon Road and Sierra Point Parkway in Brisbane); Alternative 1 (south of the southern corner of Lagoon Road and Sierra Point Parkway in Brisbane); Alternative 2 (narrow parcel of land between the Bayshore Freeway and Sierra Point Parkway in Brisbane); and Alternative 3 (narrow parcel of land between the Bayshore Freeway and Sierra Point Parkway in Brisbane).

proposed lease. Additionally, the lease does not alienate the State's sovereign interest, or permanently impact public rights.

The lease is limited to a 25-year term and does not grant the lessee exclusive rights to the lease premises. Upon termination of the lease, the lessee may be required to remove any improvements and restore the lease premises to its original condition. Additionally, the proposed lease requires the lessee to maintain a surety bond in the amount of $5,000,000 and to insure the lease premises and indemnify the State for any liability incurred as a result of the lessee's activities thereon. The lease also requires the payment of annual rent to compensate the people of the State for the occupation of the public land involved.

CLIMATE CHANGE:

Climate change impacts, including sea level rise, more frequent and intense storm events, and increased flooding and erosion, affect both open coastal areas and inland waterways in California. The lease area is in the SF Bay, in a tidally influenced site vulnerable to flooding at current sea levels that will be at high risk of flood exposure based on the projected scenarios of sea level rise in this area.

The California Ocean Protection Council updated the *State of California Sea-Level Rise Guidance* in 2018 to provide a synthesis of the best available science on sea level rise projections and rates. Commission staff evaluated the "high emissions," "medium-high risk aversion" scenario to apply a conservative approach for the eastern and the western cable landing sites based on both current emission trajectories and the lease location. The San Francisco tide gauge was used for the projected sea level rise scenario for this Project as listed in Table 1.

Table 1. Projected Sea Level Rise for San Francisco

Year	Projection (feet)
2030	0.8
2040	1.3
2050	1.9
2100	6.9

Source: Table 13, State of California Sea-Level Rise Guidance: 2018 Update
Note: Projections are with respect to a 1991 to 2009 baseline.

Along with higher sea levels, winter storms of greater intensity and frequency resulting from climate change will further affect coastal areas. In rivers and tidally influenced waterways, more frequent and powerful storms can result in increased flooding conditions and damage from storm-generated debris. Climate change and sea level rise also will affect coastal and riverine areas by changing erosion and sedimentation rates. Beaches, coastal landscapes, and near-coastal riverine

areas exposed to increased wave force, run up, and total water levels could potentially erode more quickly than before. However, rivers and creeks also are predicted to experience flashier sedimentation pulse events from strong winter storms, punctuated by periods of drought. Therefore, depending on precipitation patterns, sediment deposition and accretion may accelerate along some shorelines and coasts.

The eastern and the western shoreline areas are armored with riprap to protect from wave impacts. The Alternative 3 western cable landing site route is in the "High Scenario" flooding area with a 1 percent chance, plus 6.6-foot sea level rise, or increased erosion with anticipated sea level rise. The eastern cable landing site is within an area subject to flooding at greater than 1 percent chance, annually plus 55 inches of sea level rise. As the western cable landing site would be on the west side of Highway 101 in the Caltrans Highway 101 Right-of-Way, it would generally benefit from any climate change/sea level rise adaptation measures that are implemented by Caltrans for this major highway. Even if the cable landing site floods due to sea level rise or storm surge, the fiber optic cables are manufactured to withstand submerged conditions. The fiber optic cables would also be installed within landing vaults, which are designed to protect them from sea level rise and flooding.

The buried portions of the fiber optic cables would not be affected by sea level rise. The fiber optic cables between the cable landing sites on land and the HDD exit points in the SF Bay would be drilled to depths of between 6.5 to 66 feet below the shoreline to account for any increased erosion over time.

A scour or erosion study (Appendix F in the MND) was done for the specific site. The analysis examined current and various climate change scenarios over the next 30 years by analyzing the following:

- Scouring potential in the near-shore regions of the proposed buried fiber optic cables in the South Bay of the SF Bay
- Impact of climate change on the scouring potential

The study suggests that there would be no significant scour or erosion that might expose the buried fiber optic cables from this Project.

TRIBAL CONSULTATION

Staff contacted the Native American Heritage Commission (NAHC), which maintains two databases to assist specialists in identifying cultural resources of concern to California: the Sacred Lands File and Native American Contacts. A request was sent to the NAHC for a Sacred Lands File search of the Project area and a list of Native American representatives who may be able to provide

information about resources of concern located within or adjacent to the Project area. On September 19, 2022, the NAHC provided a letter and a list of 11 individual tribal contacts from the following eight tribes:

- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Costanoan Rumsen Carmel Tribe
- Indian Canyon Mutsun Band of Costanoan
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- North Valley Yokuts Tribe
- The Ohlone Indian Tribe
- Wuksache Indian Tribe/Eshom Valley Band
- The Confederated Villages of Lisjan

The NAHC's reply also stated that no records were identified in the Sacred Lands File for the Project Area.

Commission staff maintains a list of tribes that have requested to be notified under AB 52 Tribal Consultation for projects in their traditional and cultural affiliated geographic area. Although there were no tribes on the Commission's AB 52 list, Commission staff sent tribal outreach letters on October 24, 2022, to the eight tribes on the NAHC contact list about the proposed Project. The letters emphasized the Commission's interest to ensure those tribes have an opportunity to provide meaningful input on the potential for Tribal cultural resources to be found in the proposed Project area and recommend steps to be taken to ensure adverse impacts to Tribal cultural resources are avoided.

Commission staff received a response from the Confederated Villages of Lisjan on February 3, 2023, stating they did not have any information to supply about the Project site. The Tribe wishes to be contacted if there are any findings.

ENVIRONMENTAL JUSTICE:

Environmental justice is defined by California law as "the fair treatment and meaningful involvement of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Government Code, section 65040.12, subdivision (e)). This definition is consistent with the Public Trust Doctrine principle that the management of trust lands is for the benefit of all people. The Commission's Environmental Justice Policy ensures that environmental justice is an essential consideration in the Commission's processes, decisions, and programs. Through its policy, the Commission reaffirms its commitment to an informed and open process in which all people are treated equitably and with dignity, and in which its decisions are tempered by environmental justice considerations. Among

other goals, the Policy commits the Commission to, "Strive to minimize additional burdens on and increase benefits to marginalized and disadvantaged communities resulting from a proposed project or lease."

The Project is needed to keep up with the technical advancements for transmitting uninterrupted data in the greater SF Bay Area and connected regions. This direct telecommunication link across the SF Bay would increase telecommunications reliability, diversity of telecommunications pathways, and help respond to growing demand for capacity and speed in the region. These Project benefits would also be realized for marginalized and disadvantaged communities in the SF Bay Area and connected regions.

CONCLUSION:

For all the reasons above, staff believes the issuance of the proposed lease will not substantially impair the public rights to navigation, fishing, and commerce, or substantially interfere with the Public Trust needs and values at this location, at this time, and for the foreseeable term of the lease; and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. Approval or denial of the application is a discretionary action by the Commission. Each time the Commission approves or rejects a use of sovereign land, it exercises legislatively delegated authority and responsibility as trustee of the State's Public Trust lands as authorized by law. If the Commission denies the application, the Applicant will not be authorized to install its landing HDPE conduits and fiber optic cables. The Lessee has no right to a new lease or to renewal of any previous lease.

2. The Applicant will be building out Alternative 3 as analyzed in the MND for the western side cable landing site, as this alternative was preferred by Caltrans. This and all other alternatives were analyzed in the MND. The proposed Project would not cross the existing Kinder Morgan pipelines, under Lease 9041, in SF Bay or on land. The proposed Project would cross an abandoned Shell pipeline, under Lease 3291, in SF Bay. This crossing is far enough away from the shoreline that only the fiber optic cables, and not the HDPE conduits, would cross the Shell pipeline. The Applicant would consult and negotiate all crossings with pipeline owners.

3. This action is consistent with the "Prioritizing Social, Economic, and Environmental Justice," "Partnering with Sovereign Tribal Governments and Communities,"

"Meeting Evolving Public Trust Needs," and "Committing to Collaborative Leadership" Strategic Focus Areas of the Commission's 2021-2025 Strategic Plan.

4. This activity involves lands identified as possessing significant environmental values within the Commission's Significant Lands Inventory, pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the CEQA review process, it is staff's opinion that the Project, as proposed, is consistent with its use classification.

APPROVAL OBTAINED:

California Department of Transportation

APPROVALS REQUIRED:

United States Army Corps of Engineers
United States Coast Guard
United States Fish and Wildlife Service
National Marine Fisheries Service
California Department of Fish and Wildlife
San Francisco Bay Conservation and Development Commission
San Francisco Bay Regional Water Quality Control Board
State Historic Preservation Office
City of San Leandro
City of Brisbane
City of South San Francisco

EXHIBITS:

A. Mitigation Monitoring Program
B. Responses to CEQA Comments

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Certify that the MND, MND No. 813 (June 2023), State Clearinghouse No. 2023040125, was prepared for this project pursuant to the provisions of CEQA, that the Commission has reviewed and considered the information contained therein, and in the comments received in response thereto, and that the MND reflects the Commission's independent judgment and analysis.

Find that Mitigation Measures BIO-6 and BIO-7, as amended in the final MND, are equivalent or more effective in mitigating or avoiding potential significant effects and that they in themselves will not cause any potentially significant effect on the environment.

Adopt the MND and determine that the project, as approved, will not have a significant effect on the environment.

Adopt the Mitigation Monitoring Program, as contained in the attached Exhibit A.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed lease will not substantially impair the public rights to navigation, fishing, and commerce or substantially interfere with Public Trust needs and values at this location, at this time and for the foreseeable term of the lease; and is in the best interests of the State.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

Authorize issuance of a General Lease – Right-of-Way Use to the Applicant beginning June 5, 2023, for a term of 25 years, for the installation and use of two 2-inch-diameter buried fiber optic cables and one 8-inch-diameter HDPE conduit; annual rent in the amount of $342,452 with an annual Consumer Price Index adjustment, and with the State reserving the right to fix a different rent periodically during the lease term, as provided for in the lease; liability insurance in an amount no less than $1,000,000 per occurrence; contractor liability insurance in an amount no less than $5,000,000 per occurrence; and a surety bond in the amount of $5,000,000 to be reviewed every 5 years.

EXHIBIT A - MITIGATION MONITORING PROGRAM

The State Lands Commission (CSLC) is the lead agency under the California Environmental Quality Act (CEQA) for the San Francisco Bay Fiber Optic Cables Project (Project). In conjunction with approval of this Project, the CSLC adopts this Mitigation Monitoring Program (MMP) for implementing mitigation measures (MMs) for the Project to comply with Public Resources Code § 21081.6, subdivision (a) and State CEQA Guidelines §§ 15074, subdivision (d), and 15097.

The Project authorizes Bandwidth IG, LLC (Applicant or Bandwidth) to build infrastructure in terrestrial and marine areas connecting Brisbane (San Mateo County) to San Leandro (Alameda County) in California.

1.1 PURPOSE

Potentially significant environmental impacts from the Project must be mitigated to the maximum extent feasible. The purpose of an MMP is to confirm compliance with and implementation of MMs; this MMP will be used as a working guide for implementation, monitoring, and reporting for the Project's MMs.

1.2 ENFORCEMENT AND COMPLIANCE

The CSLC is responsible for enforcing the MMP. The Project Applicant is responsible for successfully implementing and complying with the MMs identified in this MMP. This includes all field personnel working for the Applicant.

1.3 MONITORING

CSLC staff may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as necessary. Some monitoring responsibilities may be assumed by other agencies, such as affected jurisdictions (San Mateo County and Alameda County). The CSLC or its designee shall ensure that qualified environmental monitors are assigned to the Project.

Environmental Monitors. An environmental monitor must be on-site during all Project activities with the potential to create significant environmental impacts or impacts for which mitigation is required to confirm implementation and success of MMs.

Along with CSLC staff, the environmental monitor(s) are responsible for:

- Confirming the Applicant has completed all necessary agency reviews and received all necessary approvals to perform the Project
- Coordinating with the Applicant to integrate the MM procedures during Project implementation
- Confirming that the MMP is followed

If the Applicant or their contractors requested changes from the procedures in this MMP, the environmental monitor will immediately relay those requests to CSLC staff or its designee and will not allow the requested changes until CSLC staff or its designee approve them.

Workforce Personnel. Implementing the MMP requires the full cooperation of Project personnel and supervisors. Many of the MMs require action from site supervisors and their crews. To facilitate successful implementation, relevant mitigation procedures shall be written into contracts between the Applicant and any contractors.

General Reporting Procedures. CSLC staff or its designated environmental monitor will develop a monitoring process to track all procedures required for each MM and will confirm that the timing specified for the procedures is followed. The environmental monitor shall note any noncompliance or discrepancies and take appropriate action to resolve them. Once the Project is complete, copies of all logs will be submitted to CSLC staff.

Public Access to Records. Records and reports are public and will be provided upon request.

1.4 MITIGATION MONITORING PLAN

The MMP contains MMs reducing or avoiding potentially significant impacts to Air Quality; Biological Resources; Cultural Resources; Cultural Resources – Tribal; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Hydrology and Water Quality; Noise; Recreation; Transportation; and Commercial and Recreational Fishing. Project activities were found to have less than significant or no impacts to all other environmental resource areas; therefore, they are not included. The MMP includes the following information:

- **Potential Impact:** Impacts of the Project on the resource

- **Mitigation Measure:** Full MM(s) text
- **Monitoring/Reporting Action**: Action to be taken by the environmental monitor or Lead Agency
- **Effectiveness Criteria**: How the agency can know if the MM is effective
- **Responsible Party**: Entity responsible to comply with the MM
- **Timing:** Before, during, or after terrestrial or marine Project construction; during Project operation; etc.

1.4.1 AIR QUALITY

Potential Impact: Air Quality – Impacts from construction emissions

MM AIR-1: Use of Tier 4 Equipment. All off-road diesel-powered heavy equipment used to construct the Project shall be equipped with Tier 4 engines, except for specialized equipment or when Tier 4 engines are not available. Retrofits that achieve or exceed emission reductions equivalent to that of a Tier 4 engine may be used in lieu of Tier 4 engines.

Potential Impact: Air Quality – Impacts from construction emissions

MM AIR-2: Standard Control Measures for Construction Equipment. The following air quality control measures shall be implemented during terrestrial construction.

- Maintain all construction equipment in proper tune according to manufacturer's specifications.
- Fuel all off-road and portable diesel-powered equipment with CARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road).
- All on- and off-road diesel equipment shall not idle for more than 5 minutes continuously.
- Signs shall be posted in the designated queuing areas and job sites to remind drivers and operators of the 5-minute idling limit.
- Diesel idling within 1,000 feet of sensitive receptors is not permitted.
- Staging and queuing areas shall not be located within 1,000 feet of sensitive receptors.
- Electrify equipment when feasible.

- Substitute gasoline-powered in place of diesel-powered equipment, where feasible.
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Contract specifications
Effectiveness Criteria: Reducing construction-related emissions
Responsible Party: Applicant
Timing: During construction

Potential Impact: Air Quality – Impacts on localized dust levels

MM AIR-3: Minimize Fugitive Dust. Minimize fugitive dust during construction by implementing the following measures:

- Reduce the amount of disturbed area where possible.
- Use water trucks / construction trailers or sprinkler systems in dry weather in sufficient quantity to prevent airborne dust from leaving the site.
- Implement dust control measures as soon as possible following completion of any soil-disturbing activities.
- Establish a policy that vehicle speed for all construction vehicles is not to exceed 15 miles per hour (24 kilometers per hour) on any unpaved surface.
- Water all active construction areas (including storage piles) as needed to suppress dust. Base the frequency on the type of operation and the soil and wind exposure.
- Cover or maintain at least 2 feet (0.6 meter) of space between the material and the top of the container on haul trucks transporting soil, sand, or other loose material on and off the site.
- Sweep adjacent public roads if visible soil material is carried out from a work site.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Contract specifications
Effectiveness Criteria: Reducing increases in localized dust levels
Responsible Party: Applicant and Contractors

Timing: During terrestrial Project construction

1.4.2 BIOLOGICAL RESOURCES

Potential Impact: Biological Resources – Impacts on special-status species and habitats

MM BIO-1: Provide Worker Environmental Awareness Training. Bandwidth shall provide environmental awareness training before starting construction activities for all construction personnel (including new personnel as they are added to the Project) working on the terrestrial and marine Project components. This training would be given by biological monitors (approved by CSLC staff) to help the trainees understand the following:

- Surrounding common and special-status species and their habitats
- Sensitive natural communities and ESHAs
- Applicable regulatory requirements
- MMs designed to avoid or minimize impacts on sensitive resource areas

The training materials shall be developed and approved by CSLC staff at least 30 days before starting Project activities in the terrestrial and marine work areas. The biological monitors shall maintain a list of all contractors who have been trained and shall submit this list and the final training material to CSLC staff within 30 days after construction starts and shall provide an updated final list after construction is completed.

The lead biological monitor, which would be the monitor with the most professional experience if more than one monitor is selected for the Project, shall be the main contact for reporting any special-status species observed in or near the Project area by any employee or contractor. Bandwidth shall provide the contact information for the lead biological monitor and the biological monitors to on-site construction workers, USFWS, CDFW, and CSLC staff before construction starts.

Location: Terrestrial and marine Project areas
Monitoring/Reporting Action: Training materials approved by CSLC staff at least 30 days before Project activities.
On-site biological monitor to submit list of trained personnel and training materials to CSLC within 30 days of the start of construction and after completion.

Effectiveness Criteria: Educating all personnel on potential special-status species and habitats in the work area
Responsible Party: Applicant and CSLC
Timing: Before, during, and after terrestrial and marine Project construction

Potential Impact: Biological Resources – Impacts on special-status species and habitats

MM BIO-2: Conduct Biological Surveying and Monitoring. A biological monitor (typically with a college degree in a field of biology or environmental science, knowledge of species surveying for, and experience with pre-construction and construction monitoring), approved by CSLC staff, shall be present on-site to survey the work area for special-status species and nesting birds (as applicable) before starting work in the terrestrial work area to minimize potential impacts on any special-status species or other wildlife that may be present during Project construction. Because the eastern cable landing site is adjacent to the shoreline and the potential western cable sites are not, the biological monitor would also observe the shoreline adjacent to the eastern cable landing site for special-status species before starting work in the terrestrial area. When work would occur at the eastern or western marine HDD exit locations, the biological monitor would observe the shallow tidal flats surrounding the HDD exit locations for foraging by special-status species such as birds. Observations of the marine HDD exit locations would occur from shore.

The biological monitor must be on-site full-time during the initial equipment mobilization and site preparation (including fence installation), during the final demobilization phase of construction at the cable landing sites, and during all HDD exit location work (observed from the shore). In addition, the biological monitor must make weekly site visits during Project construction for all work on the cable landing site. From shore, the biological monitor would monitor the work at the HDD exit locations in case of special-status species such as birds foraging nearby during low tides. While on-site or observing the HDD exit locations from shore, the biological monitor has the authority to stop all work, and Bandwidth shall contact the appropriate agency, (i.e., CDFW or USFWS and Commission staff) to discuss ways to protect the special-status species. If a biological monitor was not monitoring the Project site during construction when a special-status species was observed on the site, the biological monitor would be contacted immediately to determine the appropriate course of action.

Construction monitoring reports will be submitted daily during above-described construction between the OHWM on the eastern and western locations within CSLC's jurisdiction and otherwise weekly outside of CSLC's jurisdiction.

Location: Terrestrial and marine Project areas
Monitoring/Reporting Action: On-site biological monitor to verify. The monitor will submit daily monitoring reports for work within the CSLC's jurisdiction and weekly reports for work outside the CSLC's jurisdiction.
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on special-status species and habitats potentially present.
Responsible Party: Applicant and CSLC
Timing: Before and during construction

Potential Impact: Biological Resources – Impacts on special-status species and habitats

MM BIO-3: Delineate Work Limits to Protect Sensitive Biological Resources. Natural areas outside the construction work area shall not be disturbed. Before starting Project construction, sensitive biological resource areas within and adjacent to the cable landing site work areas shall be staked and flagged by the biological monitor (**MM BIO-2**). The location of the staking and flagging and barrier fencing, if applicable, would be documented in the daily monitoring log and provided to CSLC before starting construction. These demarcated areas shall be inspected daily by construction personnel throughout the construction area to make sure that they are visible for construction personnel. If construction personnel note damage to the demarcated areas, they shall notify the biological monitor, who will come to the site, if not present, and fix the barriers.

Location: Terrestrial Project areas
Monitoring/Reporting Action: On-site biological monitor to delineate and document in the monitoring log
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on special-status species and habitats potentially present.
Responsible Party: Applicant and CSLC
Timing: Before and during construction

Potential Impact: Biological Resources – Impacts on sensitive biological resources

MM BIO-4: Install Covers or Escape Ramps in Open Trenches. To prevent wildlife species from accidently being entrapped during construction, all excavated

holes to be left open overnight shall have a cover or soil ramp installed, allowing wildlife an opportunity to exit. If escape ramps are installed, the construction inspector or the biological monitor must inspect excavations before starting construction each day to confirm that no wildlife species are entrapped. If any wildlife species are entrapped and the biological monitor is not on the site, the construction inspector shall notify the biological monitor, who will travel to the site to remove wildlife species that are unable to escape on their own. Any wildlife handling shall be conducted under the biological monitor's applicable collection permit or as authorized by the appropriate wildlife agency. If a biological monitor is not on-site, a local biologist (with appropriate permits) may be called out to remove any species.

Location: Terrestrial Project areas
Monitoring/Reporting Action: On-site construction inspector/monitor to inspect daily before starting construction
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on wildlife species potentially present.
Responsible Party: Applicant and CSLC
Timing: During construction

Potential Impact: Biological Resources – Impacts on nesting birds

MM BIO-5: Conduct Pre-Construction Nesting Bird Surveys and Implement Avoidance Measures. If construction occurs during the bird nesting season (from February 1 to September 1), the following conditions (designed to protect both special-status and non–special-status birds) shall be implemented:

- No more than 1 week before starting Project-related construction, a biological monitor, approved by CSLC staff, shall survey within the biological study areas to look for nesting activity.
- If no active nests are detected during these surveys, no additional measures are required.
- If an active nest is found, an appropriate avoidance buffer shall be established around the bird nest site to avoid disturbance or destruction of the nest until the end of the breeding season (generally August 31) or until after the biological monitor determines that the young have fledged and moved out of the area (this date varies by species). Suitable buffer distances may vary between species. The extent of these buffers shall be determined by the biological monitor in coordination with the applicable wildlife agency (i.e., CDFW and/or USFWS) and would depend on the bird

species, level of construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. Disturbances shall not occur within the protective buffer(s) until all young birds have fledged, as confirmed by the biological monitor.

- A biological monitor shall be hired by Bandwidth, approved by the CSLC (**MM BIO-2**), and shall be on-site every day if construction activities happen during bird nesting season and a nest is identified within the protective buffer area.

Location: Terrestrial Project areas
Monitoring/Reporting Action: If construction occurs during the nesting season, conduct nesting bird surveys 1 week before starting Project construction. On-site biological monitor to verify and coordinate with USFWS/CDFW.
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on nesting birds.
Responsible Party: Applicant and CSLC
Timing: Before and during construction

Potential Impact: Biological Resources – Impacts on herring spawning

MM BIO-6: In-Water Work Window. In-water work would occur only from June 1 through November 30 to protect herring spawning populations.

Location: Marine Project area
Monitoring/Reporting Action: Contract specifications
Effectiveness Criteria: Implementation of this MM will reduce the potential for Pacific herring to be impacted during the spawning season.
Responsible Party: Applicant
Timing: Before construction

Potential Impact: Biological Resources – Impacts on fish species, including longfin smelt

MM BIO-7: Fish Screen on the Jet Sled Intake. A screen would be installed on the jet sled intake to reduce the chance of fish being pulled into the jet sled intake with the jetting water. The fish screen would adhere to the following criteria, provided by the California Department of Fish and Wildlife:

- The screen will be designed to allow uniform flow distribution through the entire face of the screen during use.
- If the screen is self-cleaning, the specific screen intake velocity will be 0.2 feet per second, which is the protection velocity for delta smelt (*Hypomesus transpacificus*) and is also considered protective of longfin smelt. If the screen is not self-cleaning, the screen will be designed so that the approach velocity is one fourth of the self-cleaning approach velocity (0.05 feet per second). For non-self-cleaning screens, the frequency of cleaning will be such that flow is not impaired and approach velocity is not exceeded. A cleaning frequency of once per 5 minutes is considered appropriate.
- The required screen area in square feet will be determined by dividing the maximum diverted flow (cubic feet per second) by the allowable approach velocity (feet per second) to get square feet of screen area needed.
- The screen surface will have a minimum open area of 27 percent, but open areas of 40 percent or greater are recommended. Round openings will not exceed 5/32 inch (3.96 millimeter). Square openings will not exceed 5/32 inch (3.96 millimeters) diagonally. Slotted openings will not exceed 0.0689 inch (1.75 millimeters).
- Screens can be constructed of any rigid material that allows water passage but excludes fish. Stainless steel is recommended to reduce corrosion-associated clogging. No sharp edges or projections that could harm fish will be present. The largest screen open area possible for the project should be used. If anti-fouling materials are used, they should not be deleterious to fish or other wildlife.
- The intake with the screen cover will be placed in the deepest area of water possible for the jet sled location.
- The plans and design of the fish screen showing the applicable screening criteria will be provided to the California Department of Fish and Wildlife for approval.

Location: Marine Project area
Monitoring/Reporting Action: Equipment design specifications. Approval required from California Department of Fish and Wildlife.
Effectiveness Criteria: Implementation of this MM will reduce the potential for longfin smelt to be impacted during Project activities.
Responsible Party: Applicant

Timing: Before construction

Potential Impact: Biological Resources – Impacts on marine species from entanglement with unburied cable

MM BIO-8: Cable Burial Surveys. Bandwidth would conduct an initial survey and periodic post-lay surveys of all installed fiber optic cables and conduits between the mean high tide lines to verify that the fiber optic cables and conduits were and would remain buried as initially planned or to the maximum extent feasible as determined by the initial post-lay assessment. These surveys would assess and report the following to CSLC:

- The depth of burial achieved along the fiber optic cable route.
- Any areas of fiber optic cable or conduit suspension greater than 3.3 feet from the SF Bay floor and an explanation of why the fiber optic cables could not be rerouted to avoid suspension.
- The consistency of fiber optic cable installation with the Project description.

These post-lay surveys and assessments would be conducted as follows:

- "As-built" plans showing where the improvements have been placed would be provided within 60 days of completing construction and additional post-lay surveys at a frequency to be determined by lease conditions.
- After any incident or activity, including but not limited to potential commercial fishing gear snags, severe earthquake in the vicinity of the fiber optic cables, or an extreme storm event that could result in excessive SF Bay floor scouring, that could result in the fiber optic cables or conduit exposure to the SF Bay floor surface.

Should a fiber optic cable be observed to have become unburied in any location where it should have been buried or had been buried, Bandwidth shall ensure reburial to the initial fiber optic cable burial depth at that location. A survey and burial report would be prepared and distributed to the CSLC and other responsible state agencies after each survey.

Location: Marine Project area

Monitoring/Reporting Action: Conduct a post-lay inspection survey at a frequency to be determined. The burial survey report will be distributed to responsible State agencies following each survey.
Effectiveness Criteria: Implementation of this MM will reduce the potential for marine wildlife to be exposed to the cable and the potential for entanglement.
Responsible Party: Applicant and CSLC
Timing: After construction

Potential Impact: Biological Resources – Impacts on marine wildlife

MM BIO-9: Cable Entanglements and Gear Retrieval. If fishing gear snags on a fiber optic cable and it is lost or cut, or if Bandwidth snags fishing gear, Bandwidth shall use all feasible measures (for example, deploying divers), in discussion with and guided by the local Fishing Association (San Francisco Community Fishing Association), to retrieve the fishing gear or inanimate object. Retrieval shall occur no later than 42 days after discovering or receiving notice of the incident. If full removal of gear is not feasible, Bandwidth shall remove as much gear as practicable to minimize harm to wildlife (e.g., fishes, birds, and marine mammals). Within 14 days of completing the recovery operation, Bandwidth shall submit to CSLC staff a report describing the following:

- Nature and location of the entanglement (with a map and/or GPS coordinates).
- Method used for removing the entangled gear or object, or the method used for minimizing harm to wildlife if gear retrieval proves infeasible.

Location: Marine Project area
Monitoring/Reporting Action: Retrieval of gear within 42 days of discovery. Submit recovery report to CSLC within 14 days of completing the recovery operation.
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on marine species potentially present.
Responsible Party: Applicant and CSLC
Timing: Before, during, and after construction

Potential Impact: Biological Resources – Impacts on marine native species

MM BIO-10: Control of Marine Invasive Species. Bandwidth shall ensure that the underwater surfaces of all Project vessels are clear of biofouling organisms before arriving in state waters. The determination of underwater surface

cleanliness shall be made in consultation with CSLC staff. Regardless of vessel size, ballast water for all Project vessels must be managed consistent with the CSLC's ballast management laws and regulations, and Ballast Water Management Report and a Marine Invasive Species Program Annual Vessel Reporting Form shall be submitted to CSLC staff at least 24 hours in advance of arrival in state waters, as required by regulation.

Location: Marine Project area
Monitoring/Reporting Action: On-site monitor to verify
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on marine native species.
Responsible Party: Applicant and CSLC
Timing: During marine construction

Other applicable MMs for potential impacts on biological resources

MM HYD-1: Develop and Implement Stormwater Pollution Prevention Plan (see Hydrology and Water Quality)
MM HAZ-1: Develop and Implement Spill Contingency and Hazardous Materials Management Plans. (see Hazards and Hazardous Materials)
MM HAZ-2: Prepare and Implement an Inadvertent Return Contingency Plan (see Hazards and Hazardous Materials)

1.4.3 CULTURAL RESOURCES

Potential Impact: Cultural Resources – Impacts to shipwrecks, archaeological sites, and/or historic, cultural, or tribal resources

MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources. Before disturbing the ground, Bandwidth shall contact culturally affiliated tribes and retain a culturally affiliated tribal monitor if requested. Bandwidth shall also retain a qualified archaeologist, jointly with any requested culturally affiliated tribal monitor, to train construction staff to be able to identify potential cultural and tribal cultural resources. If potential cultural or tribal cultural resources are uncovered during Project implementation, all earth-disturbing work within 100 feet of the find must be suspended or redirected until an approved archaeologist and tribal monitor, if retained, has evaluated the nature and significance of the discovery.

If a potentially significant cultural or tribal cultural resource is discovered, the CSLC, and any local, state, or federal agency with approval or permitting

authority over the Project that has requested and/or required notification shall be notified within 48 hours. The location of any such finds must be kept confidential and measures shall be taken to secure the area from site disturbance and potential vandalism. Impacts on previously unknown significant cultural or tribal cultural resources shall be avoided through preservation in place if feasible. Damaging effects on tribal cultural resources shall be avoided or minimized following the measures identified in Public Resources Code section 21084.3, subdivision (b), if feasible, unless other measures are mutually agreed to by the lead archaeologist and culturally affiliated tribal monitor that would be as or more effective. A treatment plan, if needed to address a find, shall be developed by the archaeologist and, for tribal cultural resources, the culturally affiliated tribal monitor, and submitted to CSLC staff for review and approval prior to implementation of the plan. If the archaeologist or tribe determines that damaging effects on the cultural or tribal cultural resource shall be avoided or minimized, then work in the area may resume.

Title to all abandoned shipwrecks, archaeological sites, historic or cultural resources, and tribal cultural resources on or in the tide and submerged lands of California is vested in the state and under CSLC jurisdiction. The final disposition of archaeological, historical, and tribal cultural resources recovered on state lands under CSLC jurisdiction must be approved by CSLC.

Location: Terrestrial and marine Project areas
Monitoring/Reporting Action: Qualified archaeologist retained and notification of permitting agencies. A treatment plan may be developed as needed.
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on archaeological resources.
Responsible Party: Applicant and CSLC
Timing: Before and during construction

Potential Impact: Cultural Resources – Impacts to human remains

MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains. If human remains are encountered, all provisions provided in California Health and Safety Code section 7050.5 and California Public Resources Code section 5097.98 shall be followed. Work shall stop within 100 feet of the discovery, and both an archaeologist and CSLC staff must be contacted within 24 hours. The archaeologist shall consult with the County Coroner. If human remains are of Native American origin, the County Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours of this determination, and a Most

Likely Descendent shall be identified. No work is to proceed in the discovery area until consultation is complete and procedures to avoid or recover the remains have been implemented.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Contact retained archaeologist and the CSLC within 24 hours of discovery.
Archaeologist will consult with County Coroner.
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on human remains.
Responsible Party: Applicant and CSLC
Timing: During construction

Potential Impact: Cultural Resources – Impacts to previously unknown terrestrial archaeological resources

MM CUL-3/TCR-3: Cultural and Tribal Resources Awareness Training. Before beginning construction, Bandwidth must hire a qualified archaeologist and a culturally affiliated tribal monitor (if requested by culturally affiliated tribes) to prepare a Cultural Resources Contractor Awareness Training subject to CSLC approval. The training shall be given by a qualified archaeologist and a culturally affiliated tribal monitor (if one is available) to all construction personnel before working on the Project, and the training shall include, but not be limited to, the following:

- Guidance on identifying potential cultural resources encountered
- The probability of exposing cultural resources
- Clear direction on procedures if a find is encountered

Location: Terrestrial Project areas
Monitoring/Reporting Action: Qualified archaeologist retained and training for all personnel prior to working on the Project.
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on archaeological resources.
Responsible Party: Applicant and CSLC
Timing: Before construction

1.4.4 CULTURAL RESOURCES - TRIBAL

Applicable mitigation measures for potential impacts on cultural resources - tribal

MM CUL-1/TCR-1: Discovery of Previously Unknown Cultural or Tribal Cultural Resources (see Cultural Resources)
MM CUL-2/TCR-2: Unanticipated Discovery of Human Remains (see Cultural Resources)
MM CUL-3/TCR-3: Cultural and Tribal Resources Awareness Training (see Cultural Resources)

1.4.5 GREENHOUSE GAS EMISSIONS

Applicable mitigation measures for potential impacts of greenhouse gas emissions

MM AIR-1: Use of Tier 4 Equipment (see Air Quality)
MM AIR-2: Standard Control Measures for Construction Equipment (see Air Quality)

1.4.6 HAZARDS AND HAZARDOUS MATERIALS

Potential Impact: Hazards and hazardous materials – Impacts from accidental release of hazardous materials

MM HAZ-1: Develop and Implement Spill Contingency and Hazardous Materials Management Plans. At least 30 days before start of construction of the Project, Bandwidth shall submit the following plans for review and approval by CSLC staff:

Worker Health and Safety Plan

A final Worker Health and Safety Plan (WHSP) that has been reviewed and approved by the San Mateo County Divisions of Environmental Health shall address measures to minimize risks from landfill gases and potential worker exposure to hazardous materials associated with construction activities at the western cable landing sites and within 1,000 feet of the former Brisbane Landfill. The WHSP shall be prepared by a qualified geologist or engineer.

A. The WHSP shall include, at a minimum, measures to:

   a) Address the potential for the presence and migration of landfill gases during construction.

   b) Minimize risks of exposure by construction workers to anticipated hazardous materials, to potential unanticipated waste types, and to potential landfill gas accumulation post-construction by operational and maintenance personnel.

   c) Assure Project stability and structural integrity associated with any incompetent waste fill material that may be present.

B. Bandwidth shall undertake development in accordance with the approved final WHSP. Any proposed changes to the approved final WHSP shall be reported to CSLC and San Mateo County Division of Environmental Health. No changes to the approved final WHSP shall occur without written approval from CSLC and San Mateo County Division of Environmental Health.

Soil and Waste Excavation and Management Plan

A final Soil and Waste Excavation and Management Plan (SWEMP) that has been reviewed and approved by the San Mateo County Division of Environmental Health shall address soil and waste management for construction activities at the western cable landing sites. The SWEMP shall be prepared by a qualified geologist or engineer.

A. The SWEMP shall include, at a minimum, the following:

   a) A description of the specific locations, methods, and procedures for staging, stockpiling, managing, characterizing, testing, and disposing of soil (including bentonite material), groundwater, and waste material expected to be encountered during construction.

   b) Procedures for managing unanticipated waste types that may be encountered during construction.

   c) BMPs for odor and dust control, including, but not limited to, measures to reduce the potential for exposure of staged and stockpiled materials to wind and stormwater runoff.

   d) Provisions for characterizing and testing soil, groundwater, and waste material in accordance with California Department of Toxic Substances Control (DTSC) Protocol for Burn Dump Site Investigation and Characterization. Testing should include, at a minimum, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs),

polychlorinated biphenyls (PCBs), polycyclic aromatic hydrocarbons (PAHs), dioxins and furans, organochlorine pesticides (OCPs), and California Administrative Metals (CAM-17) heavy metals.

e) Provisions for proper waste disposal at authorized facilities capable of receiving the waste(s).

B. Bandwidth shall undertake development in accordance with the approved final SWEMP. Any proposed changes to the approved final SWEMP shall be reported to CSLC and San Mateo County Division of Environmental Health. No changes to the approved final SWEMP shall occur without written approval from CSLC and San Mateo County Division of Environmental Health.

Spill Contingency and Hazardous Materials Terrestrial Plan

Measures for terrestrial operations shall include, but not be limited to, identifying appropriate fueling and maintenance areas for equipment, a daily equipment inspection schedule, and spill response procedures including maintaining spill response supplies on-site. The Spill Contingency and Hazardous Materials Terrestrial Plan (SCHMTP) could be prepared separately or the elements of the SCHMTP could be included in the SWEMP.

The terrestrial SCHMTP will identify the actions and notifications to occur if contaminated soil is encountered during onshore excavation. Bandwidth shall notify the of San Mateo and Alameda Counties' Divisions of Environmental Health within 24 hours of discovering contaminated materials during Project construction activities. Work in the area suspected of contamination shall stop until the notified agencies, together with Bandwidth, have determined the next steps.

The terrestrial SCHMTP will identify, at a minimum, the following BMPs related to using hazardous substances:

- Follow manufacturer's recommendations on use, storage, and disposal of chemical products used in construction.
- Avoid overtopping construction equipment fuel gas tanks.
- During routine maintenance of construction equipment, properly contain and remove grease and oils.
- Conduct all fueling of equipment at least 100 feet from wetlands and other waterbodies.
- Properly dispose of discarded containers of fuels and other chemicals.

- Maintain a complete list of agencies (with their telephone numbers) to be notified of potential hazardous material spills, including but not limited to, the CSLC's 24-hour emergency notification number and the California Governor's Office of Emergency Services (Cal OES) contact number.

Spill Contingency and Hazardous Materials Offshore Plan

For offshore activities involving work vessels, the primary work vessel (cable-lay vessel) will be required to carry onboard a minimum 400 feet of sorbent boom, five bales of sorbent pads at least 18 inches by 18 inches square, and a small, powered vessel for rapid deployment to contain and clean up any small hazardous material spill or sheen on the water surface. The Spill Contingency and Hazardous Materials Offshore Plan (SCHMOP) shall provide for the immediate call out of additional spill containment and clean-up resources in the event of an incident that exceeds the rapid clean-up capability of the on-site work force. These offshore measures may be provided as part of a separate SCHMOP or combined with the terrestrial plan (SCHMTP) as described above.

Location: Terrestrial and marine Project areas
Monitoring/Reporting Action: All plans to be submitted to CSLC at least 30 days prior to start of construction
Effectiveness Criteria: Implementation of this MM will reduce the potential for a release of hazardous materials to the environment.
Responsible Party: Applicant
Timing: Before and during construction

Potential Impact: Hazards and hazardous materials – Impacts from horizontal directional drilling (HDD) activities

MM HAZ-2: Prepare and Implement an Inadvertent Return Contingency Plan. A Final Inadvertent Return Contingency Plan (either one report that describes a plan for both terrestrial and marine areas or separate reports for each area) shall be submitted to CSLC staff for review and approval at least 30 days before starting construction in terrestrial and marine areas. The plan(s) must include the following:

- Measures to stop work, maintain appropriate control materials on-site, contain and remove drilling mud before demobilization, prevent further migration of drilling mud into the waterbody, and notify all applicable authorities in the case of an inadvertent return of any size.

- Control measures of constructing a dugout or settling basin at the cable landing site to contain drilling mud to prevent sediment and other deleterious substances from entering waterbodies.
- Requirements for onshore biological monitors to monitor onshore and offshore to identify signs of an inadvertent release of drilling fluids, which may include the use of Rhodamine dye.
- An abandonment contingency plan in case the HDD operations are forced to be suspended and a partially completed bore hole is abandoned.
- Complete list of the agencies (with telephone number) to be notified in case of an inadvertent return of any size, including, but not limited to, the CSLC's 24-hour emergency notification number (562) 590-5201 and the California Governor's Office of Emergency Services (Cal OES) contact number (800) 852-7550.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Submit report to the CSLC at least 30 days before starting construction.
Onshore and offshore biological monitors to identify signs of an inadvertent release of drilling fluids.
Effectiveness Criteria: Implementation of this MM will reduce the potential for impacts on wildlife species potentially present.
Responsible Party: Applicant and CSLC
Timing: Before and during construction

Other applicable MMs for potential impacts on hazards and hazardous materials

MM BIO-1: Provide Environmental Awareness Training (see Biological Resources)
MM BIO-3: Delineate Work Limits to Protect Sensitive Biological Resources (see Biological Resources)

1.4.7 HYDROLOGY AND WATER QUALITY

Potential Impact: Hydrology and Water Quality – Impacts on hydrology and water quality

MM HYD-1: Develop and Implement Stormwater Pollution Prevention Plan. Bandwidth shall develop and implement a Stormwater Pollution Prevention Plan (SWPPP) consistent with the Statewide NPDES Construction General Permit (Order 2009-0009-DWQ). At a minimum, the SWPPP shall include measures for:

- Maintaining adequate soil moisture to prevent excessive fugitive dust emissions, preservation of existing vegetation, and effective soil cover (e.g., geotextiles, straw mulch, hydroseeding) for inactive areas and finished slopes to prevent sediments from being dislodged by wind, rain, or flowing water.
- Installing fiber rolls and sediment basins to capture and remove particles that have already been dislodged.
- Establishing good housekeeping measures such as construction vehicle storage and maintenance, handling procedures for hazardous materials, and waste management BMPs, including procedural and structural measures to prevent the release of wastes and materials used at the site.

The SWPPP shall also detail spill prevention and control measures to identify the proper storage and handling techniques of fuels and lubricants, and the procedures to follow in the event of a spill. The SWPPP shall be provided to CSLC staff a minimum of 30 days prior to Project implementation.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Develop SWPPP and provide to CSLC 30 days prior to Project implementation.
Effectiveness Criteria: Implementation of this MM will reduce the Project impacts on hydrology and water quality.
Responsible Party: Applicant and CSLC
Timing: During construction

Other applicable MMs for potential impacts on hydrology and water quality

MM HAZ-1: Develop and Implement Spill Contingency and Hazardous Materials Management Plans (see Hazards and Hazardous Materials)
MM HAZ-2: Prepare and Implement an Inadvertent Return Contingency Plan (see Hazards and Hazardous Materials)

1.4.8 NOISE

Potential Impact: Noise – Impacts on sensitive receptors

MM NOI-1: Implement Construction Noise Control Measures. The Applicant shall ensure that its contractor implements specific noise attenuation measures to ensure compliance with applicable City and County noise ordinances for the duration of the construction period. Noise measures shall include the following and shall be included in the construction specifications:

- Limit construction activities to the hours specified in each local noise ordinance.
- Maintain all equipment in accordance with manufacturer's recommendations to minimize noise emissions.
- Inspect all gasoline and diesel-powered equipment to ensure they are equipped with properly functioning exhaust mufflers and intake silencers.
- Limit unnecessary idling.
- Use low noise emission equipment where feasible and practical.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Contract specifications
Effectiveness Criteria: Implementation of this MM will reduce the Project impacts on sensitive receptors.
Responsible Party: Applicant and CSLC
Timing: Before and after construction

1.4.9 RECREATION

Potential Impact: Recreation – Impacts on offshore recreational activities

MM REC-1: Advanced Local Notice to Mariners. At least 15 days before (1) start of the HDD operation, and (2) start of offshore cable laying activity, a Local Notice to Mariners (https://www.dco.uscg.mil/Featured-Content/Mariners/Local-Notice-to-Mariners-LNMs/District-11/) would be submitted to the USCG describing all activities in the SF Bay. A copy of the published notice shall be provided immediately to CSLC. The Notice must include:

- Type of operation (i.e., jet sledding, diving operations, construction)
- Specific location of operation or repair activities (including whether there is a possibility of exposed cable), including latitude and longitude and geographical position, if applicable
- Estimated schedule of activities, including start and completion dates (if these dates change, the USCG needs to be notified)
- Vessels involved in the operation
- VHF-FM radio frequencies monitored by vessels on the scene
- Point of contact and 24-hour phone number
- Chart number for the area of operation

Location: Marine Project area
Monitoring/Reporting Action: Local Notice to Mariners submitted to USCG at least 15 days prior to (1) start of HDD operation and (2) start of offshore cable laying.
A copy of the published notice will be submitted to CSLC immediately.
Effectiveness Criteria: Implementation of this MM will reduce the Project impacts on offshore recreational activities.
Responsible Party: Applicant and CSLC
Timing: Before and after construction

1.4.10 TRANSPORTATION

Potential Impact: Transportation – Impacts on local marine vessel traffic

MM TRA-1: Marine Anchor Plan. At least 30 days before starting construction, Bandwidth will submit a Marine Anchor Plan to CSLC staff for review and approval with the following:

- Map of the proposed acceptable anchor locations and exclusion zones or offshore temporary anchoring or mooring for work vessels.
- Narrative description of the anchor setting and retrieval procedures to be employed that will result in minimal impacts on the bay sediments and floor. Anchor dragging along the bay bottom is not allowed.
- Coordinates of all dropped anchor points during construction shall be recorded and included on the post-construction bay floor survey map.

Location: Marine Project area
Monitoring/Reporting Action: Provide plan to CSLC 30 days prior to construction
Effectiveness Criteria: Implementation of this MM will reduce the Project impacts on local vessel traffic and provide safe anchoring.
Responsible Party: Applicant and Applicant's contractor
Timing: Before and during construction

Potential Impact: Transportation – Reduce hazards on local roadways

MM TRA-2: Traffic Control Plan. Before starting the Project activities, a Traffic Control Plan shall be submitted to CSLC staff for review and approval. It shall include measures such as appropriate signage, detour routes, and lane closure to reduce potential hazards to motorists and workers during the Project. In addition, the Traffic Control Plan shall address measures to allow emergency vehicle access, and reduction of impacts to circulation, potential hazards to motorists, bicyclists, pedestrians, and workers during the Project.

Location: Terrestrial Project areas
Monitoring/Reporting Action: Provide plan to CSLC 30 days prior to construction
Effectiveness Criteria: Implementation of this MM will reduce the Project impacts on local traffic.
Responsible Party: Applicant and Applicant's contractor
Timing: Before construction

Other applicable MMs for potential impacts on transportation

MM REC-1: Advanced Local Notice to Mariners (see Recreation)

1.4.11 COMMERCIAL AND RECREATIONAL FISHING

Applicable mitigation measures for potential impacts on commercial and recreational fishing

MM BIO-7: In-Water Work Window (see Biological Resources)
MM BIO-8: Fish Screen on the Jet Sled Intake (see Biological Resources)
MM BIO-9: Cable Burial Surveys (see Biological Resources)
MM BIO-10: Cable Entanglement and Gear Retrieval (see Biological Resources)
MM BIO-11: Control of Marine Invasive Species (see Biological Resources)
MM REC-1: Advanced Local Notice to Mariners (see Recreation)
MM TRA-1: Marine Anchor Plan (see Transportation)

1.4.12 LIST OF ABBREVIATIONS AND ACRONYMS

Applicant = Bandwidth IG, LLC
BIO = Biological
BMP = best management practice
Cal OES = California Governor's Office of Emergency Services
CAM = California Administrative Metals
CARB = California Air Resources Board
CDFW = California Department of Fish and Wildlife
CEQA = California Environmental Quality Act
CNG = compressed natural gas
CSLC = California State Lands Commission
CUL = Cultural
DTSC = California Department of Toxic Substances Control
ESHA = environmentally sensitive habitat area
HAZ = Hazardous
HDD = horizontal directional drilling
HYD = Hydrology
LNG = liquefied natural gas
MM = mitigation measure
MMP = Mitigation Monitoring Program
NAHC = Native American Heritage Commission
NOI = Noise
NPDES = National Pollutant Discharge Elimination System
OCPs = organochlorine pesticides

OHWM = ordinary high water mark
PAHs = polycyclic aromatic hydrocarbons
PCBs = polychlorinated biphenyls
REC = Recreation
SCHMOP = Spill Contingency and Hazardous Materials Offshore Plan
SCHMTP = Spill Contingency and Hazardous Materials Terrestrial Plan
SF Bay = San Francisco Bay
SVOCs = semi-volatile organic compounds
SWEMP = Solid Waste Excavation and Management Plan
SWPPP = Stormwater Pollution Prevention Plan
TCR = Tribal Cultural Resources
TRA = Transportation
USCG = U.S. Coast Guard
USFWS = U.S. Fish and Wildlife Service
VHF-FM = very high frequency – frequency modulation
VOCs = volatile organic compounds
WHSP = Worker Health and Safety Plan

SAN FRANCISCO BAY FIBER OPTIC CABLES PROJECT

INITIAL STUDY(IS)/MITIGATED NEGATIVE DECLARATION (MND) RESPONSE TO COMMENTS

California Department of Fish and Wildlife (CDFW)

COMMENT 1 – REMOVE REFERENCE TO A WORK WINDOW FOR LONGFIN SMELT IN MITIGATION MEASURE (MM) BIO-6

"The ISMND [MND] has correctly identified Longfin smelt as potentially being present within the Project area. However, the ISMND [MND] incorrectly listed an in-water work window of June 1 through November 30 for Longfin smelt. Although there are likely times of the year that fewer Longfin smelt may be present in the Project area, the Department [CDFW] has determined that the avoidance of Longfin smelt in San Francisco Bay is not possible using a work window because of the various life stages that inhabit San Francisco Bay throughout the year. This work window, however, is appropriate for protection of Pacific herring and federally listed Steelhead trout."

To address this comment, CDFW recommends removing the reference to a work window for longfin smelt in MM BIO-6.

COMMISSION RESPONSE TO CDFW COMMENT 1

MM BIO-6 has been revised to remove longfin smelt on MND page 3-57 and in Appendix C (Mitigation Monitoring Program).

COMMENT 2 – MODIFY MM BIO-7: FISH SCREEN ON THE JET SLED INTAKE

"MM BIO-7 describes the potential of fish being entrained into the jet sled intake necessitating the need to install a protective fish screen. Although the installation of a screen is a measure to avoid and/or minimize potential take of fish species, there is still the potential for impacts to state listed species. Longfin smelt, specifically, would be of the most concern and are the most vulnerable given the preference to inhabit the lower portions of the water column."

To address this comment, CDFW recommends the Bandwidth IG, LLC (Applicant) consult with CDFW regarding the potential for a 2081(b) Incidental Take Permit and that this permit be added to Table 1.7-1 Anticipated Agencies with Review or Approval over Project Activities in the MND on page 1-11.

COMMISSION RESPONSE TO CDFW COMMENT 2

Discussions with CDFW regarding revisions to the planned design of the fish screen described in MM BIO-7 and the potential need for a 2081(b) Incidental

Take Permit occurred on May 12, 2023. CDFW has indicated that an Incidental Take Permit may not be needed depending on CDFW review of final screen design described in MM BIO-7. The CDFW Incidental Take Permit was added to Table 1.7-1 on MND page 1-11 with qualifying language that it may not ultimately be required. Additionally, text was added in the MND on page 3-57 to explain the on-going discussions with CDFW and the potential for an Incidental Take Permit. Commission staff has coordinated with CDFW staff to accurately capture their intended changes in the MND.

COMMENT 3 – MODIFY THE BIO-7: FISH SCREEN ON THE JET SLED INTAKE

"The Department [CDFW] does not agree with the screen conditions described within the MM. Given the potential of smaller life stages of longfin smelt being present, a slotted screen opening should be constructed with the smallest recommended size of 1.75 millimeters (mm) defined in the Department [CDFW] Fish Screen Criteria (attachment 1 [in the comment letter to the Commission])."

To address this comment, CDFW recommends that MM BIO-7, on MND page 3-58, describing the screen opening sizes be amended to be the following:

> "The screen surface will have a minimum open area of 27 percent, but open areas of 40 percent or greater are recommended. Round openings will not exceed 5/32 inch (3.96 millimeter). Square openings will not exceed 5/32 inch (3.96 millimeters) diagonally. ~~Slotted openings will not exceed 3/32 inch (2.38 millimeters)~~ Slotted openings will not exceed 0.0689 inches (1.75mm)."

COMMISSION RESPONSE TO CDFW COMMENT 3

MM BIO-7 has been revised in the MND on page 3-58 and in Appendix C to state that the slotted openings will not exceed 0.0689 inch (1.75 millimeters).

COMMENT 4 – ADDITION OF POTENTIAL IMPACTS TO WHITE STURGEON FROM PROJECT ACTIVITIES

"White sturgeon are a state species of special concern (SSC). Although the SSC designation does not have a formal legal status, species are designated to bring additional attention to conservation, research, and recovery of species that have previously been subject to population declines or are generally rare. SSCs should be considered during the environmental review process. CEQA (California Public Resources Code §§ 21000-21177) requires State agencies, local governments, and special districts to evaluate and disclose impacts from "projects" in the State. Section 15380 of the CEQA Guidelines indicates that

species of special concern should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein."

To address this comment, CDFW recommends that an analysis be included in the MND of potential impacts to white sturgeon from Project activities and that the MND add white sturgeon to Appendix D Table 2-1: Special-status Species and Critical Habitat Potentially Occurring or Known to Occur in the Action Area.

COMMISSION RESPONSE TO CDFW COMMENT 4

The Special-Status Marine Species and Fishes sections on MND pages 3-47 and 3-48 have been edited to include white sturgeon and explain that discussion of potential impacts to green sturgeon, included in Appendix D, is inclusive of white sturgeon due to the similarity of the two species. No edit was made to Table 2-1 in Appendix D because Appendix D only addresses federally-listed species, and white sturgeon is not a federally-listed species.

California Department of Transportation (Caltrans)

COMMENT 1– APPLY FOR AN ENCROACHMENT PERMIT

"The IS/MND [MND] mentions that the [A]pplicant would obtain an encroachment permit from Caltrans for the western cable landing site. As part of the encroachment permit submittal process, you may be asked by the Office of Encroachment Permits to submit a completed encroachment permit application package, digital set of plans clearly delineating Caltrans' ROW [Right-of-Way], digital copy of signed, dated and stamped (include stamp expiration date) traffic control plans, this comment letter, your response to the comment letter, and where applicable, the following items: new or amended Maintenance Agreement (MA), approved Design Standard Decision Document (DSDD), approved encroachment exception request, and/or airspace lease agreement."

To address this comment, Caltrans recommends the Applicant apply for an Encroachment Permit from Caltrans for the western cable landing site.

COMMISSION RESPONSE TO CALTRANS COMMENT 1

Caltrans already issued an approved Encroachment Permit (Permit No. 04-23-6-UJ-0260) to the Applicant on March 29, 2023, for crossing the State's right-of-way at the western cable landing site. The approved Encroachment Permit includes a description of the Alternative 3 route, which was analyzed in the MND. The MND analysis included four possible options for the western cable landing site:

- Proposed Western Cable Landing Site (along the Bay Trail at the southern corner of Lagoon Road and Sierra Point Parkway in Brisbane)
- Alternative 1 (south of the southern corner of Lagoon Road and Sierra Point Parkway in Brisbane)
- Alternative 2 (narrow parcel of land between the Bayshore Freeway and Sierra Point Parkway in Brisbane)
- Alternative 3 (narrow parcel of land between the Bayshore Freeway and Sierra Point Parkway in Brisbane).

East Bay Dischargers Authority (EBDA)

COMMENT 1–ANALYZE 96-INCH FORCE MAIN IN THE EASTERN CABLE LANDING SITE IN THE MND AND SHOW IT IN THE EASTERN CABLE LANDING SITE FIGURES

"EBDA owns and operates a transport pipeline system conveying treated wastewater effluent from Union City to San Leandro. EBDA's pipelines converge at the Marina Dechlorination Facility (MDF) at 14150 Monarch Bay Drive in San Leandro, where effluent is dechlorinated and discharged through a 7-mile deep water outfall to the San Francisco Bay.

EBDA has reviewed the California State Lands Commission (CSLC) [Commission]'s Initial Study/Mitigated Negative Declaration (IS/MND) [MND] for the San Francisco Bay Fiber Optic Cables Project. We note that the IS/MND [MND] does not discuss EBDA, EBDA's facilities, or the proposed [P]roject's potential impacts on EBDA's facilities. The proposed Eastern Cable Landing Site is directly on top of EBDA's 96-inch force main, just south of the MDF. We therefore believe that as the [P]roject is currently proposed, CSLC [Commission]'s conclusion in Section 3.19 that there will be no impact with regard to wastewater treatment infrastructure is incorrect. CSLC [Commission] should revise the IS/MND [MND] to analyze the proposed [P]roject's impacts on these facilities including, at a minimum, revisions to Figure ES-4 to include a depiction of the location of EBDA's facilities and analysis of the potential impacts to EBDA's facilities from the proposed [P]roject in Section 3.19."

In their comment, EBDA explained that this 96-inch force main takes treated wastewater from Union City to San Leandro to the north of the eastern cable landing site at the MDF so it can be dechlorinated and discharged through an outfall to the SF Bay. To address this comment, EBDA recommends revisions to the MND to identify the 96-inch force main on Figure ES-4 and include an analysis of potential impacts from the Project in Section 3.19.

COMMISSION RESPONSE TO EBDA COMMENT 1

The Applicant consulted with EBDA staff on May 11, 2023, to discuss the EBDA's 96-inch force main and identify potential protection methods. These conversations are still ongoing to design the Project to avoid any impacts to the EBDA's 96-inch force main. Figures ES-4 and 1.3-4 were revised to show the EBDA 96-inch force main. The MND Section 3.19 on pages 3-167, 3-168, and 3-169 was also revised to identify the 96-inch force main and evaluate potential Project impacts. The Project would have no impact on the force main because it would be avoided. The route of the horizontal directional drilling and associated 8-inch-diameter high-density polyethylene (HDPE) conduit installation would be designed to avoid the force main with adequate physical separation to meet both Commission and EBDA separation requirements.

COMMENT 2–OUTLINE HOW THE EBDA FORCE MAIN WOULD BE PROTECTED FROM PROJECT IMPACTS

"We further respectfully request that CSLC [Commission] consult with EBDA staff to outline how the EBDA force main will be protected during construction and long-term operation of this [P]roject. We believe that either the Eastern Cable Landing Site needs to be relocated, or other mitigation needs to be proposed to ensure protection of EBDA's critical infrastructure."

To address this comment, EBDA recommends consultation to identify protection methods during construction and long-term operation.

COMMISSION RESPONSE TO EBDA COMMENT 2

The Applicant consulted with EBDA staff on May 11, 2023, to discuss the Project and identify potential protection methods. The 96-inch force main would be located during construction, and the route of the horizontal direction drilling and installation of the 8-inch-diameter high-density polyethylene conduit would be designed to avoid the force main with adequate physical separation to meet both Commission and EBDA separation requirements. As a utility facility owner, consultation between EBDA and the Applicant will be ongoing through construction.