

APPENDIX A: CALIFORNIA HIGH-SPEED RAIL IMPACT AVOIDANCE AND MINIMIZATION FEATURES FOR TRANSPORTATION

TR-IAMF#1: Protection of Public Roadways during Construction. Prior to Construction the Contractor shall provide a photographic survey documenting the condition of the public roadways along truck routes providing access to the proposed project site. The photographic survey shall be submitted for approval to the agency responsible for road maintenance and the Authority. The Contractor shall be responsible for the repair of any structural damage to public roadways caused by HSR construction or construction access, returning any damaged sections to the equivalent of their original pre HSR construction structural condition or better. The Contractor shall survey the condition of the public roadways along truck routes providing access to the proposed project site after construction is complete. The Contractor shall complete a before- and after-survey report and submit it to the Authority for review, indicating the location and extent of any damage.

This feature will ensure that the Project does not result in the deterioration of local streets from construction traffic. This will avoid traffic conflicts and maintenance costs that would otherwise accompany streets that are in disrepair.

TR-IAMF#2: Construction Transportation Plan. The design-build contractor shall prepare a detailed CTP for the purpose of minimizing the impact of construction and construction traffic on adjoining and nearby roadways. Prepare the CTP in close consultation with the pertinent city or county. The Authority must review and approve the CTP before commencing any construction activities. The CTP will address, in detail, the activities to be carried out in each construction phase, with the requirement of maintaining traffic flow during peak travel periods. Such activities include, but are not limited to, the routing and scheduling of materials deliveries, materials staging and storage areas, construction employee arrival and departure schedules, employee parking locations, and temporary road closures, if any. The CTP will provide traffic controls pursuant to the *California Manual on Uniform Traffic Control Devices* sections on temporary traffic controls (Caltrans 2014) and will include a traffic control plan that includes, at a minimum, the following elements:

- Temporary signage to alert drivers and pedestrians to the construction zone
- Flag persons or other methods of traffic control
- Traffic speed limitations in the construction zone
- Temporary road closures and provisions for alternative access during the closure
- Detour provisions for temporary road closures—alternating one-way traffic will be considered as an alternative to temporary closures where practicable and where it would result in better traffic flow than would a detour
- Identified routes for construction traffic
- Provisions for safe pedestrian and bicycle passage or convenient detour
- Provisions to minimize access disruption to residents, businesses, customers, delivery vehicles, and buses to the extent practicable—where road closures are required during construction, limit to the hours that are least disruptive to access for the adjacent land uses
- Provisions for farm equipment access
- Provisions for 24-hour access by emergency vehicles
- Safe vehicular and pedestrian access to local businesses and residences during construction—the CTP will provide for scheduled transit access where construction would otherwise impede such access. Where an existing bus stop is within the work zone, the design-builder will provide a temporary bus stop at a convenient location away from where construction is occurring. Adequate measures will be taken to separate students and parents walking to and from the temporary bus stop from the construction zone.

- Advance notification to the local school district of construction activities and rigorously maintained traffic control at all school bus loading zones within the work zone, to ensure the safety of school children. Review existing or planned Safe Routes to Schools with school districts and emergency responders to incorporate roadway modifications that maintain existing traffic patterns and fulfill response route and access needs during project construction and HSR operations.
- Identification and assessment of the potential safety risks of project construction to children, especially in areas where the project is located near homes, schools, day care centers, and parks
- Promotion of child safety within and near the project vicinity. For example, crossing guards could be provided in areas where construction activities are located near schools, day care centers, and parks
- CTPs will consider and account for the potential for overlapping construction from reasonably foreseeable projects

This feature reduces the potential for interruptions in traffic flow during construction. Although traffic congestion cannot be avoided in all circumstances, a CTP ensures that traffic control will be handled in a consistent manner that complies with industry standards for traffic management. This will reduce the impact of delays resulting from construction.

TR-IAMF#3: Off-Street Parking for Construction-Related Vehicles. Identify adequate off-street parking for all construction-related vehicles throughout the construction period. If adequate parking cannot be provided on the construction sites, designate a remote parking area and use a shuttle bus to transfer construction workers to the job site. This measure shall be addressed in the CTP. This feature will reduce conflict between existing users and construction vehicles over parking space by providing an option for off-site parking.

TR-IAMF#4: Maintenance of Pedestrian Access. Prepare specific construction management plans to address maintenance of pedestrian access during the construction period. Actions to limit pedestrian access would include, but not be limited to, sidewalk closures, bridge closures, crosswalk closures or pedestrian rerouting at intersections, placement of construction-related material within pedestrian pathways or sidewalks, and other actions that may affect the mobility or safety of pedestrians during the construction period. If sidewalks are maintained along the construction site frontage, provide covered walkways. Maintain pedestrian access where feasible (i.e., meeting design, safety, Americans with Disabilities Act requirements). This measure shall be addressed in the CTP. This feature will reduce the potential hazards to pedestrians of construction activities by implementing specific measures to accommodate pedestrians and provide for their safety at construction sites.

TR-IAMF#5: Maintenance of Bicycle Access. Prepare specific construction management plans to address maintenance of bicycle access during the construction period. Actions to limit bicycle access would include, but not be limited to, bike lane closures or narrowing, closure or narrowing of streets that are designated bike routes, bridge closures, placement of construction-related materials within designated bike lanes or along bike routes, and other actions that may affect the mobility or safety of bicyclists during the construction period. Maintain bicycle access where feasible (i.e., meeting design, safety, Americans with Disabilities Act requirements). This measure shall be addressed in the CTP. This feature will reduce the potential hazards to bicyclists of construction activities by implementing specific measures to accommodate bicyclists and provide for their safety at construction sites.

TR-IAMF#6: Restriction on Construction Hours. Limit construction material deliveries between 7 a.m. and 9 a.m. and between 4 p.m. and 6 p.m. on weekdays. Limit the number of construction employees arriving or departing the site between the hours of 7:00 a.m. and 8:30 a.m. and 4:30 p.m. and 6:00 p.m. Areas where these restrictions will be implemented will be determined as part of the CTP. Based on Authority review of the CTP the restricted hours maybe altered due to

local travel patterns. This feature will reduce potential conflicts between existing vehicles and construction traffic. It will also limit construction-related noise to working hours.

TR-IAMF#7: Construction Truck Routes. Deliver all construction-related equipment and materials on the appropriate truck routes. Prohibit heavy-construction vehicles from accessing the site via other routes. Truck routes will be established away from schools, day care centers, and residences, or along routes with the least impact if the Authority determines those areas are unavoidable. This measure shall be addressed in the CTP. This feature will reduce potential conflicts between existing vehicles and construction traffic, as well as hazards related to placing new truck traffic on streets that are not suited to truck traffic due to the types of uses that adjoin them.

TR-IAMF#8: Construction during Special Events. Provide a mechanism to prevent roadway construction activities from reducing roadway capacity during major athletic events or other special events that substantially (10 percent or more) increase traffic on roadways affected by project construction. Mechanisms include the presence of police officers directing traffic, special-event parking, use of within-the-curb parking, or shoulder lanes for through-traffic and traffic cones. This measure shall be addressed in the CTP.

This feature reduces the potential for interference with special events during construction. Although traffic congestion cannot be avoided in all circumstances, this feature commits the Authority to traffic controls that comply with industry standards for traffic management. This will reduce the impact of delays resulting from construction.

TR-IAMF#9: Protection of Freight and Passenger Rail during Construction. Repair any structural damage to freight or public railways that may occur during the construction period, and return any damaged sections to their original structural condition. If necessary, during construction, a “shoofly” track would be constructed to allow existing train lines to bypass any areas closed for construction activities. Upon completion, tracks would be opened and repaired; or new mainline track would be constructed, and the “shoofly” would be removed. Contractor repair responsibility will be included in the design/build contract.

TR-IAMF#10: Maintenance of Transit Access. The Contractor shall prepare specific construction management plans to address maintenance of transit access during the construction period. Actions that limit transit access would include, but not be limited to, roadway lane closures or narrowing, closure or narrowing of streets that are designated transit routes, bus stop closures, bridge closures, placement of construction-related materials within designated transit lanes, bus stop or layover zones or along transit routes, and other actions that may affect the mobility or safety of bus transit during the construction period. Maintain transit access where feasible (i.e., meeting design, safety, ADA requirements). This measure shall be addressed in the CTP.

References

California Department of Transportation (Caltrans). 2014. *California Manual on Uniform Traffic Control Devices*. Available: <http://www.dot.ca.gov/trafficops/camutcd/camutcd2014.html>.

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