



SAN JOSE TO MERCED PROJECT SECTION

Review of Key Differentiators by Subsection

This section describes key community and environmental factors that differentiate the alternatives within each subsection of the project extent. Alternatives 1, 2, 3, and 4 vary in the San Jose Diridon Station Approach, Monterey Corridor, and Morgan Hill and Gilroy Subsections. Because the alternatives are identical in the Pacheco Pass and San Joaquin Valley Subsections, those subsections are not discussed. Community and environmental factors that do not substantially differentiate alternatives in a given subsection are not included in the discussion. For example, because there are no agricultural lands in the San Jose Diridon Station Approach Subsection, that resource is not discussed for that subsection.

San Jose Diridon Station Subsection

- **Displacements**—Alternative 4 would have the lowest number of displacements (24) because of the alignment's primary location within the Caltrain right-of-way and its at-grade profile, whereas Alternatives 2 and 3 would have the most displacements (142 and 141 respectively for each Alternative) because of the viaduct design outside of the existing rail right-of-way. Alternative 1 would have more displacements (89) than Alternative 4 but less than Alternatives 2 and 3 because the viaduct section would end at I-880 instead of Scott Boulevard.
- **Aesthetics and visual quality**—Alternative 4 would have the lowest operational impact on aesthetics and visual quality because it would be located at grade mostly within the Caltrain right-of-way. Alternative 1 would have more impacts on visual quality than Alternative 4 because it would be on an elevated viaduct (to I-880) outside existing rail rights-of-way through most of San Jose. Alternatives 2 and 3 would have the highest impacts on visual quality because they would be on elevated viaduct outside existing rail rights-of-way through Santa Clara and downtown San Jose (approximately 2 more miles of viaduct than Alternative 1).
- **Noise**—Alternative 4 would have higher operational noise impacts than the other alternatives because it would result in the sounding of HSR train horns at two at-grade crossings south of the San Jose Diridon Station, while the other project alternatives would not. Alternative 4 and Alternative 1 would also result in sounding of HSR train horns when passing through the Santa Clara Station while Alternatives 2 and 3 would not.
- **Environmental justice**—Alternative 4 and Alternative 1 would have the lowest operational aesthetics and visual quality, community cohesion, and displacement impacts on minority and low-income populations in Santa Clara because they would be at grade, mostly within the Caltrain right-of-way. Alternatives 2 and 3 would have the highest impacts on aesthetics and visual quality because they would be on an elevated viaduct from Tamien to Scott Boulevard. Alternative 4 and Alternative 1 would result in HSR sounding horns when going through the Santa Clara Caltrain station, while Alternatives 2 and 3 would not.

Alternative 4 would have lowest impacts relative to aesthetics and visual quality and displacement on minority and low-income populations in and south of downtown San Jose because it would be located at grade, mostly within the Caltrain right-of-way. Alternatives 1, 2 and 3 would have more aesthetic and visual quality and displacement impacts than Alternative 4 because they would be on an elevated viaduct (to I-880) outside existing rail rights-of-way through most of San Jose. Alternative 4 would have higher noise impacts than the other alternatives because it would result in the sounding of HSR train horns at two at-grade roadway crossings south of the San Jose Diridon Station while the other project alternatives would not. Alternative 4 would have greater effects on community cohesion in the North Willow Glen and Gardner neighborhood of the alternatives, while Alternatives 1, 2 and 3 would have greater effects than Alternative 4 on community cohesion of the neighborhood east of the Caltrain right of way along Auzerais Avenue.

- **Section 4(f)/6(f) resources**—Alternative 1, 2, and 3 would have permanent effects on portions of Los Gatos Creek Trail and Park (0.55 acres each) and the Guadalupe River Trail (0.8 acres each). Alternatives 2 and 3 would also affect a portion of Reed Street Park (0.18 acres each). Alternative 4 would affect portions of Los Gatos Creek Trail and Park (1.03 acres) as well as a small (0.03-acre) portion of Fuller Park.
- **Built environment historic resources**—All four project alternatives would have a permanent significant and unavoidable impact on the San Jose Diridon Station and 75 South Autumn Street. Alternatives 1, 2, and 3 would also have a permanent significant and unavoidable impact on the Sunlite Baking Company and 415 Illinois Ave.

Monterey Corridor Subsection

- **Displacements**— Alternative 4 would have the lowest number of permanent displacements (3) due to the alignment's location within the Caltrain right-of-way as much as feasible and its at-grade profile, whereas Alternative 2 would have the highest number of displacements (73) because of the embankment design outside of the existing rail right-of-way and the displacements associated with roadway grade separations. Alternatives 1 and 3 would have more displacements (46 for each Alternative) than Alternative 4 but less than Alternative 2 because they would have a viaduct design and not require as many roadway grade separations.
- **Aesthetics and visual quality**—Alternative 4 would have the least operational impact associated with aesthetics and visual quality because it would be located at grade mostly within the existing railroad right-of-way. Alternatives 1 and 3 would have greater impacts than Alternative 4 because they would be on elevated viaduct outside existing rail rights-of-way. Alternative 2 would have less impacts than Alternatives 1 and 3 because it would be on an embankment outside existing rail rights-of-way.
- **Noise**—Alternative 4 would have more operational noise impacts than the other alternatives because it would result in the sounding of HSR train horns at the at-grade crossings and Caltrain stations south of the San Jose Diridon Station (Blossom Hill, Capitol) while the other project alternatives would not.
- **Traffic**—The Preferred Alternative 4 would result in substantially lower additional peak hour travel time delay on Monterey Road because it would not permanently reduce travel lanes from six lanes as would Alternatives 1, 2, and 3.
- **Environmental justice**—Alternative 4 would have the lowest impacts on minority and low-income populations associated with aesthetics and visual quality, community cohesion, and displacements because it would be located at grade mostly within the existing railroad right-of-way. Alternatives 1 and 3 would have more impacts than Alternative 4 because they would be on elevated viaduct located outside existing rail rights-of-way. Alternative 2 would have the most impacts on aesthetics and visual quality because it would be located on embankment outside existing rail rights-of-way and would include large grade separation structures. Alternative 4 would have higher noise impacts than the other alternatives because it would result in the sounding of HSR train horns at the at-grade crossings and Caltrain stations south of the San Jose Diridon Station (Blossom Hill, Capitol) while the other project alternatives would not.
- **Section 4(f)/6(f) resources**—All alternatives would affect a portion of the Coyote Creek Parkway. Alternative 4 would have the least effect (0.31 acres) and Alternative 2 would have the most effect (3.34 acres), with Alternatives 1 and 3 in between (2.42 acres each). Alternatives 1, 2, and 3 would affect a portion of the Coyote Creek Trail (Alternatives 1 and 3 – 1.03 acres; Alternative 2 – 1.2 acres), but Alternative 4 would not.
- **Emergency vehicle access/response time**—Alternatives 1, 2, and 3 would result in increased travel times along Monterey Road during morning and evening peak periods due to the narrowing of Monterey Road from six lanes to four, but vehicle detection mitigation would reduce effects on emergency vehicle response times to a less-than-significant level. Alternative 4 would increase emergency response times by more than 30 seconds in a portion of the service area for one fire station (4430 Monterey Road) and for the Kaiser Permanente San Jose Medical Center as a result of

increased gate-down time at at-grade crossings. This impact would be reduced to a less-than-significant level with vehicle detection mitigation and if the City of San Jose chooses to construct and operate a new fire station and install new responder equipment at existing fire stations with funding provided by HSR. However, the impact would be significant and unavoidable if the City does not undertake these actions.

Morgan Hill and Gilroy Subsection

- **Displacements**— Alternative 4 would have the lowest number of displacements (81) due to its location within the Caltrain corridor right-of-way as much as feasible and the at-grade alignment, whereas Alternative 2 would have the most displacements (730) due to the embankment design outside the existing rail right-of-way and due to the displacements associated with roadway grade separations which would also result in the most effects on community cohesion, particularly in downtown Gilroy. Alternative 1 would have more displacements (218) than Alternative 4 because it would be located outside the existing rail right-of-way. Alternative 3 would have the second lowest number of displacements (114) because it would avoid downtown Gilroy compared to Alternatives 1 and 2.
- **Agricultural farmland**—The project alternatives would differ in the acreage of permanent conversion of agricultural land only in this subsection. Alternative 4 would permanently convert the smallest amount of agricultural farmland because this alternative would minimize land use displacement and conversion by staying predominantly within the existing transportation corridor right-of-way. Alternative 3 would permanently convert the largest area of agricultural farmland because it would pass through the eastern portion of Santa Clara County and bypass the urban area of Gilroy. Alternative 4 and Alternatives 1 and 2 would pass through downtown Gilroy and would thus avoid some agricultural farmland. However, Alternative 2 would require relocation of the UPRR tracks, resulting in impacts on agricultural farmland. Alternative 1 would be built on viaduct in the median of Monterey Road for a portion of its length and would pass through downtown Gilroy, thus avoiding some of the agricultural farmland in the subsection.
- **Aesthetics and visual quality**—Alternative 4 would have the lowest impact on aesthetics and visual quality because of its location at grade mostly within the UPRR right-of-way. Alternative 1 would have higher impacts than Alternative 4 because it would be on an elevated viaduct outside rail rights-of-way through Gilroy and would have an elevated HSR station. Alternative 2 would have the highest visual impacts in Gilroy because it would be on an elevated embankment, would have an elevated station, and would require construction of roadway grade separations. While Alternative 3 would avoid aesthetic and visual quality impacts in downtown Gilroy, it would affect visual quality in east Gilroy with a guideway on viaduct and embankment and an HSR station at a greenfield site. The effects of Alternative 3 would be experienced by fewer community members than those affected by project alternatives in downtown Gilroy.
- **Land Use and development** - The Authority has adopted a station area policy to locate stations in downtown, multi-modal transportation hubs and not greenfield sites in order to promote connections to transit, to support transit-oriented development, and to avoid conversion of agricultural and open space lands to urban or transportation uses. Alternative 3 includes the East Gilroy Station which is located outside of Gilroy in an agricultural area and is not consistent with Authority policy. Alternatives 1, 2, and 4 would result in conversion of commercial and mixed land uses to transportation uses in downtown Gilroy due to their location, whereas Alternative 3 would not. However, Alternative 3 would convert more agricultural lands to transportation uses due to its alignment in East Gilroy and East Gilroy station.
- **Noise**—Alternative 4 would have the most noise impacts because it would result in HSR trains sounding horns at the at-grade crossings and the Morgan Hill, San Martin, and Gilroy Caltrain Stations, whereas the other project alternatives would not.
- **Environmental justice**—Alternative 4 would have the lowest impacts on minority and low-income populations in Morgan Hill associated with aesthetics and visual quality, community cohesion, and displacements because it would be located at grade mostly within the existing railroad right-of-way. Alternatives 1 and 3 would have greater impacts than Alternative 4 because they would be on an

elevated viaduct outside existing rail rights-of-way through Morgan Hill, although these alternatives would not pass through downtown Morgan Hill. Alternative 2 would have the most impacts on minority and low-income populations in Morgan Hill because it would be on an elevated embankment outside existing rail rights-of-way through Morgan Hill and would require displacements because of construction of roadway grade separations. Alternative 4 would have higher noise impacts than the other alternatives because it would result in the sounding of HSR train horns at the at-grade crossings and the Morgan Hill Caltrain station while the other project alternatives would not.

Downtown Gilroy has the highest rates of minority and low-income populations in the resource study area identified for environmental justice (more than 85 percent minority and 60 percent low-income). Alternative 3 would avoid downtown Gilroy and would have no effect on minority populations and low-income populations there, whereas Alternative 1, Alternative 2, and Alternative 4 would result in higher impacts on minority and low-income populations. Of the project alternatives that pass through downtown Gilroy, Alternative 4 would result in the least impacts on minority and low-income populations associated with aesthetics and visual quality, community cohesion, and displacement due to its location at grade mostly within the UPRR right-of-way. Alternative 2 would have the most displacement impacts of the downtown Gilroy alternatives because it would be on embankment, would include an elevated station, and would require construction of roadway grade separations which would also have the most effect on community cohesion of the alternatives. Alternative 4 would have the most noise impacts because it would result in HSR trains sounding horns at the at-grade crossings and the Gilroy Caltrain Station, whereas the other project alternatives would not. While Alternative 3 would avoid impacts in downtown Gilroy, it would affect visual quality and community cohesion in east Gilroy, although these impacts would be experienced by fewer community members with a lower percentage of minority and low-income populations than those affected by the project alternatives in downtown Gilroy. Alternative 3 would result in more conversion of agricultural farmland and have higher impacts on agricultural employment than the other project alternatives.

- **Biological resources**—Alternative 4 would have the least impacts on natural resources because it has a narrow footprint that is primarily within an existing railroad right-of-way and it travels through downtown Morgan Hill and Gilroy instead of east Gilroy. Alternative 1 would have higher impacts than Alternative 4 for most natural resources because it would not use an existing railroad right-of-way and would have a longer alignment outside of an existing transportation corridor (due to the Morgan Hill bypass). Alternative 2 would have higher impacts than Alternative 4 for most natural resources because it has a wider footprint (using an embankment) and more extensive roadway modifications than Alternative 4. Alternative 3 would have higher impacts on biological and aquatic resources than Alternative 4 because it would not use an existing railroad right-of-way and because of its routing via the Morgan Hill bypass and through the agricultural and less developed areas in east Gilroy, contrasted with the more urban routing of Alternative 4 through downtown Morgan Hill and downtown Gilroy.
- **Section 4(f)/6(f) resources**—Alternative 2 would affect a portion of the Morgan Hill Community and Cultural Center (1.31 acres).
- **Built environment historic resources**—Alternative 4 would have a significant and unavoidable impact on the Madrone Underpass and the Live Oak Creamery. Alternative 3 would have a significant and unavoidable impact on the Stevens/Fisher House and the San Martin Winery. Alternative 1 would have a significant and unavoidable impact on the Stevens/Fisher House, the San Martin Winery, the Live Oak Creamery, and the St. Stephens School. Alternative 2 would have a significant and unavoidable impact on the Coyote Depot Complex, the Stevens/Fisher House, the Cribari Winery, the St. Martin Winery, the Live Oak Creamery, the St. Stephens School, and the IOOF Orphanage Home.
- **Emergency vehicle access/response time**—Alternative 4 would result in increased emergency response times of more than 30 seconds in a portion of the service areas for five fire stations (15670 Monterey Road, 10810 No Name Uno, 880 Sunrise Drive, 8383 Wren, and 7070 Chestnut Street) as well as response times for the Kaiser Permanent San Jose Medical Center and the St. Louise Regional Hospital due to increased gate-down time at at-grade crossings. This impact would be reduced to a less-than-significant level with vehicle detection mitigation and if the Cities of San Jose

and Gilroy and Santa Clara County choose to construct and operate a new fire station and install new responder equipment at existing fire stations with funding provided by HSR. However, the impact would be significant and unavoidable if the cities and county do not undertake such actions. The other alternatives would not result in this impact.

Additional Considerations

In addition to the operational performance, community factors, and environmental factors, the Authority also considered the compatibility of the alternatives with directly relevant transportation projects or plans between Santa Clara and Gilroy.

- **Caltrain Peninsula Corridor Electrification Project**—All of the alternatives are designed to be compatible with the Caltrain electrification project.
- **Caltrain Business Plan and Service Vision** —Caltrain is currently developing a Business Plan to address forecasted increases in travel demand and ridership, and the long-term goal of southern Santa Clara County communities for more regular rail service. One of the concepts in the Caltrain Business Plan is to extend electrification and increase service to Gilroy. Alternative 4 is the only alternative that would provide for an extension of electrification and other infrastructure to support increased regional passenger rail service to Gilroy.
- **BART Silicon Valley Extension**—All of the alternatives would accommodate the planned extension of BART to San Jose, including BART stations at Diridon Station and in Santa Clara.
- **State Rail Plan and Other Passenger Rail Service Planning**—The Authority has consulted with the State Rail Plan and other passenger rail providers so that the alternatives would not impede plans for expansion of ACE, Capitol Corridor, and TAMC (Monterey County Rail Extension) passenger rail service. All of the alternatives would provide adequate capacity at the San Jose Diridon Station and the Gilroy Station for the planned expansions of other passenger rail services.

Overall Assessment

Implementing the four project alternatives in the subsections between Santa Clara and Gilroy would lead to four relatively different sets of environmental impacts and costs. In summary:

- Alternative 1 would have the lowest impacts relative to commercial and agricultural structural displacements in terms of area (square feet). It would have the most number of residual noise impacts (with noise barrier mitigation and local quiet zone implementation). The predominant factors contributing to the impacts of Alternative 1 are its use of elevated viaduct between San Jose and Gilroy, its alignment bypassing downtown Morgan Hill, and its alignment through downtown Gilroy. It has the second highest capital cost. It would have less alignment in proximity to existing transit corridors compared to Alternatives 2 and 4, but more than Alternative 3.
- Alternative 2 would not be the single best performing alternative relative to any community or environmental factors. It would have the most impacts on Section 4(f)/6(f) resources, built environment historic resources, displacements, roadway travel times on Monterey Road, road closures, aesthetics and visual quality, and minority and low-income populations. The predominant factors contributing to the impacts of Alternative 2 relative to the other alternatives are its use of elevated embankment between San Jose and Gilroy, its alignment through downtown Morgan Hill and Gilroy, and the construction of roadway grade separations. Alternative 2 would have the second lowest capital cost. Along with Alternative 4, it would have the most alignment in proximity to existing transit corridors.
- Alternative 3 would have the lowest impact on CEQA-only built environment historic resources (along with Alternative 4) and operational noise severe impacts. It would have the highest impacts on waters and wetlands, habitat for special-status plant and wildlife species, wildlife movement corridors, conservation areas, and agricultural farmland. The predominant factors contributing to the impacts of

Alternative 3 are its use of elevated viaduct between San Jose and East Gilroy, its alignment bypassing downtown Morgan Hill and Gilroy, and its alignment through east Gilroy. Alternative 3 would have the highest capital cost. It would have the least amount of alignment in proximity to existing transit corridors.

- Alternative 4 would have the lowest impacts on number of displacements, biological resources, Section 4(f)/6(f) resources, aesthetics and visual quality, agricultural farmland, and built environment resources. It would have the most noise impacts from project operation if local jurisdictions choose not to implement quiet zones, but the second lowest noise impacts of the alternatives if noise barrier mitigation and quiet zones are implemented. It would have the lowest impact on travel times along Monterey Road in San Jose. It would have the highest impact on emergency vehicle response times due to increased gate-down time at the at-grade crossings, but only if local jurisdictions do not construct and operate new fire stations and install new response equipment for which HSR would provide funding. The predominant factors contributing to the impacts of Alternative 4 relative to the other alternatives are alignment at grade mostly within existing rail rights-of-way between San Jose and Gilroy and its alignment through downtown San Jose, downtown Morgan Hill, and downtown Gilroy. It is the alternative with the lowest capital cost. It, along with Alternative 2, would have the most alignment in proximity to existing transit corridors. Alternative 4 would also provide the opportunity to extend electrified Caltrain service to Gilroy.