

5.16 Transportation and Traffic

TRANSPORTATION AND TRAFFIC

Would the project:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Significance criteria established by CEQA Guidelines, Appendix G.

5.16.1 Setting

Existing Traffic Volumes and Levels of Service

The 2011 San Francisco Congestion Management Program (SFCMP) establishes traffic level of service (LOS) standards consistent with State CMP-mandated criteria. In 1991, the SFCMP established the LOS standard at LOS E. Facilities that were already operating at a lower level of service (LOS F) at that time remain legislatively exempt from the LOS E standard. Within the Embarcadero-Potrero Project Area, Interstate 80 (I-80) between Fremont Street and U.S. Highway 101 (U.S. 101) is exempt from the LOS E standard (SFCTA, 2011).

SFCMP segments that are within a designated Infill Opportunity Zone (IOZ)³ are also exempt from LOS conformance requirements. All local roads within the study area (Folsom Street, Spear Street, and 23rd Street) are within IOZs (SFCTA, 2011).

³ Infill Opportunity Zones (IOZs) were designed to provide local flexibility within the state traffic requirement framework. To be deemed an infill opportunity zone, the area must meet four criteria: (1) the area must be zoned for infill residential or mixed-use development; (2) the area must be located within a 1/3 mile of a transit stop with 'frequent' service; (3) the area must be located in a county with a population of 400,000 or more; (4) infill opportunity zones can only be designated in areas where the community's general plan or specific plans calls for higher-density infill development, so that the resulting development in the infill opportunity zone will be consistent with the goals and objectives of existing planning documents (TransForm, 2013).

Highways

I-80 provides regional access to Embarcadero Substation and the northern onshore portion of the project. I-80 connects San Francisco to the East Bay via the San Francisco-Oakland Bay Bridge. I-80 and U.S. 101 provide regional access to the Peninsula/South Bay area. I-80 connects to downtown San Francisco surface streets at multiple intersections. The closest intersections to the project site occur at Fremont Street/Folsom Street, Fremont Street/Harrison Street, First Street/Harrison Street, and Essex Street/Harrison Street. I-80 is ten lanes (five lanes in each direction) across the Bay Bridge, and six to eight lanes across San Francisco. Caltrans (2011) indicates an annual average daily traffic volume of 123,000 vehicles per day on I-80 between the First Street/Harrison Street ramps and the San Francisco-Oakland Bay Bridge. According to the 2011 SFCMP, I-80 operates at LOS F in the PM peak in both directions between U.S. 101 and Fremont Street.

Interstate 280 (I-280) provides regional access to Potrero Switchyard and the southern onshore underground route. I-280 is a regional freeway that connects San Francisco with cities to the south on the Peninsula and the greater San Jose area, serving as a major commuter route between the two cities. The most direct access between Potrero Switchyard and I-280 is at the Cesar Chavez Street/25th Street interchange via Illinois Street. Caltrans (2011) indicates an annual average daily traffic volume of 59,000 vehicles per day on I-280 near the Cesar Chavez Street/25th Street interchange. According to the 2011 SFCMP, I-280 is operating at LOS E and D in the northbound and southbound directions, respectively, in the PM peak between near the Cesar Chavez Street/25th Street interchange.

Arterial Roads

The 2011 SFCMP designates Folsom Street as a two-way, four-lane, east-west, major arterial. Between First Street (to the west) and Spear Street (to the east), Folsom Street has three eastbound lanes and one westbound lane. West of First Street, Folsom Street transitions into one-way operation in the eastbound direction, serving as a primary eastbound connector to the I-80 freeway ramps in the South of Market area. According to the 2011 SFCMP, Folsom Street in the eastbound direction between First Street and The Embarcadero operates at LOS E in both AM and PM peak hours. Folsom Street is considered a Class III arterial, based on the 2000 Transportation Research Board, Highway Capacity Manual methodology (PG&E, 2012). The average daily traffic along Folsom Street in the eastbound direction is 15,600 vehicles per day (vpd) between Fremont Street and Beale Street (PG&E, 2012).

Folsom Street has a Class II bicycle lane (see below under Bicycle) between First Street and Spear Street, as well as sidewalks along both sides of the street. On-street parking is allowed on both sides of Folsom Street between Spear Street and Main Street, but only on the south side between Beale Street and First Street. Folsom Street has a designated bus lane in the westbound direction between the Transbay Temporary Terminal bus station and Essex Street to facilitate the efficient movement of buses between the Temporary Terminal and the Bay Bridge.

Local Roads

Spear Street is a two-lane, north-south, local road between Market Street to the north and a cul-de-sac just south of Harrison Street at its southern terminus. Spear Street operates one-way southbound between Market Street and Harrison Street, and changes to two-way operation south of Harrison Street. There are sidewalks and on-street parking on both sides of Spear Street along the Proposed Project route. The average daily traffic on southbound Spear Street between Folsom Street and Harrison Street is 5,700 vpd (PG&E, 2012).

23rd Street is a two-way, two-lane, east-west, local road between Pennsylvania Avenue to the west and the street's eastern terminus, which is just east of Potrero Switchyard at the DHL Warehouse gate. 23rd Street between Illinois Street and the DHL Gate has a sidewalk on the north side of the road and on-street parking on both sides. There are no bicycle facilities or transit routes on this segment of 23rd Street, as the road segment is primarily surrounded by industrial land use. Spear Street and 23rd Street were not included as monitored road segments in the 2011 SFCMP.

Parking Facilities

On-street parking occurs along most of the northern onshore portion of the Proposed Project route, with the exception of the north side of Folsom Street between Main Street and Fremont Street. Folsom Street between Main Street and Fremont Street includes a bus-only lane in the westbound direction, and on-street parking is restricted; 17 parking spaces are found between Beale and Main Streets on the northbound lanes, and 10 car and 4 motorcycle spaces are found between Spear and Main on the southbound direction. On-street parking within the downtown area is generally one-hour or two-hour metered or unmetered time-limited parking. Spear Street supports 51 car and 12 motorcycle parking spaces between Harrison and the cul-de-sac, and 31 car spaces including 21 on the north side and 10 on the south side between Harrison and Folsom.

There is on-street parking along both sides of 23rd Street east of Illinois Street towards the DHL Warehouse gate. On the south side, there are approximately nine parallel parking spaces. On the north side, parking is unmarked and approximately 50 to 55 spaces can be used depending on the parking distances and types of vehicles used.

Mass Transit

There are no public rail lines or stations immediately along the proposed transmission line route. North of the route, there are transit lines operated by Bay Area Rapid Transit (BART), Cal Train, and SF Municipal light rail service (Muni Metro) throughout downtown San Francisco and on The Embarcadero. The closest rail line to Potrero Switchyard is Muni Metro route T, which runs along Third Street.

Transbay Temporary Terminal

The Transbay Temporary Terminal is located along the block bounded by Beale Street to the southwest, Howard Street to the northwest, Main Street to the northeast, and Folsom Street to the southeast. The Transbay Temporary Terminal provides bus terminal facilities during demolition of the old Transbay Terminal between Howard and Mission Streets and during construction of the new multi-modal Transbay Transit Center (expected to open in 2017). The terminal serves SF Muni, Golden Gate Transit, AC Transit, SamTrans, WestCAT, and Greyhound. Between the Proposed Project construction hours of 7 a.m. and 8 p.m., there are approximately 1,380 bus trips that use Folsom Street to travel to and from the Transbay Temporary Terminal (SFCTA, 2012), and all bus traffic and taxi stand traffic accesses the temporary terminal from Folsom Street.

San Francisco Municipal Transit Agency (SF Muni Metro and Bus)

SF Muni is the transit division of the SFMTA, and provides local bus and light rail service within the project area. Seven Muni bus lines (38, 38L, 71, 71L, 76, 82X, and 108) run on the proposed northern transmission line route at Folsom Street. Between the proposed construction hours of 7 a.m. and 8 p.m., SF Muni provides approximately 735 bus trips to and from the Transbay Temporary Terminal via Folsom Street. There is one bus stop along the proposed route at Folsom Street between Main Street and Beale Street in the eastbound direction (SFMTA, 2010).

There are no transit routes along the proposed southern portion of the transmission line route at 23rd Street. The closest transit service to the proposed southern end of the project is the light rail, Muni Metro route T, along Third Street, with a station at 23rd Street and Third Street.

Golden Gate Transit

Golden Gate Transit provides regional transit service between San Francisco and northern Bay Area communities via the Golden Gate Bridge. Golden Gate Transit offers five different routes that serve the Transbay Temporary Terminal along the proposed northern transmission line route along Folsom Street. The routes include 10, 70, 80, 101, and 101X. Between the proposed construction hours of 7 a.m. and 8 p.m., Golden Gate Transit provides approximately 90 bus trips to and from the Transbay Temporary Terminal via Folsom Street. There are no bus stops that serve Golden Gate Transit routes along the proposed transmission line route (Golden Gate Bridge, Highway and Transportation District, 2012a).

Alameda-Contra Costa Transit District (AC Transit)

AC Transit provides regional transit service between San Francisco and the eastern Bay Area communities from Richmond to Fremont. AC Transit provides regional bus service to the Transbay Temporary Terminal via the I-80 Bay Bridge, Fremont Street, and Folsom Street. Most transbay service is peak-hour and peak-direction (west to San Francisco during the AM peak period and east from San Francisco during the PM peak period), with headways of 15 to 30 minutes per route. The AC Transit routes include 800, B, C, CB, E, F, FS, G, H, J, L, LA, LC, NL, NX, NX1, NX2, NX3, NX4, NXC, O, OX, P, S, SB, V, W, and Z. Between the proposed construction hours of 7 a.m. and 8 p.m., AC Transit provides approximately 450 bus trips to and from the Transbay Temporary Terminal via Folsom Street. There are no bus stops that serve AC Transit routes along the proposed transmission line route (AC Transit, 2012).

San Mateo County Transit District (SamTrans)

SamTrans provides regional bus service between San Francisco and the southern Bay Area communities from Daly City to Palo Alto. SamTrans provides regional bus service to the Transbay Temporary Terminal via Mission Street, Fremont Street, and Folsom Street, including routes KX, 292, 391, and 397. Between the proposed construction hours of 7 a.m. and 8 p.m., SamTrans provides approximately 50 bus trips along Folsom Street near the Transbay Temporary Terminal. There is a designated layover area for SamTrans buses on the south side of Folsom Street between Main Street and Beale Street (SamTrans, 2012).

Western Contra Costa Transit Authority (WestCAT)

WestCAT provides regional bus service between San Francisco and the Hercules Transit Center through a service called Lynx. The Lynx route serves the Transbay Temporary Terminal via the I-80 Bay Bridge and Folsom Street. Between the proposed construction hours of 7 a.m. and 8 p.m., WestCAT Lynx provides approximately 50 bus trips to and from the Transbay Temporary Terminal. No bus stops serve WestCAT routes along the proposed transmission line route (WestCAT, 2011).

Greyhound

Greyhound operates a terminal facility at the Transbay Temporary Terminal, providing regional passenger and package express bus service to Bakersfield, Fresno, Los Angeles, Modesto, Oakland, San Fernando, and San Jose (Greyhound, 2012). The Greyhound terminal building and driveway is located on the west side of Folsom Street between Main Street and Beale Street.

Bicycle

Existing bicycle facilities are part of the San Francisco Bicycle Network. Bikeways are typically classified as Class I, II, or III facilities. Class I bikeways are paths with exclusive right-of-way for use by bicycles and/or pedestrians. Class II bikeways are bike lanes striped within the paved areas of roadways and established for the preferential use of bicycles. Class III bikeways are signed bicycle routes where pavement markings called “sharrows” are used to inform bicyclists and motorists to share the road space (SFMTA, 2013).

One Class II bikeway is found in the project area, located along the proposed northern transmission line route at Folsom Street between First Street and Spear Street. This bike lane is part of the MTC Regional Bicycle Network. No bike lanes are present on Spear Street or 23rd Street. The closest bikeway to the proposed southern onshore underground alignment is a Class II bikeway on Illinois Street (San Francisco Bicycle Coalition, 2012).

Pedestrian Facilities

Pedestrian facilities are found along the entire northern portion of the Proposed Project route, including sidewalks along both sides of Spear Street and Folsom Street. All intersections along the proposed northern route are signalized with marked crosswalks. At the southern portion of the Proposed Project route, there is a sidewalk only on the north side of 23rd Street.

Marine Navigation, Transportation, and Traffic

The bay presents a number of hazards to navigation, such as strong tides, strong currents, and variable bottom depths, all of which confine large vessels to defined shipping lanes within the bay. Navigating the bay becomes more complex during periods of restricted visibility. Currents in the bay can reach over 4 knots at the Golden Gate; south of the Bay Bridge along the San Francisco waterfront these are generally under 2 knots.

Vessel traffic in the bay consists of a complex variety of inbound and outbound vessels, wholly in-Bay vessel movements, tugs, government vessels, passenger ferry ships, recreational boats, commercial and sport fishing boats, board sailors, and personal watercraft (jet skis) within a series of bays, channels and rivers that comprise the San Francisco Bay planning area (Harbor Safety Commission of the San Francisco Bay Area [HSC] 2012a). A tug escort is required for large vessels within the submarine cable area (HSC, 2012b). The project area is within the San Francisco Bay Regulated Navigation Area (RNA), as established by the U.S. Coast Guard (USCG), and vessel traffic is monitored continuously in the project area by the Vessel Traffic Service (VTS). The proposed submarine transmission line would be located west of the established north/south shipping lanes used by commercial and naval traffic that travel into and out of the bay. Designated anchorage areas are located east and southeast of the proposed submarine route (NOAA, 2013). In addition, an expanding ferry system makes over 85,000 trips annually, mainly to and from San Francisco in the central part of the bay. Because much of the bay shoreline is urbanized, recreational boating and the growing sports of board sailing and paddle sports are popular, with an estimated 20,000 boat berths around the bay (HSC, 2012a).

The Inland Navigation Rules Act of 1980 and International Regulations for Preventing Collisions at Sea (International Navigational Rules or 72 COLREGS) govern the “Rules of the Road” for boat traffic. Rule 9 of both the International and Inland Rules of the Road provides requirements for vessels navigating in the vicinity of narrow channels or fairways. Vessels and powerboats less than approximately 65 feet (20 meters), all sailboats, and vessels engaged in fishing are required not to impede the passage of a vessel

that can safely navigate only within a narrow channel or fairway. Additionally, a vessel shall not cross a narrow channel or fairway if such crossing impedes the passage of a vessel that can safely navigate only within that channel or fairway. A small craft must keep well clear and not hinder or interfere with the transit of larger vessels. Small craft and fishing vessels are required not to anchor or fish in narrow channels if large vessels or barges being towed are transiting. In San Francisco Bay, the Central Bay including the project area is considered to fall under Rule 9 (HSC, 2012a).

Three passenger ferry routes serving AT&T Park cross the Proposed Project submarine route:

- Golden Gate Transit operates the Giants Ferry passenger ferry route from the Larkspur Ferry Terminal (Golden Gate Bridge, Highway and Transportation District, 2012b). Passenger ferry service to AT&T Park operates between April and October for San Francisco Giants baseball home games. Each service operates one ferry boat along the route and picks passengers up at McCovey Cove, with service to AT&T Park usually arriving 20 to 40 minutes prior to game time. Ferries typically depart AT&T Park 20 minutes after the last out on weeknights, or 11:30 pm, whichever is first.
- Blue & Gold Fleet provides passenger ferry service to Oakland and Alameda Ferry Terminals (Blue & Gold Fleet, 2012).
- Vallejo Baylink (2012) is a passenger ferry service owned by the City of Vallejo and operated by Blue & Gold Fleet, and provides service to the Vallejo Ferry Terminal.

South Beach Harbor, located between Pier 40 and AT&T Park, is a full service marina, consisting of 700 slips with concrete docks and a 640-foot recreational and commercial Guest Dock. South Beach Harbor was built in 1986 by the San Francisco Redevelopment Agency on property leased from the Port of San Francisco. The marina does not have a fuel dock or public boat launch.

Air Transportation

There are no airports or heliports within the immediate vicinity of the project. The closest airports are San Francisco International Airport and Oakland International Airport, located approximately 8.5 miles south of the project and approximately 8 miles southeast of the project, respectively. A helipad is being constructed as part of the UCSF hospital complex west of Third Street.

Applicant Proposed Measures

PG&E proposes to implement measures during the design, construction, and operation of the Proposed Project to ensure it would occur with minimal environmental impacts in a manner consistent with applicable rules and regulations. Applicant Proposed Measures (APMs) are considered part of the Proposed Project in the evaluation of environmental impacts. CPUC approval would be based upon PG&E adhering to the Proposed Project as described in this document, including this project description and the APMs (see Table 5.16-1), as well as any adopted mitigation measures identified by this Initial Study.

Table 5.16-1. Applicant Proposed Measures (APMs) Related to Transportation

APM Number	Issue Area
Transportation	
APM TR-1	<p>Traffic Management Implementation. PG&E will follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. PG&E will coordinate construction traffic access at Embarcadero Substation and Potrero Switchyard with SFMTA during project construction. PG&E is a member of the California Joint Utility Traffic Control Committee, which published the California Joint Utility Traffic Control Manual (2010). PG&E will follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the CVC. These recommendations include provisions for safe access of police, fire, and other rescue vehicles.</p> <p>In addition, PG&E will apply for an Excavation Permit and a Special Traffic Permit from the City of San Francisco, and will also submit a Traffic Management Plan to the City as part of his application. The Traffic Management Plan will include the following elements and activities:</p> <ul style="list-style-type: none"> ▪ Consult with SF Muni at least one month prior to construction to coordinate bus stop relocation (as necessary) and to reduce potential interruption of transit service, especially to the Transbay Temporary Terminal. ▪ Include a discussion of work hours, haul routes, limits on lengths of open trench, work area delineation, traffic control and flagging. ▪ Identify all access and parking restrictions and signage requirements, including any bicycle route or pedestrian detours, should the need for these arise during final design. ▪ Lay out a plan for notifications and a process for communicating with affected residents and businesses prior to the start of construction. Advance public notification would include postings of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access points/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints. ▪ Include a plan to coordinate all construction activities with emergency service providers in the area at least one month in advance. Emergency service providers shall be notified of the timing, location, and duration of construction activities. All roads shall remain passable to emergency service vehicles at all times. ▪ Include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access. ▪ Specify the street restoration requirements pursuant to PG&E’s franchise agreements with the City and County of San Francisco. ▪ Identify all roadway locations where special construction techniques (e.g., horizontal boring, directional drilling, or night construction) would be used to minimize impacts to traffic flow. ▪ Develop circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. These plans will also address loading zones.
APM TR-2	<p>Marine Traffic Management Implementation. PG&E and its contractors will coordinate with the USCG VTS to establish a Vessel Safety Zone, and will provide information for the appropriate notices to mariners for cable laying work. The USCG requires 90-day notification for establishment of the Vessel Safety Zone. This information is then disseminated by the USCG to mariners and other parties.</p>

5.16.2 Environmental Impacts and Mitigation Measures

a. *Would the project cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume-to-capacity ratio on roads, or congestion at intersections)?*

LESS THAN SIGNIFICANT – CONSTRUCTION. Project construction would occur in a highly urbanized area and would therefore create impacts to public, private, and pedestrian transit in the project area. Some road closures and one-way traffic controls would be required to allow for certain construction activities and to maintain public safety. These closures and controls would decrease traffic flow and parking availa-

bility and potentially reduce LOS designations of streets in the project area, particularly on Folsom Street. Additionally, the proposed underground construction on Folsom Street could reduce the accessibility of the Transbay Temporary Terminal, and project construction could result in reroutes and delays of public transportation. While construction would create impacts, these impacts would be temporary in nature and would not change long-term traffic loads or patterns.

The submarine portion of the route would avoid potential conflicts with the urban arterials and public transit routes that would be affected by underground construction.

Work Areas. The width of the temporary construction work zone in public roadways would be approximately 25 feet. Open trench construction in paved roadways would be expected to proceed at approximately 150-300 linear feet per day. As identified in APM TR-1, steel plating would be placed over the trench to allow vehicular and pedestrian access to areas not under active construction. A construction corridor width of 25 feet would be used in most places for the construction of the duct bank, but additional space would be required at vault and boring locations. Equipment and vehicles generally would park on the street opposite the trench. Construction zones would occur entirely within the paved portion of City streets, and PG&E does not propose any sidewalk closures except for access to the Potrero Switchyard on the north side of 23rd Street, and the sidewalk may be temporarily closed along the south side of Folsom Street where the line would exit Embarcadero Substation. Traffic controls would also be implemented to direct local traffic safely around the work areas. PG&E would apply for a Special Traffic Permit from the SFMTA, which will include a Traffic Management Plan as part of the application, as detailed in APM TR-1.

Each of the following roadways is parallel to the proposed onshore underground alignment and may experience lane closures during construction of the project:

- Spear Street from its cul-de-sac next to The Embarcadero to Folsom Street
- Folsom Street from Spear Street to First Street
- 23rd Street from Illinois Street to the DHL Warehouse gate

In addition, the following roadways would be crossed by the Proposed Project route and may experience lane closures when transmission line construction occurs within the intersections along the Proposed Project route:

- Harrison Street
- Main Street
- Beale Street
- Fremont Street

Work areas would be temporary in nature, and impacts would not persist once construction is complete.

Staging Areas and Yards. Construction would involve use of equipment staging sites, laydown yards, equipment and material storage areas, and areas to temporarily store excavated materials near the substations and land routes; see Figure 4-5 (PG&E, 2013). Commercially available off-site office and yard space may also be used. Traffic associated with use of these areas would be temporary in nature, and impacts would not persist once construction is complete.

HDD Transition Areas. Horizontal direction drilling, or HDD, is proposed at both the northern and southern transition areas from the onshore to marine segments. The work area for the northern HDD landing site would be approximately 500 feet by 60 feet between Harrison Street and the Spear Street cul-de-sac, and cable pulling would occur in areas 75 feet by 12 feet at manholes spaced 1,800 feet apart. The

use of HDD would ensure that vehicle, rail, bicycle, and pedestrian traffic along The Embarcadero would not be disrupted during construction. The work area for the southern HDD landing site would be 800 feet by 50 feet along 23rd Street, and an additional 800 feet of 23rd Street would be used for staging, which would extend the temporary lane closure and loss of parking between Illinois Street and the shoreline. Traffic would be disrupted, but very low levels of traffic occur in the vicinity of the proposed HDD activities. At both northern and southern HDD transition areas, excavation for bore pits and splice vaults would require a work zone to be closed to the public for approximately six weeks.

The northern submarine/underground transition landing zone would be located on the easternmost block of Spear Street, which dead-ends directly underneath the Bay Bridge (I-80). This block of Spear Street is a cul-de-sac with no through traffic. The proposed location of the northern HDD transition and bore pit would be configured to maintain access for residents and minimize conflicts with residential driveways on the south side of Spear Street. Approximately 23 metered parking spaces on the south side of Spear Street would be closed during the HDD construction.

The southern submarine/underground transition landing zone would be located in 23rd Street approximately 200 feet from shore, near the DHL Warehouse, in an area with no through traffic. The southern HDD transition and work zone would not block access for DHL Warehouse employees or trucks. The temporary lane closures and the increased disruption to vehicles, bicyclists, and transit riders as a result of these closures would be reduced to a less-than-significant level by the implementation of APM TR-1.

Lane Closures due to Trenching. The trenching work on both the northern and southern underground segments would occupy approximately 1,500 feet of street lane at any time during which the lane would be closed to traffic along that distance. Trenching would progress at an approximate rate of 50 feet per day. The total surface of the trench plates over backfilled areas would vary between approximately 100 to 500 feet in length each day until it has reached a surface large enough (typically 300 feet) for efficient pavement restoration. Trench paving is planned to occur once a week to minimize the amount of trench plates on the road. The total duration of trench excavation and manhole installation is estimated to take approximately four months along the northern underground segment, and two months along the southern underground segment. Lane closures would also be required for 13 days at each of the seven vault locations, including one in Folsom Street between Fremont and Main Streets, and three at each HDD transition in Spear Street and 23rd Street.

One traffic lane would remain open at all times on Spear Street between the cul-de-sac and Harrison Street, although a flagger may be required to maintain two-way traffic. Spear Street operates one-way southbound between Folsom Street and Harrison Street, so no flagger would be required.

Final pavement restoration would be scheduled after the cable is fully installed and operative. The City would require a full lane of pavement restoration which in turn would require a two lane closure over a 1,500-foot work area. Final paving would take one week to complete the northern underground segment and two days to complete the southern underground segment.

Folsom Street between Spear Street and First Street is a two-way roadway, with three travel lanes eastbound and one travel lane westbound. Since final design is ongoing, PG&E has not specified whether the north or south the side of Folsom Street would be affected by the temporary closure.

The north side of Folsom Street has one westbound travel lane, and this lane is for exclusive bus use between the Transbay Temporary Terminal and First Street. The south side of Folsom Street has on-street parking and a Class II bicycle lane. In addition, a number of transit routes run along Folsom Street between Main Street and First Street (with the Transbay Temporary Terminal as a destination), including routes operated by six transit agencies (SF Muni, Golden Gate Transit, AC Transit, SamTrans, WestCAT,

and Greyhound). The temporary lane closures and the increased disruption to vehicles, bicyclists, and transit riders as a result of these closures would be less than significant with the implementation of APM TR-1, which would ensure the following, among other requirements in a Traffic Management Plan that would be approved as part of PG&E's Special Traffic Permit from SFMTA: coordination of bus stop relocation (as necessary); identification of all access and parking restrictions and signage requirements, including any bicycle route or pedestrian detours; plan for notifications and a process for communicating with affected residents and businesses; coordination with emergency service providers and assurance that all roads shall remain passable to emergency service vehicles at all times; requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access; and development of circulation and detour plans to minimize impacts to local street circulation.

Marine Traffic. During the construction of the underwater portion of the transmission line, a cable-laying barge positioned by tugboats would be present on the bay surface above the submarine route. Barges have right-of-way under maritime rules because of their limited maneuverability. Typically, the barge would be pulled into position via commercial tugboats, and the barge anchors would be positioned to allow the barge to kedge between them along the cable route. (Kedging is a process by which a ship is moved slowly along the surface of the water towards the fixed point of the anchor.) The proposed submarine route would be nearer to shore than and located west of the established north/south shipping lanes used by commercial and naval traffic, and designated anchorage areas are located east and southeast of the proposed submarine route. As a result the project would have no effect on the shipping lanes or anchorage areas.

Crews would need to board crew boats from an existing commercial marina (e.g., at the Port of Oakland or the Yerba Buena Island Marina) and be taken to the designated anchoring locations of other project vessels. Given that anchoring locations vary each day based on local traffic, project vessels and barges would be directed daily regarding anchoring locations via the Vessel Traffic Service of San Francisco and the USCG. Specific anchoring points or locations would become known during project implementation.

The current schedule estimate would be for offshore cable-laying activities to occur over a six-month time period. The actual duration of the cable laying would be relatively short (a day or two for each of the three cables), plus mobilization and demobilization. Cable-laying barge, tug boats, and ancillary boats would be present for a few weeks. Vessels and equipment, including dive boat and divers, would also be present to prepare the HDD exit and when the HDD exits and cable are tied to the HDD head and the cable is pulled back. The pipe and casing of the HDPE conduit would be connected to a small boat and dragged from 23rd Street until the pipe is floating on the water, and tugged along the surface of the water to each HDD exit. These activities and all vessel operations would need to comply with applicable navigational codes and standards. The operation would be coordinated with VTS, a Vessel Safety Zone would be established, and movements would be coordinated with and monitored by the VTS. The VTS Notices to Mariners would be used to continuously advise vessel operators of the cable laying operation. Vessels involved in the cable laying would operate according to 72 COLREGS.

The measures included in APM TR-2 above, include coordination with USCG to establish a Vessel Safety Zone, and also to provide information on the cable laying work for dissemination by the USCG to mariners and other parties. Discussions with USCG personnel in July 2012, confirm that coordination between PG&E and the USCG, as required under APM TR-2, would avoid any conflicts with preexisting or ongoing dredging, passenger ferry service to/from China Basin (for San Francisco Giants home games), as well as with other marine traffic, including recreational boats, commercial and sport fishing boats, board sailors, and personal watercraft (jet skis). Given the lack of potential conflict with shipping lanes

and anchorage areas, the planned coordination with VTS and USCG under APM TR-2, short-term construction impacts to marine traffic would be less than significant.

NO IMPACT – OPERATION AND MAINTENANCE. To facilitate proper equipment operation and safety for the new and existing facilities, current project operation and maintenance activities would continue at Embarcadero Substation and Potrero Switchyard. A Distributed Temperature Sensing system of fiber optics integrated in the body of the cable would be used to monitor the submarine and underground cable on a routine basis. Aside from contracted stand-by marine transportation and technical support, no additional staff would be hired by PG&E after the transmission project is energized and placed into service. No substantial increase in traffic or traffic-related impacts would occur due to operation and maintenance activities.

b. Would the project cause, either individually or cumulatively, a level-of-service standard established by the county congestion management agency for designated roads or highways to be exceeded?

LESS THAN SIGNIFICANT – CONSTRUCTION. Construction-related traffic would be temporary and therefore would not result in any long-term degradation in operating conditions or LOS on any roadways.

The primary off-site impacts from the movement of construction trucks would include short-term and intermittent effects on traffic operations due to slower movements and larger turning radii of the trucks compared to passenger vehicles. However, the majority of the Proposed Project route would be located near and on major arterials where occasional slow or larger turning radius movements would not substantially diminish the level of service.

Traffic-generating construction activities related to the Proposed Project would consist of the daily arrival and departure of construction workers to each work site; trucks hauling equipment and materials to the work site; worker travel from off-site office and yard sites to the project site; and the hauling of excavated spoils from and import of new fill to each work site. During construction, the approximate number of construction personnel for each task would be:

- 30 construction personnel for excavation and conduit installation
- 8 truck drivers during conduit installation using two excavation crews
- 20 construction personnel for onshore cable installation
- 15 construction personnel for the HDD installations
- 25 construction personnel for the submarine cable installation

Based on these estimated crew sizes, construction worker trips for traveling to and from each work site would not exceed about 40 round trips (80 one-way trips) per day.

Construction would typically occur between 7 a.m. and 8 p.m., or during times set by the SFDPW in the Excavation Permit. If trenching work could cause traffic congestion, the City may require nighttime work to minimize traffic disruption.

According to the 2011 SFCMP, eastbound Folsom Street between First Street and The Embarcadero operates at LOS E during both the AM and PM peak hours. Temporary lane closures along this segment of Folsom Street may cause the roadway to operate at LOS F conditions. However, all local roads within the study area, including the affected segment of Folsom Street, are defined in the 2011 SFCMP as being within an Infill Opportunity Zone, and therefore exempt from LOS standards. With coordination of activities through the SFDPW and SFMTA reviews, the potential impact of adversely affecting the roadway LOS in during project construction would be less than significant.

NO IMPACT – OPERATION AND MAINTENANCE. To facilitate proper equipment operation and safety for the new and existing facilities, current project operation and maintenance activities would continue at Embarcadero Substation and Potrero Switchyard. No new staff would be required for maintenance or operations at the new Potrero Switchyard or at Embarcadero Substation or along the underground transmission line segments; therefore there would be no impacts to any roadway LOS.

c. *Would the project result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?*

NO IMPACT. No change in air traffic patterns would occur as a result of the project, so there would be no impact. No airports or airport runways are found within 20,000 feet of the project, and therefore Federal Aviation Administration 14 CFR 77 regulations regarding obstructions within that distance would not apply to the project.

d. *Would the project substantially increase hazards because of a design feature or incompatible uses?*

LESS THAN SIGNIFICANT – CONSTRUCTION. Heavy equipment operating adjacent to or within a road right-of-way could increase the risk of accidents. Construction-generated trucks on the affected city streets would interact with other vehicles, and potentially create hazards. Potential conflicts also could occur between construction traffic and bicyclists and pedestrians, and potential short-term hazards could be associated with temporary lane closures during construction. Construction traffic related impacts would be reduced with implementation of APM TR-1. Under APM TR-1, PG&E would: coordinate construction traffic access at Embarcadero Substation and Potrero Switchyard with SFMTA during project construction; follow the recommendations in the California Joint Utility Traffic Control Manual (2010) regarding basic standards for the safe movement of traffic on highways and streets; apply for an Excavation Permit and a Special Traffic Permit from the City of San Francisco. PG&E would submit a Traffic Management Plan to the City as part of its Special Traffic Permit application, which would include required elements, such as: coordination with the City; notification processes for affected residents and businesses; notification of emergency service providers of the timing, location, and duration of construction activities; requirement for roads to remain passable to emergency service vehicles at all times; and circulation and detour plans to minimize impacts to local street circulation. The Proposed Project would not involve any new permanent design features that would be hazardous or incompatible because, upon completion, the cable would be underground.

To avoid creating hazards within franchise in city streets and areas owned by Caltrans (for the portion under the Bay Bridge), PG&E would obtain all necessary road encroachment permits prior to construction and would comply with all the applicable conditions of approval. PG&E's Traffic Management Plan (to be prepared in coordination with the City) would govern how project construction would comply with roadside safety protocols, so as to reduce the risk of accidents. With these measures, the impact would be less than significant.

NO IMPACT – OPERATION AND MAINTENANCE. An entrance to the new Potrero Switchyard would be constructed off 23rd Street. This entrance would be constructed in the middle of the block on a straight street with very low traffic. Because it would be used infrequently and not cause substantial disruption to existing traffic, it would not create a hazard, and there would be no impact.

The proposed submarine route would be closer to shore and west of the established north/south shipping lanes used by commercial and naval traffic, and designated anchorage areas are located east and southeast of the proposed submarine route. As a result the project would have no effect on the shipping

lanes or anchorage areas. Additionally, the cable would be buried under seafloor sediments, so it would not create a hazard or otherwise impact other marine traffic in the area.

e. Would the project result in inadequate emergency access?

LESS THAN SIGNIFICANT. Routes for emergency vehicles would be maintained throughout project construction, as required in APM TR-1. The Proposed Project activities could have the potential, in rare circumstances, to slow emergency response vehicles (for example, a slow-moving delivery truck could occupy momentarily a lane or space needed for emergency vehicle access). PG&E would minimize this potential impact through notifications to emergency service providers and other measures included in APM TR-1, and incorporated in PG&E Traffic Management Plan that is part of PG&E's Excavation Permit and Special Traffic Permit approved by the City of San Francisco. Implementation of APM TR-1 would ensure that this impact would be less than significant.

f. Would the project result in inadequate parking capacity?

LESS THAN SIGNIFICANT. Construction of the project could result in closure of parking spaces on Spear Street, Folsom Street, and 23rd Street. These closures would be temporary in nature and would not constitute a long-term loss of parking capacity. Closures would not occur simultaneously, and specific closure areas would be related to the rate of in-street construction. The number of parking closures at a given time would be very small relative to the parking capacity in the Rincon Hill and Central Waterfront areas. Parking capacity would return to normal conditions once project construction is complete.

As specified under APM TR-1, PG&E would obtain all necessary road permits prior to construction and would comply with all the applicable conditions of approval. PG&E would notify affected residents and businesses of construction and road/parking closures prior to construction, and PG&E would provide a toll-free telephone number for receiving questions or complaints during construction. Temporary parking closures would also be signed appropriately, as required in PG&E's Traffic Management Plan (to be prepared in consultation with the City) Short-term impacts to parking capacity would be less than significant.

g. Would the project conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

LESS THAN SIGNIFICANT. The Class II bike lane along Folsom Street from First Street to Spear Street would be temporarily affected by project construction. Lane closures could temporarily detour bikeways, but impacts related to construction would be short-term and temporary. Alternate bike routes are available nearby on Market Street and Townsend Street.

The Proposed Project would have no permanent impact on alternative transportation. Construction zones would occur entirely within the paved portions of streets, and PG&E does not propose any sidewalk closures except for access to the Potrero Switchyard. Project construction would cause disruptions to bus access to and from the Transbay Temporary Terminal at Folsom Street between Main Street and Beale Street. Golden Gate Transit, AC Transit, Greyhound, WestCAT, SF Muni, and SamTrans currently use the Transbay Temporary Terminal. Bus routes on streets would need to be temporarily and slightly detoured around work crews. The following SF Muni lines currently run on Folsom Street in the project area: 38, 38L, 71, 71L, 76, 82X, and 108. There is one bus stop along the proposed underground construction route at Folsom Street between Main Street and Beale Street in the eastbound direction, which serves SamTrans lines KX, 292, 391, and 397. This bus stop may need to be temporarily relocated. Although project construction could result in the temporary relocation of the bus stop on the south side

of Folsom Street, between Main Street and Beale Street, once construction becomes complete, buses and other public transit options would operate as normal.

As specified under APM TR-1, PG&E would obtain all necessary road permits prior to construction and would comply with all the applicable conditions of approval. PG&E's Traffic Management Plan (to be prepared in consultation with the City) would establish methods for minimizing construction effects on transit service and bike facilities to ensure that this impact would be less than significant.