

Wildlife Movement

SAN JOSE TO MERCED PROJECT SECTION

The California High-Speed Rail system is being designed to minimize impacts to important wildlife linkages, contribute to wildlife passage improvement plans, and mitigate impacts to wildlife movement consistent with Proposition 1A approved by California voters. The California High-Speed Rail Authority (Authority) has been analyzing wildlife movement and mitigation options since 2001. The goal is to limit, where feasible, the extent to which the high-speed rail system may present an additional barrier to an animal's natural movement, and improve movement where barriers currently exist. Wildlife permeable designs also help to mitigate impacts to species protected under the Federal Endangered Species Act (FESA) and California Endangered Species Act (CESA).

For the San Jose to Merced Project Section, a systematic approach was used to evaluate the effects on wildlife movement from the high-speed rail project. In addition, coordination with local and regional conservation groups throughout this project section design and environmental review process provided valuable insight and on-the-ground knowledge. The Authority has adopted a variety of mitigation measures tailored to the nature of impacts across the section. Where existing right-of-way would be used, the Authority ensures that the guideway's permeability will be protected or improved. In other areas, such as Pacheco Pass, an overcrossing is proposed. Viaduct sections, guideway enclosures, and dedicated undercrossings are proposed in the Grasslands Ecological Area and vicinity.

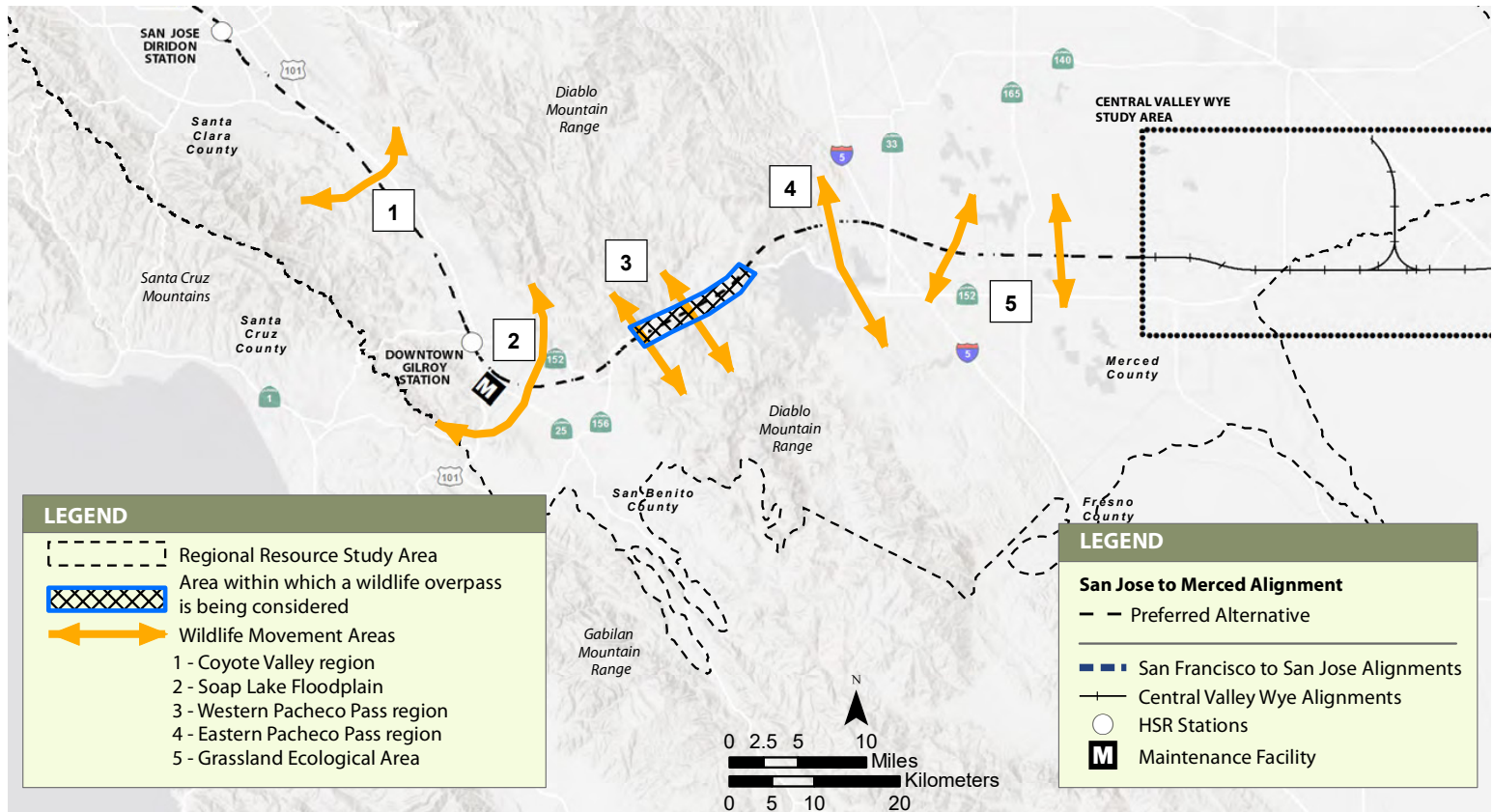


Figure 1. shows the Preferred Alternative between San Jose, Gilroy, and the Central Valley and shows the location of areas that are important for wildlife movement, including the following:

- 1) Coyote Valley: East-West Movement between the Diablo Range and the Santa Cruz Mountains.
- 2) Soap Lake Floodplain south and west of Gilroy: Northeast to Southwest movement between the Diablo Range and the Santa Cruz Mountains and the Gabilan Range.
- 3) & 4) Pacheco Pass: North-South movement along the Diablo Range both west and east of San Luis Reservoir. A possible location of a wildlife overpass over SR 152 is shown as potentially occurring in the Pacheco Pass in an approximately 7 to 8 mile zone west of San Luis Reservoir.
- 5) Central Valley: North-South Movement between federal, state, and regionally held natural lands in the Grasslands Ecological Area.

IMPORTANT WILDLIFE LINKAGES

SAN JOSE TO MERCED PROJECT SECTION - ALTERNATIVE 4

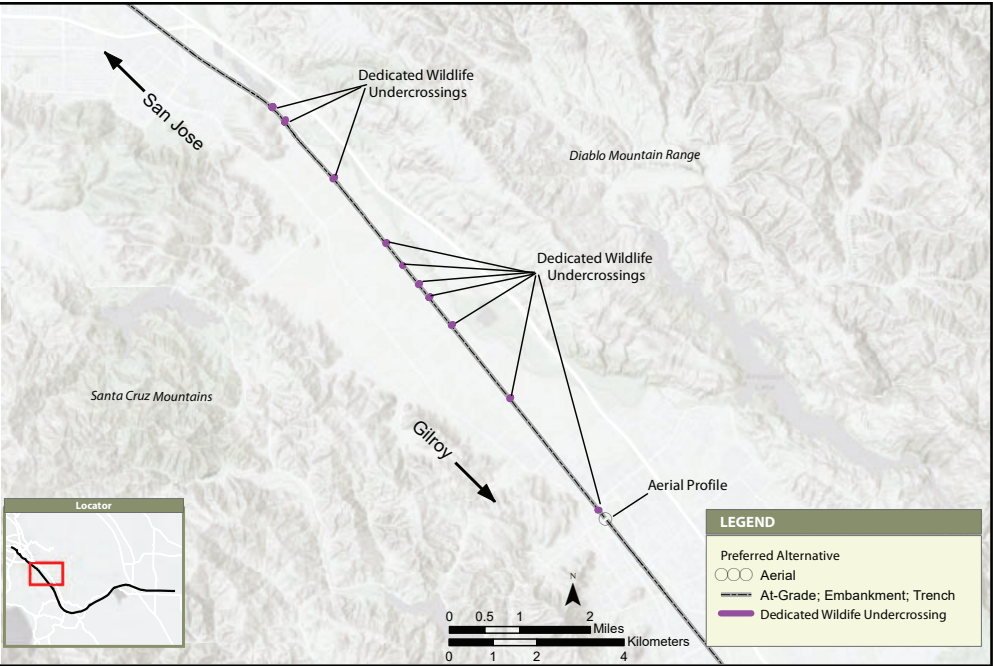


Figure 3. depicts the locations of dedicated wildlife crossings in Coyote Valley.

Coyote Valley is the narrowest point of connection between the Diablo Mountain Range and the Santa Cruz Mountains. This region is also relatively undeveloped compared to the developed regions of San Jose to the north and Morgan Hill and Gilroy to the south. With the preferred alternative, the Authority is proposing to create a new undercrossing for the existing rail corridor and for the major road (Monterey) that runs through the area. This will lead to an overall improvement in connectivity relative to current conditions.

The Soap Lake floodplain, which includes the Upper Pajaro River, provides for connectivity between the Diablo Mountain Range and the Gabilan and Santa Cruz Mountain Ranges. One of the primary means by which the Authority is minimizing adverse effects to wildlife movement in Soap Lake is the conversion of embankment and at-grade rail sections to viaduct.

Pacheco Pass provides for north-south connectivity between the inner and outer Diablo Ranges which are roughly divided by SR 152. Tunnel sections avoid approximately 15 miles of rail impacts to wildlife movement in Pacheco Pass. In addition, the Authority is supporting the planning of a proposed wildlife overpass in the section where the rail is underground to provide safe passage across SR 152 for larger species such as Tule elk and mountain lion.

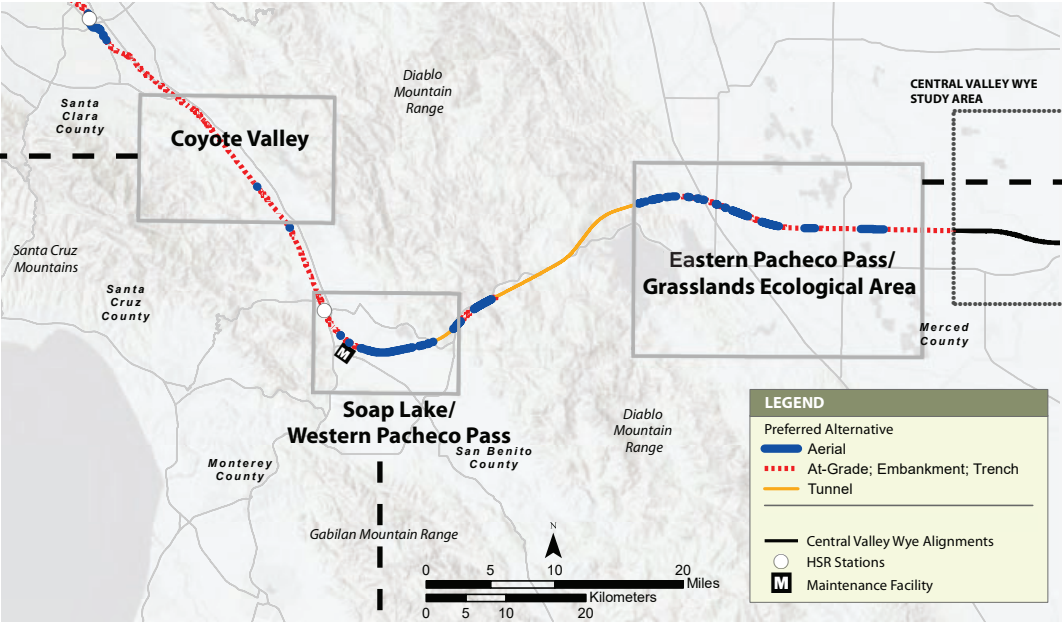


Figure 2. shows the three zoomed in locations along the alignment that are featured in Figures 3, 4, and 5.

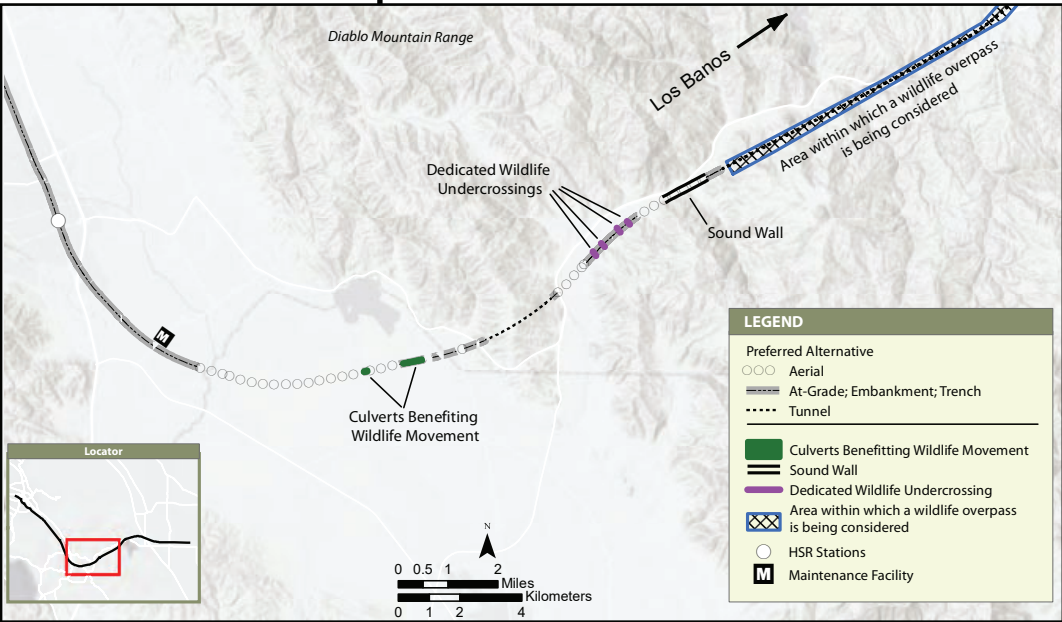


Figure 4. shows the locations of aerial structures, culverts, dedicated wildlife crossings, and sound walls in Soap Lake and Western Pacheco Pass that will provide for improved wildlife movement across or in the vicinity of the rail. This figure also shows the area within which a wildlife overpass over Highway 152 is being considered.

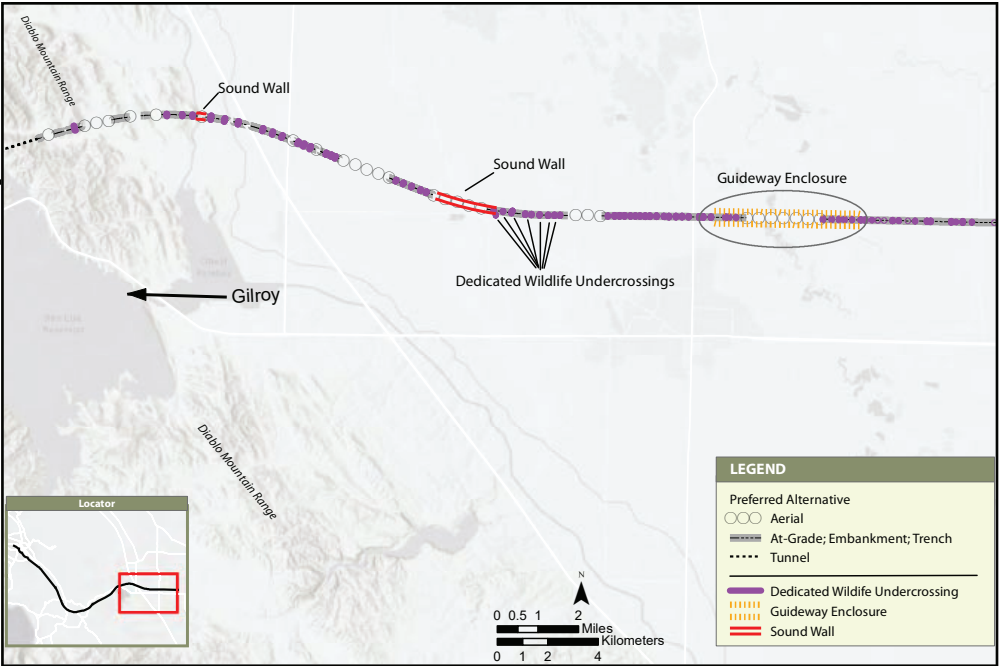


Figure 5. depicts the locations of aerial sections, dedicated wildlife crossings, and sound walls placed in Eastern Pacheco Pass and Grasslands Ecological Area to minimize impacts to wildlife movement. This figure also shows the location of the guideway enclosure in the Grasslands Ecological Area to avoid bird strike, light, and visual effects and minimize noise and vibration effects.

The Grasslands Ecological Area (GEA) is an important stopover on the Pacific Flyway for tens of thousands of migratory birds, especially waterfowl and shorebirds. A three-mile section of the rail alignment in the GEA northwest of Los Banos will be enclosed with a “tube-like” structure, called a guideway enclosure, to avoid train strike electrocution, light, and visual impacts and minimize noise effects on migratory birds.

Wildlife undercrossings provide for movement under the rail alignment in Coyote Valley, Pacheco Pass, and the GEA.

Noise walls are also proposed in discreet sections of Pacheco Pass and the GEA to further limit noise, visual, and light impacts to important wildlife movement locations.

Wildlife jump-outs or escape ramps are designed to allow animals to escape from the fenced rail corridor.

SAFE PASSAGES FOR WILDLIFE

The importance of wildlife movement has increased in recent years. Many native species continue to experience population declines, especially those with large habitat ranges. This is due, in part, to ongoing habitat fragmentation which limits mobility and ultimately the number of available resources such as food and mating partners. Providing safe passages for wildlife across busy roads has not only been shown to reduce effective habitat fragmentation, it has also been shown to significantly reduce vehicle collisions.

The importance of providing safe passages for wildlife is reflected by the fact that in 2022 the California Wildlife Conservation Board will allocate approximately \$30 million dollars to wildlife movement improvement projects and the 2021 federal infrastructure bill (Infrastructure Investment and Jobs Act) includes \$350 million for wildlife crossing planning and infrastructure.

The Authority is designing the system to minimize and mitigate impacts to wildlife movement and to create a permeable corridor. The Authority has partnered with Pathways for Wildlife, a wildlife movement research organization, other transportation agencies, and the Santa Clara Valley Habitat Agency to apply for a California Wildlife Conservation Board planning grant to fully or partially fund planning efforts to inform placement of a wildlife overcrossing over State Route 152.



Figure 6. Typical Wildlife Undercrossing



Figure 7. Dual Purpose Culvert/Wildlife Undercrossing



Figure 8. Combined Undercrossing/ Drainage Culvert and Wildlife Jump-out