### 2.2.4 Public Health and Safety

This section addresses the potential for public exposure to unsafe situations associated with implementation of the proposed project and the potential for disruption to emergency response services provided by the police and fire departments.

#### 2.2.4.1 Affected Environment

The primary police and fire services for the Port are provided by the City of Long Beach. The Long Beach Police Department provides police protection within the vicinity of the Port. Police services within the project vicinity are also supported by the POLB Harbor Patrol. The two closest police stations to the Port are the South Patrol Division, located at Broadway and Magnolia Avenue, and the West Patrol Station, at Santa Fe Avenue and PCH. The South Patrol Division is responsible for responding to calls for service.

The Harbor Patrol supplements City police protection and provides 24-hour service to Port property through radio-directed patrol cars. Emergency response time is approximately 3 to 5 minutes.

The LBFD provides fire protection within the City of Long Beach, including the Port. The Operations Bureau of the LBFD is responsible for 23 fire stations, which house 23 pumpers, 4 support trucks, 8 paramedic rescue vehicles, 1 foam apparatus, 3 airport fire-fighting and rescue vehicles, 2 harbor fireboats, and 1 technical rescue vehicle. The bureau is also responsible for the operations of the Marine (Lifeguard) Division, which maintains 9 lifeguard facilities with a staff of 26 lifeguards. The Port and adjacent areas are located within the District 1 service area. District 1 is geographically located in the southwest area of the city, encompassing the Port and the downtown. It is comprised of Fire Stations 1, 2, 3, 4, 6, 10, 15, 20, and 24. Daily staffing for the district includes 52 personnel, with the following apparatus assigned to its stations:

- One battalion chief command suburban
- Eight fire engines
- One support truck
- Four paramedic ambulances
- Two fire boats
- One technical rescue vehicle

Additionally, The Los Angeles Fire Department (LAFD) has a mutual aid agreement with the LBFD. LAFD Station No. 40 and a Fire Boat Station, located at 330 Ferry Street, are located on Terminal Island approximately 1.5 mi (2.4 km) from the Port. Station No. 111, located at 1411 South Seaside Avenue (Berth 256), also has one fireboat.

Emergency response within marine water is within the jurisdiction of USCG. Spill containment and cleanup, however, is generally the responsibility of the parties involved.

Other organizations that provide emergency assistance include United States Customs, Federal Bureau of Investigation (FBI), California Department of Fish and Game (CDFG) and Department of Homeland Security Transportation Security Administration (TSA).

#### 2.2.4.2 Environmental Consequences

##### Evaluation Criteria

The proposed project may result in an adverse effect on public health and safety, if it would:

- Impair or interfere with implementation of an adopted emergency response plan or emergency evacuation plan
- Substantially diminish the level of fire and police services (i.e., reduction of acceptable response time)
- Create a significant hazard to the public through the generation of heavy machinery, vehicles, or equipment; or the creation of attractive nuisances, accessible excavations, or accessible open body of water

##### No Action Alternative

The main purpose of the project is to replace an aging transportation structure with a seismically resistant bridge that would function as a dependable transportation link for the region between the City of Long Beach and Terminal Island for its planned 100-year design life. Under the No Action Alternative, there would be no health and safety effects associated with construction, demolition, or rehabilitation activities. The physically deteriorated Gerald Desmond Bridge would continue to be used by commuters and to access Port facilities on Terminal Island. Spalling concrete on the Gerald Desmond Bridge resulted in the Port installing protective netting beneath the bridge deck to protect Port facilities (e.g., Fireboat Station No. 20) and workers below. When considering future transportation demand, insufficient roadway capacity would result in increased delay for commuters and Port users. When maintenance and protection measures are

no longer feasible to ensure the safety of the traveling public, bridge closure may be required until seismic retrofit is completed or a replacement bridge could be constructed. Potential closure of the bridge would adversely affect regional traffic patterns, Port operations, and goods transport.

## Construction and Demolition Impacts

North-side Alignment Alternative

Construction activities are anticipated to take place in logical sequence, including footing construction, column construction, tower construction, approach span erection, and main-span erection. These sequences are expected to overlap. The construction duration is estimated to be 48 months. During the period of construction, the existing Gerald Desmond Bridge would continue its normal use; therefore, there would be no major obstruction to emergency response routes during construction of the new bridge. Project construction would not likely be concurrent with construction of the Schuyler Heim Bridge replacement; therefore, all routes to Terminal Island would remain open during construction, and they would not adversely affect emergency vehicle access routes.

Safety of workers and the general public may potentially be adversely affected due to the use of heavy machinery and equipment throughout the construction phase. With implementation of Office of Safety and Health Administration (OSHA) regulations related to safety in the construction site and coordination with USCG, who has policing authority in the water, no adverse effects on worker or general public safety are anticipated.

Reconstruction of all ramps for the existing Terminal Island East interchange and the four existing ramp connections to Pico Avenue could result in some periodic ramp closures. This could potentially adversely affect emergency response times or interfere with the emergency response services. Potential effects on emergency response times would be minimized by submitting bridge construction, demolition, and ramp closure schedules to the Long Beach Police and Fire Departments, USCG, and Caltrans at least 2 weeks before closures would occur. Advance notification and planning with emergency service providers would provide adequate time for these agencies to plan for alternative routes in case of emergencies. No adverse effect on emergency response time or service is anticipated during construction (see Section 2.1.5 [Traffic and Circulation]).

Demolition of the Gerald Desmond Bridge would occur subsequent to completion of the new bridge. Demolition would generally be conducted in logical sequence, staged over a period of approximately 15 months. The demolition phase would include removal of approach span decks, approach span girders, concrete piers, and concrete footings. Conventional means of demolition would be used (e.g., saw-cut, breaking, and hauling away as rubble). Potentially adverse effects to the health and safety of nearby business operators, Port tenants, and commuters using the new bridge and Ocean Boulevard could result from on-road traffic hazards associated with movement of heavy equipment and vehicles. Road hazard impacts would be minimized with adherence to a TMP (see Section 2.1.5 [Traffic and Circulation]). The TMP would address traffic management and safety procedures for travel within the project area. With implementation of the TMP, effects of road hazards on the nearby business operators, Port tenants, and commuters would be less than adverse. Potential road hazards would not affect emergency response routes. All traffic would be routed to the new bridge and ramps during demolition activities. Construction equipment hauling demolition debris would utilize designated haul routes. Demolition materials would be recycled to the extent possible in accordance with Port standards and the City of Long Beach Construction and Demolition Recycling Program. All designated haul routes would be located outside of nearby communities. Local community traffic circulation would not be affected during demolition of the Gerald Desmond Bridge. Road hazards would not affect the health and safety of area residents.

In addition to the on-road traffic hazards, marine transportation hazards could potentially adversely affect ships navigating through the Back Channel during the bridge construction and demolition phases. Potential marine transportation effects on ships utilizing the Back Channel would be minimized by notifying all marine transportation and recreational boating companies of scheduled work over the Back Channel. With proper notification, no adverse effects resulting from potential marine transportation hazards are anticipated.

South-side Alignment Alternative

Although the location of this alternative would be different, the scope and schedule of the construction and demolition phases and the potential effect on public health and safety would be very similar to that of the North-side Alignment

Alternative. Construction and demolition impacts to public health and safety under the South-side Alignment Alternative would be the same as those described under the North-side Alignment Alternative.

Rehabilitation Alternative

As discussed in Chapter 1 (Project Description and Alternatives), the construction activities identified below are required to bring the Gerald Desmond Bridge up to current seismic standards and prevent ongoing bridge deterioration:

- Replacement of the main span bridge deck
- Replacement of all expansion joints
- Replacement of the sway bracings for the main span
- Painting of all steel members
- Seismic retrofit of foundations, columns, bent caps, abutments, and superstructure

The estimated construction time for this alternative is 40 months. With the exception of the bridge deck replacement, all activities would be completed from the bridge or from the ground adjacent to the bridge. Bridge deck replacement would likely be completed at night, one lane at a time. This would allow traffic to be maintained in all 5 lanes during peak operating hours. Bridge deck replacement would occur during 12-hour closures from 7:00 p.m. to 7:00 a.m. This alternative would have very little impact on bridge traffic and practically no impact on Port operations.

No substantial obstructions affecting emergency response routes during rehabilitation of the Gerald Desmond Bridge are anticipated.

Any potential effects on emergency response would be minimized by submitting bridge rehabilitation schedules to the Long Beach Police and Fire Departments, USCG, and Caltrans at least 2 weeks prior to construction. Advance notification and planning with emergency service providers would provide adequate time for these agencies to plan for alternate routes in case of emergencies. No adverse effect on emergency response time or service is anticipated during construction (see Section 2.1.5 [Traffic and Circulation]).

During bridge deck replacement activities, the lane closure would provide construction access for work from the bridge, as well as for replacement of the bridge deck. During these activities, construction equipment, as well as barriers to protect workers, would result in increased road hazards. The associated reduced capacity and heavy equipment could potentially adversely affect bridge users; however, with implementation of OSHA regulations related to safety in the construction site, coordination with USCG, and deck replacement activities occurring during off peak hours, no adverse effects on workers or general public safety are anticipated.

In addition to on-road traffic hazards, marine transportation hazards could potentially adversely affect ships utilizing the Back Channel during bridge rehabilitation activities. Potential marine transportation hazard effects on ships utilizing the Back Channel would be minimized by notifying all marine transportation and recreational boating companies of scheduled work over the Back Channel. With proper notification, no adverse marine hazard effects would occur.

## Operational Impacts

North-side Alignment Alternative

Subsequent to completion of the new bridge, ground transportation between SR 710 and Ocean Boulevard would be via the new approach spans and bridge. Once the new bridge is in operation, traffic and worker safety would increase due to the wider and structurally sound bridge. The additional capacity would improve traffic circulation within the Port and between the City of Long Beach and Terminal Island. The roadway shoulders would improve traffic safety by providing additional capacity for breakdowns. Additionally, the wider bridge would improve emergency vehicle access, potentially contributing to reduced response times during major incidents on the roadway or at the industries on Terminal Island. Implementation of the proposed alternative would improve traffic and personal safety. No adverse effects on public health and safety resulting from operation of the North-side Alignment Alternative are anticipated.

**Accident/Terrorist Vulnerability Assessment.** An analysis of accident and terrorist vulnerability of the new bridge was recommended by the Gerald Desmond Bridge Technical Advisory Panel (TAP). The TAP further recommended that the above assessment be performed prior to beginning final design. The intent of this assessment is to address the potential vulnerability of the bridge and develop conceptual modifications to the bridge design as required. Detailed design of anti-terrorist modifications (e.g., changes to bridge components, armoring) is not included in this environmental assessment. This analysis would

be performed as an integral component of the final design phase.

Following the vulnerability assessment, security and hardening measures would be incorporated into the final bridge design to reduce the potential for substantial structural damage during a terrorist attack. Measures may include restricting access to vulnerable elements by using fencing and gates; installing security systems, such as advanced-technology closed-circuit monitors; and strengthening critical bridge elements.

South-side Alignment Alternative

This alternative would result in the same beneficial operational effects on public health and safety. Permanent impacts to public health and safety under the South-side Alignment Alternative would be the same as those described under the North-side Alignment Alternative. Prior to construction, this alternative would also require an accident/terrorist vulnerability assessment.

Rehabilitation Alternative

The Rehabilitation Alternative would improve structure safety and stability by preventing collapse and associated loss of life during major seismic events for the next 30 years; however, it would not provide additional capacity for emergency vehicle access or for breakdowns. This alternative would also result in a continued reduction in the LOS associated with forecasted increased travel demand (see Section 2.1.5 [Traffic and Circulation]) and could result in increased response times during major incidents on the roadway or at the industries on Terminal Island. Additionally, the Rehabilitation Alternative would not eliminate the need for future transportation improvements to address the other deficiencies identified in the Purpose and Need (see Chapter 1). The bridge would still require replacement within the 30-year design life of the Rehabilitation Alternative.

### 2.2.4.3 Avoidance, Minimization, and/or Mitigation measures

#### Temporary Measures

North- and South-side Alignment Alternative

**HS-1** An Accident and Terrorist Vulnerability assessment of the build alternative shall be completed and all recommendations incorporated into the project during final design. The assessment will analyze and considerer applicable protection measures for the construction and the operational phases of the proposed project.

**HS-2** The Port shall submit all bridge work schedules to the Long Beach Police and Fire Departments, USCG, and Caltrans at least 2 weeks prior to initiation of work to provide adequate time for the agencies to plan for alternate routes in case of emergencies.

**HS-3** Prior to initiation of construction activities, the Port shall notify all businesses, tenants, and utility companies (i.e., SCE, gas, water, oil, and telecommunications) within the project area of the proposed work schedules and associated roadway and ramp closures.

**HS-4** The Port shall notify all marine transportation and recreational boating companies 2 weeks prior to initiation of planned work activities potentially affecting normal operations within the Back Channel.

**HS-5** The Port shall regularly notify USCG and all Port tenants of scheduled work over the Back Channel during construction and demolition of the project.

**HS-6** The contractor shall prepare an emergency response and health and safety plan in accordance with all applicable federal, state, and OSHA standards. The plan should address potential emergency situations and assure the safety and health of workers by setting and enforcing standards to reduce occupational injuries and accidents. The Port will review and approve the plans prior to initiation of construction activities.

Rehabilitation Alternative

See measures HS-2 through HS-6 above.

#### Permanent Measures

No measures are required.