

7 OTHER CEQA/NEPA CONSIDERATIONS

This chapter identifies significant and unavoidable impacts that implementing the proposed Burbank to Los Angeles Project Section of the California High-Speed Rail (HSR) System would create. It also describes the relationship between short-term uses of the environment and long-term productivity. Finally, this chapter discusses significant irreversible environmental changes or irretrievable commitments of resources or foreclosure of future options that implementing the HSR Build Alternative would create. This chapter is based on the detailed analysis of environmental resources of concern presented in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures. Chapter 8, Preferred Alternative and Station Sites, discusses the environmentally superior alternative, the environmentally preferable alternative, and the least environmentally damaging practicable alternative.

7.1 Unavoidable Significant Impacts

Chapter 2, Alternatives, explains the efforts the agencies have made through the tiered project development and environmental review process to design the HSR system, and the Burbank to Los Angeles Project Section, in a manner that avoids and minimizes impacts. Section 2.5.2.10 and Appendix 2-B describe the impact avoidance and minimization features incorporated into the HSR Build Alternative. Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures, describes the potential environmental consequences of the HSR Build Alternative, including the impacts considered significant under the California Environmental Quality Act (CEQA). Under the National Environmental Policy Act (NEPA), the project as a whole has the potential to significantly affect the quality of the human environment. Therefore, the Authority has prepared an EIS. Conclusions regarding the significance of specific impacts are not required by NEPA and its implementing regulations. Under NEPA, once a decision to prepare an EIS is made, it is the magnitude of the impact that is evaluated (based on context and intensity), and no judgment of significance is necessary. Therefore, references to the “significance” of an impact in the text below are limited to significance determinations under CEQA. Measures were prescribed to mitigate significant impacts. In some cases, the mitigation would not reduce the impact to a less than significant level under CEQA and to no effect under NEPA. The following impacts cannot be fully mitigated:

- Section 3.2, Transportation**—The HSR Build Alternative would have a construction impact (under NEPA) on signalized intersections and roadway segments related to delay increases.¹ During construction of new or modified grade separations, access may be prohibited due to construction activities and from temporary and permanent closures. Traffic would be detoured to other locations, adding vehicle volumes and delays to intersections near those locations. Even with mitigation, construction impacts related to intersection delays would remain at 11 signalized intersections and 6 roadway segments. Due to limited existing right-of-way and physical constraints of existing development, there is no mitigation considered to reduce traffic impacts resulting from increased traffic from the closures and detours at these locations; therefore, construction impacts on signalized intersections and roadway segments related to conflicts with level-of-service standards would remain under NEPA.

Project-related construction traffic would contribute to interference with pedestrians, bicyclists, and bus service where existing sidewalks, paths, and bus stops need to be temporarily closed or relocated to allow for construction of new facilities. Similarly, construction activities may create temporary hazards for users of these pedestrian areas and lane closures and detours could create delays to pedestrians, cyclists, and transit users. Bus lines that operate along roadways with proposed closures and detours could experience schedule delays or rerouting of routes. Construction of the HSR Build Alternative would affect land planned for the San Fernando Railroad Bike Path. If the planned San Fernando Railroad Bike Path does not exist at the time of HSR construction, the HSR Build Alternative would

¹ Impacts on signalized intersections and roadway segments related to delay increase are only under NEPA because level-of-service is no longer the performance standard for transportation impacts under CEQA.

permanently convert land planned for this bike path in Glendale and would preclude the development of this resource in its current alignment. However, if the planned San Fernando Railroad Bike Path exists at the time of HSR construction, permanent acquisition of the entire alignment of the bike path would result in a permanent impact from the conversion of this resource. The HSR Build Alternative would have impacts under NEPA and significant and unavoidable permanent construction impacts under CEQA related to incompatible uses even after implementation of mitigation measures because no feasible location has been identified to date for the San Fernando Railroad Bike Path, resulting in a loss of connectivity of a planned bicycle network.

A total of 16 signalized intersections along the HSR Build Alternative alignment and in the two HSR station areas and eight roadway segments would exceed transportation impact thresholds for NEPA during operation. If mitigation measures proposed for consideration under NEPA are implemented, impacts to nine intersections would be reduced; however, impacts would remain at seven signalized intersections and the eight roadway segments. Due to limited existing right-of-way and physical constraints, no mitigation is considered feasible to reduce the impacts at the remaining intersections and the eight roadway segments.

Section 3.3, Air Quality and Global Climate Change—During construction of the HSR Build Alternative, construction emissions would exceed the South Coast Air Quality Management District thresholds, as well as general conformity *de minimis* applicability thresholds, for carbon monoxide for the years 2021 through 2025 and for nitrogen oxides for the years 2020 through 2025. Therefore, construction emissions of these pollutants may cause significant air quality impacts related to the release of criteria pollutant emissions for which the project region is in nonattainment. Therefore, these emissions would be cumulatively considerable and contribute to a cumulative air quality impact. Furthermore, because carbon monoxide and nitrogen oxides emissions associated with construction of the HSR Build Alternative would exceed the South Coast Air Quality Management District thresholds, the HSR Build Alternative would impede the implementation of the respective air quality plans, including plans prepared to attain the National Ambient Air Quality Standards.

Additionally, during construction of the HSR Build Alternative, the maximum emission concentrations associated with construction would exceed the annual ambient California Ambient Air Quality Standards at the localized level for the 1-hour average nitrogen oxide concentrations. Because the annual ambient concentrations of nitrogen dioxide already exceed the annual California Ambient Air Quality Standards, construction of the HSR Build Alternative would further contribute to this exceedance, resulting in an impact under NEPA and a significant and unavoidable impact under CEQA on sensitive receptors at schools, residences, and health-care facilities near the HSR Build Alternative construction areas.

Implementation of mitigation measures would require the Authority to commit to the purchase of emissions offsets to reduce the nitrogen oxides pollutant emissions to levels that are below the California Ambient Air Quality Standard for each calendar year that exceedances occur. However, consultation with the South Coast Air Quality Management District (2018) has suggested that a sufficient quantity of nitrogen oxides emissions offsets may not be available to achieve this goal. The Authority will participate in an anticipated South Coast Air Quality Management District emission offset program to the maximum extent that offsets are available to reduce construction period nitrogen oxides emission. Therefore, even after implementation of mitigation measures, construction activities of the HSR Build Alternative would have an impact under NEPA and a significant and unavoidable impact on local air quality and sensitive receptors under CEQA.

- **Section 3.4, Noise and Vibration**—Operation of the HSR Build Alternative would result in an impact under NEPA and significant and unavoidable noise impacts under CEQA on sensitive receptors because residual severe impacts would remain at 68 residences and 2 theaters even after implementation of mitigation measures.

- Section 3.6, Public Utilities and Energy** – Operation of the HSR Build Alternative would result in an increase in water usage for Los Angeles Union Station (LAUS) when compared to existing conditions in the project footprint within Los Angeles. The increase in water usage at LAUS would account for [approximately 0.02 percent](#) of the total water supply by 2040 in the city of Los Angeles. Although the City’s Urban Water Management Plan (City of Los Angeles 2015) indicates that the Los Angeles Department of Water and Power would have sufficient supply to adequately serve its existing service area during normal, dry, and multiple dry years, it is not yet determined if the project-generated increase in operations water demand at LAUS is within the existing and future service capacity of the Los Angeles Department of Water and Power. In the absence of the verification of future supply by Los Angeles Department of Water and Power, the sufficiency of water supply to serve the HSR Build Alternative at LAUS cannot be confirmed at this time. Even with implementation of mitigation measures, the increased water demand would not necessarily be reduced to a less than significant impact. Therefore, the increase in operations water demand at LAUS would remain an impact under NEPA and significant and unavoidable under CEQA.
- Section 3.15, Parks, Recreation, and Open Space**—Construction of the HSR Build Alternative would result in impacts on the planned San Fernando Railroad Bike Path due to the permanent conversion of property from recreational resources to rail right-of-way. Implementation of mitigation measures would require the Authority to consult with the officials with jurisdiction to identify an alternative route for the continuation of the lost use and functionality of the resource, including maintaining connectivity for existing and planned bicycle routes. However, even with implementation of mitigation measures, construction impacts on the planned San Fernando Railroad Bike Path due to the permanent conversion of property from recreational resources to rail right-of-way would remain an impact under NEPA and significant and unavoidable under CEQA.

Operation of the HSR Build Alternative would result in impacts on the planned San Fernando Railroad Bike Path due to the permanent easement and conversion of property from a recreational resource to rail right-of-way. Implementation of mitigation measures would require the Authority to maintain connections to the unaffected park portions or nearby roadways after construction and to consult with the official with jurisdiction to identify an alternate route for the continuation of the lost use and functionality of the resource, including maintaining connectivity. However, even with implementation of mitigation measures, operations impacts on the planned San Fernando Railroad Bike Path due to the permanent easement and conversion of property from recreational resources to rail right-of-way would remain an impact under NEPA and significant and unavoidable under CEQA. Additionally, operation of the HSR Build Alternative would result in impacts on Pelanconi Park due to permanent visual changes. Implementation of a mitigation measure would require the contractor to incorporate the Authority-approved aesthetic preferences for nonstation structures into final design and construction to reduce visual impacts during operation. However, even with implementation of this mitigation measure, operational impacts on Pelanconi Park due to permanent visual changes would remain an impact under NEPA and significant and unavoidable under CEQA.

- Section 3.16, Aesthetics and Visual Quality**—During construction of the HSR Build Alternative, the addition of intrusion-protection railings to the three historic bridges (the Arroyo Seco Parkway Historic District Bridge, the Broadway Viaduct Bridge, and the Spring Street Viaduct Bridge) would conflict with the visual character of these historic properties and create an impact on the scenic values of these visual/cultural resources. Even after implementation of mitigation measures, the residual impacts on the three historic bridges would be an impact under NEPA and significant and unavoidable under CEQA.

Operation of the HSR Build Alternative would introduce a new visual element that would affect visual quality by substantially degrading the existing visual character or quality of the site and its surroundings. With implementation of mitigation measures, impacts on visual quality would be less than significant under CEQA for 22 of the 25 key viewpoints analyzed for the Burbank to Los Angeles Project Section. However, even after implementation of

mitigation measures, an impact under NEPA and significant and unavoidable impacts under CEQA on the visual quality in three key viewpoints (Key Viewpoints 5, 6 and 7) would occur as a result of the proposed grade separations.

- **Section 3.17, Cultural Resources**—Construction of the HSR Build Alternative would result in impacts due to physical alteration of Arroyo Seco Parkway, the Broadway Viaduct, and the Spring Street Viaduct. Although the HSR Build Alternative would not physically encroach on the Main Street Bridge or cause any physical destruction of or damage to this historic property, the HSR Build Alternative would result in alteration of the property that would change the character of the property's use and physical setting in a manner that would diminish its integrity. Implementation of mitigation measures would require the Authority to work with consulting parties to develop interpretive or educational materials for the Main Street Bridge and to design the intrusion protection railings for the Arroyo Seco Parkway Historic Bridge, the Broadway Viaduct Bridge, and the Spring Street Viaduct Bridge. The Authority would also be required to develop a feasibility study to explore design options to maintain the historic use of the Main Street Bridge to the maximum extent feasible while still meeting the safety requirements of the HSR Build Alternative. However, even with implementation of mitigation measures, construction impacts on the Arroyo Seco Parkway, Broadway Viaduct, Spring Street Viaduct, and Main Street Bridge due to alteration of these resources would remain an impact under NEPA and significant and unavoidable under CEQA.

- **Section 3.19, Cumulative Impacts**

- **Transportation:** Construction of the HSR Build Alternative and other cumulative projects would result in cumulative impacts under NEPA from traffic disruption if construction of the projects were to occur simultaneously. The HSR Build Alternative, combined with the other cumulative projects, would result in exceedances of level-of-service at 22 intersections and 6 roadway segments during construction. Even with implementation of mitigation measures, cumulative construction-related traffic impacts would remain at 11 intersections and 6 roadway segments because there is no feasible mitigation available to reduce cumulative impacts resulting from increased traffic from the closures and detours.

The HSR Build Alternative would result in a redistribution of traffic from changes in the roadway network and from additional trips to and from the station areas. During operation, the HSR Build Alternative combined with the other cumulative projects would result in permanent traffic impacts under NEPA on 24 intersections and 7 roadway segments along the Burbank to Los Angeles Project Section alignment. The Authority would consider implementing mitigation measures to reduce the impacts for 17 intersections and 6 roadway segments. However, due to limited right-of-way and physical constraints, no mitigation is considered feasible to reduce impacts at the remaining 7 signalized intersections and 1 roadway segment. Therefore, the HSR Build Alternative would result in a cumulatively considerable traffic impact under NEPA.

- **Air Quality:** Construction of the HSR Build Alternative in combination with the other cumulative projects would be built at the same time and would result in a temporary cumulative air quality impact because the construction of other cumulative projects may overlap with construction of the HSR Build Alternative and exceed significance thresholds for air quality at sensitive receptors. Construction of the HSR Build Alternative would contribute to the cumulative air quality impact because it would contribute to a violation of air quality standards (i.e., regional carbon monoxide and nitrogen oxides emissions and localized emissions of nitrogen dioxide, PM₁₀, and PM_{2.5}). Even with implementation of mitigation, the maximum concentrations associated with construction would still exceed the California Ambient Air Quality Standards at the localized level and the cumulative construction-related air quality impact would be an impact under NEPA and significant and unavoidable under CEQA.

- **Noise and Vibration:** A temporary cumulative noise and vibration impact is anticipated during construction of the HSR Build Alternative because the construction of reasonably foreseeable future projects in the project vicinity may temporarily overlap with project construction and would exceed significance thresholds for noise at sensitive receptors such that they would combine to create noise levels exceeding federal (i.e., FRA/Federal Transit Administration and Federal Highway Administration) or state standards. Even with implementation of mitigation, the HSR Build Alternative in combination with cumulative projects would have the potential to exceed significance thresholds for noise and vibration at sensitive receivers during construction. Therefore, cumulative construction-related noise and vibration impacts would be an impact under NEPA and significant and unavoidable under CEQA.

During operations, the HSR Build Alternative would result in severe noise impacts at noise-sensitive receptors after implementation of project-level measures. These noise emissions would combine with the noise emissions of other planned transportation projects to result in significant cumulative operational noise impacts under CEQA because the combined noise exposure would exceed FRA/Federal Transit Administration criteria for severe noise impacts. There is no additional feasible mitigation beyond project-level measures to reduce this impact; therefore, cumulative operational noise impacts would be an impact under NEPA and significant and unavoidable under CEQA. The HSR Build Alternative would have a considerable contribution to the cumulative impact because it would cause the largest change in the baseline ambient noise conditions among the many planned transportation projects.

- **Public Utilities and Energy:** In the absence of verification of the sufficiency of future LADWP supplies to meet project-generated operational water demand at LAUS even with implementation of PUE-MM#2, operation of the HSR Build Alternative at LAUS may result in impacts to LADWP’s existing service commitments. Therefore, the HSR Build Alternative would contribute to a cumulative impact on water supplies during operation. Therefore, cumulative operational increases in water demand at LAUS would be an impact under NEPA and significant and unavoidable under CEQA.
- **Socioeconomics and Communities:** Construction of the HSR Build Alternative would result in a temporary cumulative impact on communities under NEPA associated with a short-term disruption to the surrounding communities and the temporary degradation of community character and cohesion, primarily adjacent to an existing railroad corridor. Even with implementation of mitigation measures, temporary cumulative impacts on communities could still occur because some level of disruption to communities would be expected due to the potential for the construction schedules of the HSR Build Alternative, the adjacent HSR project sections, and other cumulative projects to overlap. Therefore, due to the length of the construction period and the number of detours and closures required to construct the HSR Build Alternative, the HSR Build Alternative would result in a cumulatively considerable contribution to impacts on community cohesion and character during construction under NEPA.

7.2 Project Benefits

Despite the significant and unavoidable impacts described above under Section 7.1, the benefits listed below and identified in Chapter 1, Purpose, Need, and Objectives, and in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures, would result from the implementation of the Burbank to Los Angeles Project Section as proposed:

- **Transportation Benefits**
 - Provides an essential building block to establish very high-speed passenger rail service as part of Phase 1 of the HSR system, to meet the state’s growing demands on its transportation system

- Adds capacity to the state’s transportation infrastructure via the new HSR transportation mode, thereby reducing pressure on the state’s existing transportation infrastructure, including highways and airports
- Improved transit, bicycle, and pedestrian safety
- **Environmental Benefits**
 - Provides long-term reductions in regional vehicle miles traveled by automobile
 - Provides long-term improvements in regional air quality by reducing criteria pollutants and greenhouse gases generated by automobiles and aircraft
 - Provides long-term reduction in transportation-related energy requirements
 - Supports achieving the state’s greenhouse gas reduction goals as described in Assembly Bill 32, Senate Bill 32, and the California Air Resources Board’s 2017 Scoping Plan
 - Supports the state’s goals for reducing vehicle miles traveled and promoting transit-oriented development, as reflected in Senate Bill 743
 - Reduces emergency response times and enhances roadway safety as a result of grade separating existing crossings
 - Improves growth and investments in station areas by increasing statewide accessibility and reducing travel time
 - Compatibility with the goals and policies of the cities of Burbank, Glendale, and Los Angeles that support development of the HSR stations
 - Provides a catalyst for the improved accessibility and transit-oriented development envisioned in local planning documents
- **Economic and Employment Benefits**
 - Provides economic and employment benefits from construction and operation
 - Improves access to jobs, community amenities, and new employment opportunities
 - Results in beneficial effects related to sales tax gains and regional employment

7.3 Relationship between Short-Term Use of the Environment and the Enhancement of Long-Term Productivity

Developing the HSR Build Alternative would require an investment of materials to create new transportation infrastructure. This investment of materials is expected to include natural resources such as rock and aggregate (e.g., for alignment and other facility foundations), steel (e.g., for rail and catenary structures), other building materials, and the various structural components of the HSR trains. Fossil fuels would be consumed for project construction. In addition, the project would require conversion of land to accommodate the new transportation infrastructure. The consequences of these land conversions are described in Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures.

The Burbank to Los Angeles Project Section of the California HSR System would be approximately 14 miles long, crossing the cities of Burbank, Glendale, and Los Angeles on an existing railroad corridor. The HSR system for this project section would be within a narrow and constrained urban environment, crossing major streets and highways, and, in some portions, adjacent to the Los Angeles River. The Los Angeles County Metropolitan Transportation Authority owns the railroad right-of-way, the Southern California Regional Rail Authority owns the track and operates the Metrolink commuter rail service, the National Railroad Passenger Corporation (Amtrak) provides intercity passenger service, and the Union Pacific Railroad holds track access rights and operates freight trains. The HSR Build Alternative would require acquisition of property where the project extends beyond the existing railroad right-of-way and as necessary for project

operation. When the remnant portion of an acquired parcel beyond the required right-of-way is too small to sustain current use without other modifications, it would also be acquired. These remnant parcels would be used only temporarily for construction and would be sold after project construction. The Authority's adopted strategy of sharing the existing corridor and blending HSR with other rail systems on shared infrastructure accelerates and broadens benefits, improves efficiency, minimizes community effects, and reduces capital costs.

As indicated in Chapter 1, Project Purpose, Need, and Objectives, the capacity of California's intercity transportation system is insufficient to meet existing and future travel demand, and the current and projected future congestion of the system will continue to result in deteriorating air quality, reduced reliability, and increased travel times. The Burbank to Los Angeles Project Section of the California HSR System would provide benefits (such as increased safety, reduced pollutant emissions, and reduced greenhouse gas emissions) and accessibility improvements (such as transit linkages to the San Francisco Bay Area, Sacramento, and other areas of Southern California).

The addition of HSR service from Burbank to Los Angeles would provide immediate linkages to a number of light rail, commuter rail, and bus services that allow intercity travelers access to multiple locations throughout the Los Angeles Basin. Because the HSR system would provide a new alternative to regional transportation options that consume fossil fuels (e.g., automotive trips and commercial air travel), and because the HSR system would be powered by electricity primarily generated by harnessing renewable resources (e.g., solar power, wind power), the Burbank to Los Angeles Project Section would make an important contribution to greenhouse gas reduction efforts.

As described in Section 3.18, Regional Growth, the proposed HSR system would provide direct and indirect economic benefits, including short- and long-term employment benefits. The HSR system would improve accessibility to labor and customer markets and provide a source of regional job growth by providing a more attractive market for commercial and office development in the Burbank and Los Angeles station areas. Regional job growth is expected to be primarily internal to Los Angeles County (i.e., not by population shifts from the Bay Area and elsewhere in Southern California). Improved accessibility would increase the competitiveness of the region, as well as the state's industries and overall economy. Chapter 1, Project Purpose, Need, and Objectives, describes the benefits of the HSR project in more detail.

7.4 Significant Irreversible Environmental Changes that Would Result from the Burbank to Los Angeles Project Section if Implemented

The HSR Build Alternative would require the commitment of material and energy for construction and operation, and the commitment of land for HSR facilities. As previously described, the HSR Build Alternative would require an investment of materials such as rock, aggregate, steel, and other building materials. Fossil fuels would be consumed for project construction. These environmental changes would be irreversible. The significance of these impacts is evaluated throughout Chapter 3, Affected Environment, Environmental Consequences, and Mitigation Measures. Overall, it is expected that residents and businesses in the region would benefit from the improved quality of the transportation system (e.g., improved accessibility, increased capacity, and energy savings), which would outweigh the irreversible commitment of resources.

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