6.15 TRANSPORTATION AND TRAFFIC

	Potentially Significant Impact	*Less Than Significant With Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
Would the project:				
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)?	☐	☒	☐	☐
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
e) Result in inadequate emergency access?	☐	☒	☐	☐
f) Result in inadequate parking capacity?	☐	☒	☐	☐
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☒	☐	☐

6.15.1 Approach to Analysis

Assessment of impacts related to construction of project components involved evaluation of the effects of the project on traffic and circulation resulting from project increases in traffic, loss of travel lanes and parking areas, disruptions of public transit, and potential safety effects associated with construction. Construction characteristics, including proposed manpower and equipment, location of construction, and rate of construction were determined on the basis of information

provided by Metromedia. Conservative assumptions were used to determine the potential number of vehicles required for project construction.

6.15.2 Impact Significance Criteria

Determining the significance of traffic impacts is based on the above environmental checklist. Project activities that would create a significant increase in traffic, exceed adopted traffic service standards, increase traffic hazards, result in inadequate emergency access, or exceed parking capacity may result in a significant impact. Typically, these would be project activities that generate or attract traffic at a particular location or that temporarily obstruct traffic.

6.15.3 Impact Mechanisms

Traffic impact mechanisms would be: (1) temporary increases in traffic along route segments due to construction workers and construction vehicles during cable installation and POP construction and (2) temporary traffic obstructions during construction activities in road rights-of-way.

6.15.4 Impact Assessment

Traffic-generating construction activities related to conduit and cable installation consist of daily commuter trips of construction workers at each work site; truck trips for hauling equipment and materials to the work site; and truck trips for hauling of excavated spoils from the work site. The following identifies the number of construction workers expected with each type of construction spread (i.e., each construction site along the alignment):

- Street Trench 10-person crew
- Cable Pulling 8-person crew
- Directional Drilling 8-person crew
- Clear and Grub 2-person crew
- Dirt Trench 8-person crew

Based on these estimated crew sizes, and assuming some overlap in construction activities at each work site, construction worker trips traveling to and from each work site are not anticipated to exceed 20 round trips (40 one-way trips) per day.

As discussed in Chapter 3, the trench size for open-cut installation in paved roadways would be approximately 1.5 feet wide by 5 feet deep. Open trench construction in paved roadways is expected to occur at the following average rates, depending on location and conditions:

- Metropolitan Streets 85 linear feet per day
- Industrial and Residential Streets 200 linear feet per day.

Using the above trench size and construction rate estimates, and assuming 50 percent backfilling of soil, at each construction spread, it is estimated that up to 30 cubic yards (cy) of trench spoils would be hauled off-site daily, and a similar volume of new fill would be imported daily. Using an average haul load of 10 cy per truck, and assuming no backhauling, this would amount to up to six truck haul round trips (12 one-way trips) generated per workday. Accounting for delivery of conduit, cable, and other construction components (which would be shipped on demand to the

project site throughout the construction period), the total number of off-site construction truck trips would be approximately 12 round trips (24 one-way trips) per workday.

The rate of construction for dirt trenching (e.g., in railroad rights-of-way) would be greater than for paved roadways. However, since the potential for reuse of native soil would be greater for dirt trenching than for trenching in streets, off-site hauling of soil in these locations would be less than that expected for paved roadways. Off-site vehicle trips generated at locations where special construction techniques are proposed (i.e., directional drilling) for crossing major roads, creeks, or other conditions where surface disturbance may need to be minimized, would also be less than that generated by trenching in paved roadways.

6.15.4.1 San Francisco Bay Area Network

a. Would the proposed 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 number of vehicle trips, volume-to-capacity ratio on roads, or congestion at intersections)? Or

b. Would the proposed project cause an exceedance, either individually or cumulatively, of a designated roadway level-of-service standard established by the county congestion management agency?

Impact TRANS-1: New conduit installation along or across streets would reduce the number of, or available width of, travel lanes on roads, resulting in temporary disruption of traffic flows and increases in traffic congestion. (Less than Significant with Identified Mitigation)

The proposed new build segments follow along and across, a number of roadways. Conduit installation activities would temporarily disrupt existing transportation and circulation patterns in the vicinity. Impacts would include direct disruption of traffic flows and street operations. Lane blockages or street closures during conduit installation would result in a reduction in travel lanes and curb parking. New build conduit installation work along or across high traffic volume arterials could significantly impact traffic flow and operations at these locations.

A 12-foot-wide construction easement is required for cable installation trenching in public roadways. As specified under Construction Vehicle Trip Generation, above, open trench construction along paved roadways would be expected to proceed at a rate of about 85 linear feet per day for metropolitan streets, and 200 linear feet per day for residential and industrial streets. Consequently, impacts would be relatively brief at any one location along the cable alignment, in most cases, less than one workweek.

Pacific Bell Structure. Table J-1 in Appendix J identifies all roadways in which new build construction for the Pacific Bell Structure would occur along or across. As necessary, special construction techniques (e.g., directional boring) are proposed as needed to install conduit beneath freeways, major arterials or intersections, and at-grade railroad crossings.

Metromedia Backbone. The alignment of the Metromedia Backbone follows solely along the Caltrain right-of-way between the cities of San Francisco and San Jose via the Peninsula (Peninsula Backbone), and along the Union Pacific right-of-way between Oakland and San Jose (East Bay Backbone). Therefore, as described below, potential disruptions to roadways from cable installation would be limited to where the alignments cross roadways.

Peninsula Backbone. Table J-2 in Appendix J identifies all roadway crossings along the Caltrain right-of-way for the Metromedia Peninsula Backbone, and the proposed construction method at each crossing. As shown in Table J-2, directional drilling would occur at 28 of the 32 at-grade crossings, and at the 32 crossings with a road underpass (i.e., railroad overcrossing), thereby avoiding surface road disruption and maintaining two-way travel on these cross roads during construction. In addition, travel on freeways and all other roads that cross over the Caltrain right-of-way (50 locations) would be unaffected by proposed construction and would remain open. Thus, construction-related disruption of public roads and traffic flows would be minimal.

East Bay Backbone. Table J-3 in Appendix J identifies all roadway crossings along the UPRR right-of-way for the East Bay Backbone, and the proposed construction method at each crossing. As shown in Table J-3, directional drilling would occur at 80 of the 85 at-grade crossings, and at all 20 crossings with a road underpass (i.e., at railroad overcrossings), thereby avoiding surface road disruption and maintaining two-way travel on these cross roads during construction. In addition, travel on freeways and all other roads that cross over the UPRR right-of-way (14 locations), as well as BART lines that cross over the UPRR right-of-way (two locations), would be unaffected by proposed construction and would remain open. Thus, construction-related disruption of public roads and traffic flows would be minimal.

Mitigation Measure TRANS-1: Obtain and comply with local and state roadway encroachment permits and railroad encroachment permits.

As deemed necessary by the governing jurisdiction, roadway encroachment permits will require the contractor to prepare a traffic control plan in accordance with professional engineering standards prior to construction. The traffic control plan could include the following requirements:

- Identify all roadway locations where special construction techniques (e.g., directional drilling or night construction) would be used to minimize impacts on traffic flow.
- Develop circulation and detour plans to minimize impacts on local street circulation. This may include the use of signing and flagging to guide vehicles through or around the construction zone.
- Schedule truck trips outside of peak morning and evening commute hours.
- Limit lane closures during peak hours to the extent possible.
- Use haul routes minimizing truck traffic on local roadways to the extent possible.
- Include detours for bicycles and pedestrians in all areas potentially affected by project construction.
- Install traffic control devices as specified in the California Department of Transportation Manual of Traffic Controls for Construction and Maintenance Work Zones.
- Develop and implement access plans for highly sensitive land uses such as police and fire stations, transit stations, hospitals, and schools. Access plans would be developed in cooperation with the facility owner or administrator. To minimize disruption of emergency vehicle access, ask affected jurisdictions to identify detours, which will then be posted by the contractor. Notify the facility owner or operator in advance of timing, location, and duration of construction activities and locations of detours and lane closures.

- Store construction materials only in designated areas.
- Coordinate with local transit agencies for temporary relocation of routes or bus stops in works zones, as necessary

Impact TRANS-2: Construction would result in short-term increases in vehicle trips by construction vehicular activities and construction workers. (Less than Significant with Identified Mitigation)

Construction-generated traffic would be temporary and therefore would not result in long-term degradation of operating conditions or level of service on project roadways. The primary off-site impacts from movement of construction trucks would include a short-term and intermittent reduction in roadway capacities due to slower movements and larger turning radii of trucks compared to passenger vehicles. The majority of proposed new build construction for the San Francisco Bay Area Network is located close to major arterials, state routes, and freeways. Use of these routes would minimize project effects on traffic flow near the project sites.

As discussed under Construction Vehicle Trip Generation, above, installation of fiber optic conduit could generate up to 20 off-site construction worker vehicle round-trips (40 one-way trips) and 12 off-site truck round trips (24 one-way trips) per day per construction spread. These project-generated trips would not be substantial relative to background traffic conditions on all arterials and freeways, and would fall within the daily fluctuations of traffic for these roadways. Therefore, this short-term increase in vehicle trips would not significantly affect level of service and traffic flow on roadways. Traffic generated by construction activities would be mostly felt on minor roadways serving construction sites.

Level of service standards for roadways that are part of county Congestion Management Program (CMP) networks are intended to regulate long-term traffic increases from operation of new development, and do not apply to temporary construction projects. As such, the project would not exceed level-of-service standards established by the applicable Congestion Management Agency for designated CMP roadways.

It is possible that multiple construction spreads could occur for construction of the San Francisco Bay Area Network. However, multiple trenching construction spreads, if they were to occur, are expected to be an average of 5 miles apart, and cable-pulling spreads would be an average of 40 miles apart. Thus, trucks and other vehicles would typically gain access to construction sites from different sets of roadways and intersections. Since new build would be distributed throughout the San Francisco Bay metropolitan area, potential combined traffic effects of individual construction projects would be less than significant.

Proposed hours of construction are Monday through Saturday, 7:00 A.M. to 5:00 P.M. Most project-related hauling and deliveries would be dispersed throughout the day, thus reducing the effect on peak-hour traffic. Project truck traffic occurring weekdays from 7:00 A.M. to 9:00 A.M. and 4:00 P.M. to 6:00 P.M. would coincide with peak-period traffic, and therefore, would have the greatest potential to impede traffic flow.

Mitigation Measure: Metromedia would implement Mitigation Measure TRANS-1.

c. Would the proposed 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?

As discussed in Chapter 3, Project Description, the project would involve only belowground installation of fiber optic conduit and cable. Therefore, no impact on air traffic patterns or increase in safety risks would occur as a result of the project.

d. Would the proposed project substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact TRANS-3: New conduit installation along roadways and railroad rights-of-way would temporarily increase the potential for accidents. (Less than Significant with Identified Mitigation)

Heavy equipment operating adjacent to or within a railroad or road right-of-way would increase the risk of accidents. Construction-generated trucks on project area roadways would interact with other vehicles. Potential conflicts could also occur between construction traffic and bicyclists and pedestrians, particularly in urban areas and residential neighborhoods.

Mitigation Measure: Implement Mitigation Measure TRANS-1.

e. Would the proposed project result in inadequate emergency access?

Impact TRANS-4: New conduit installation along or across streets would affect emergency access. (Less than Significant with Identified Mitigation)

As discussed in Impact TRANS-2, the project would have temporary effects on traffic flow, particularly for routes in road rights-of-way. Conduit installation along or across streets and the temporary reduction of travel lanes could result in delays for emergency vehicle access near the work sites.

Mitigation Measure: Implement Mitigation Measure TRANS-1.

f. Would the proposed project result in inadequate parking capacity?

Impact TRANS-5: Construction for all project components would generate a temporary demand for parking spaces for construction worker vehicles; in addition, cable installation would temporarily displace existing on-street parking on a number of streets. (Less than Significant with Identified Mitigation)

The project would create limited new, temporary parking demand for construction workers and construction vehicles as crews move along the installation alignment. As discussed in Impact TRANS-1, the project would not generate a substantial number of construction workers at any one location along the alignment; therefore, the amount of parking required would not be significant. Construction along the alignment would also temporarily displace existing on-street parking on a number of streets. However, given the proposed rate of new conduit installation, on-street parking impacts would be relatively brief at any one location along the alignment.

The only permanent above ground facilities resulting from the project would be unstaffed POPs that would require only occasional inspection visits. Sufficient area would exist at each station for parking during such visits.

Mitigation Measure: Implement Mitigation Measure TRANS-1.

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

Impact TRANS-6: Cable installation could temporarily disrupt bus service along the proposed alignment. (Less than Significant with Identified Mitigation)

The project will have no lasting impact on demand for alternative transportation or on alternative transportation facilities. However, cable construction could disrupt access to bus stops and park-and-ride lots along the alignments, and slow bus movements. Bus routes on streets may need to be temporarily detoured, and bus stops temporarily relocated.

Mitigation Measure: Implement Mitigation Measure TRANS-1.

6.15.4.2 Los Angeles Basin Network

Potential transportation impacts associated with the Los Angeles Basin Network would be similar in nature to Impacts TRANS-1 through TRANS-6 discussed above for the San Francisco Bay Area Network. Table J-4 in Appendix J identifies all arterial roadways in which new build construction for the Los Angeles Basin Network would occur along or across. As necessary, special construction techniques (e.g., directional boring) would be used as needed to install conduit beneath freeways, major arterials or intersections, and at-grade railroad crossings.

a. Would the proposed 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)? Or

b. Would the proposed project cause an exceedance, either individually or cumulatively, of a designated roadway level-of-service standard established by the county congestion management agency?

The impact and mitigation would be the same for the Los Angeles Basin Network as for the San Francisco Bay Area Network. Please refer to Impacts TRANS-1 and TRANS-2.

c. Would the proposed 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?

As discussed in Chapter 3, Project Description, the project would involve only belowground installation of fiber optic conduit and cable. Therefore, no impact on air traffic patterns or increase in safety risks would occur as a result of the proposed project.

d. Would the proposed project substantially increase hazards because of a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The impact would be the same for the Los Angeles Basin Network as for the San Francisco Bay Area Network. Please refer to the discussion for Impact TRANS-3.

e. Would the proposed project result in inadequate emergency access?

The impact would be the same for the Los Angeles Basin Network as for the San Francisco Bay Area Network. Please refer to the discussion for Impact TRANS-4.

f. Would the proposed project result in inadequate parking capacity?

The impact would be the same for the Los Angeles Basin Network as for the San Francisco Bay Area Network. Please refer to the discussion for Impact TRANS-5.

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

The impact would be the same for the Los Angeles Basin Network as for the San Francisco Bay Area Network. Please refer to the discussion for Impact TRANS-6.