Project Description

Project Overview

The Southern California Regional Rail Authority (SCRRA) is proposing the Olive Subdivision Milepost (MP) 5.40 Culvert Replacement Project (Project). The Project would include the in-kind, replacement of an existing 24-inch reinforced concrete pipe (RCP) culvert and associated structures (i.e., headwalls, wingwalls, or other outlet erosion protection) adjacent to SCRRA's existing railroad right-of-way (ROW) between North Cypress Street and North Batavia Street in the City of Orange, California.

Project Goals and Objectives

The Project was identified in SCRRA's *2020 Rehabilitation Plan* (October 2020). The *2020 Rehabilitation Plan* provides a thorough evaluation of the condition of key SCRRA infrastructure, including bridges, culverts, and tunnels. The purpose of the plan is to identify the age and condition of SCRRA infrastructure, provide rehabilitation and/or replacement recommendations, where necessary, and identify sources of available funding to carry out any proposed improvements.

SCRRA's *2020 Rehabilitation Plan* identifies the Project as a high priority project for the Olive Subdivision. The existing 24-inch RCP culvert was originally constructed in 1917 and, due to its age and deteriorating condition, replacement is required to avoid localized flooding within the Project area. Inspection reports for this culvert have identified concrete spalling in the pipe and headwalls and have noted reoccurring partial obstruction of the pipe from siltation. The culvert would be replaced with a similar RCP culvert structure. The Project replacement would align with SCRRA's *2020 Rehabilitation Plan* by maintaining safety and reliability of the existing rail system and supporting infrastructure.

Project Location

The Project is located within SCRRA's Olive Subdivision at MP 5.40 within the western portion of the City of Orange. The existing RCP culvert is located approximately 0.13 mile north of the existing railroad right-of-way intersection with West Walnut Avenue, between North Cypress Street and North Batavia Street. Figure 1 shows the regional location of the Project. Figure 2 shows the Project location and Project study area (Latitude: 33.796988 and Longitude: -117.857397 within the USGS Orange 7.5-minute quadrangle).

Figure 1. Regional Location

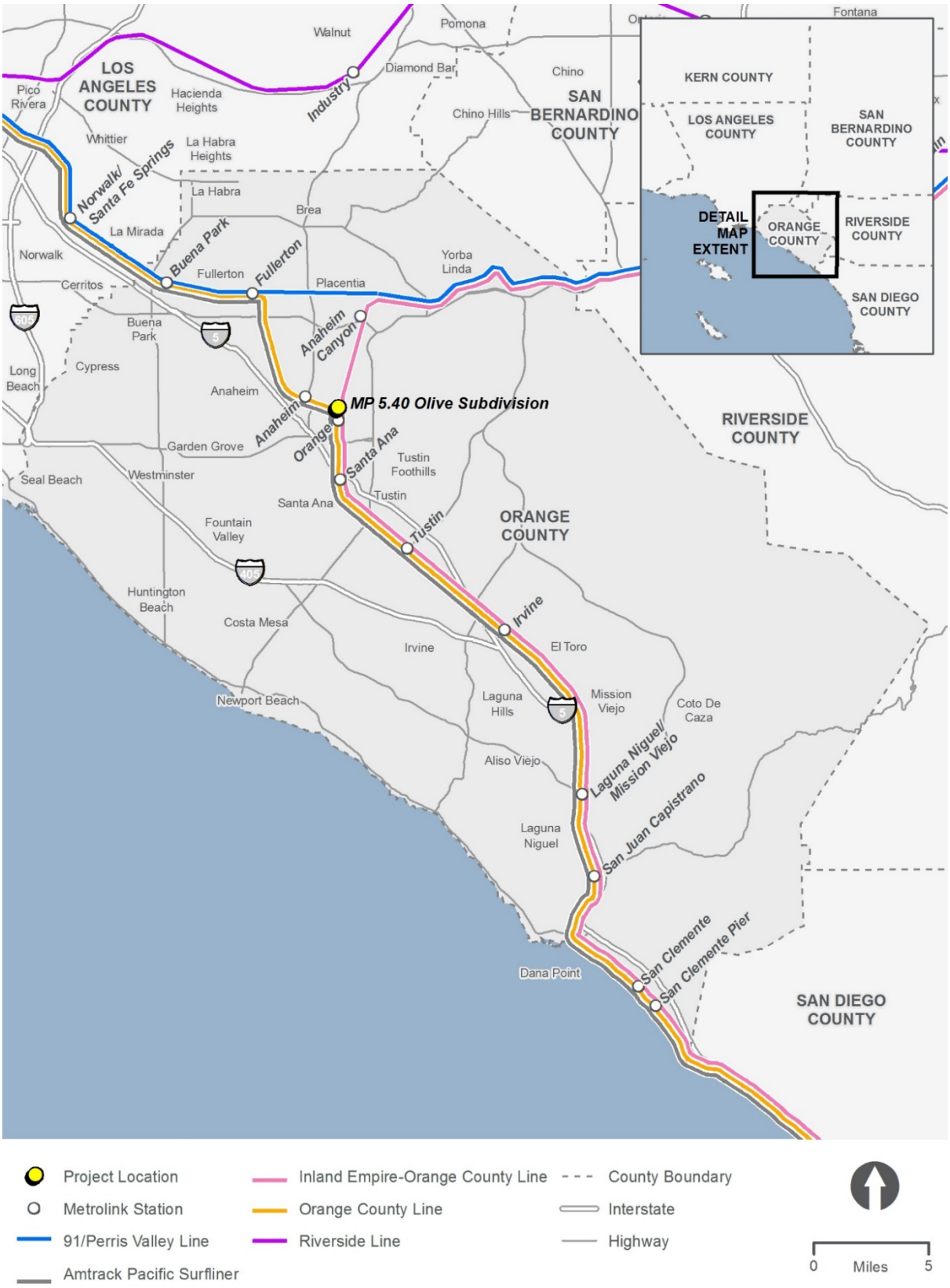

Figure 2. Project Study Area

Project Components

The Project would include the in-kind replacement of the existing 24-inch RCP culvert and associated structures (i.e., headwalls, wingwalls, or other outlet erosion protection as necessary) located at MP 5.40 on SCRRA's Olive Subdivision. The following sections describe the Project components including the proposed physical improvements, construction, and operational information.

Physical Improvements

Right-of-Way

The majority of the Project would be contained within the SCRRA ROW, however, approximately 0.07 acre of the Project would be located within parcels owned by the City of Orange. All permits and approvals from the City of Orange, including temporary construction easements and encroachment/ grading permits, would be required prior to construction.

Structures

The Project would replace the existing RCP culvert located at MP 5.40 that was constructed in 1917. The existing RCP culvert is approximately 2 feet in width and 53 feet in length. An existing concrete basin, approximately 0.03 acre in size, is located immediately east of the RCP outlet. Under existing conditions, the culvert enables runoff to flow underneath the two mainline railroad tracks at this location. The Project would completely replace the existing RCP culvert with a new RCP or CMP culvert structure, including new headwalls, wingwalls, and other inlet and outlet erosion protection, as necessary. The new structure would comply with SCRRA's Design Criteria Manual and standard specifications.

Drainage

Under existing conditions, the RCP culvert receives runoff flows from both the west and the east of the existing mainline tracks. Runoff from the crane storage yard, west of the existing railroad tracks, drains to the RCP inlet west of the railroad tracks, then flows underneath the railroad tracks through the existing RCP, and outlets in the concrete basin east of the railroad tracks. Runoff from the industrial areas to the east drain directly into the existing concrete basin.

Replacement of the RCP culvert would improve runoff flows and minimize the potential for localized flooding of the mainline tracks during storm events, while maintaining existing drainage patterns in the Project area. Excavation activities and associated dewatering may be required as part of the Project.

Construction

Project construction is anticipated to be approximately 4 months in duration. The City of Orange Municipal Code (Subsection 8.24.040) exempts noise sources associated with construction between the hours of 7:00 a.m. and 8:00 p.m. Monday through Saturday and between the hours of 9:00 a.m. and 8:00 p.m. on Sunday or a Federal holiday. Most construction would coincide with the hours specified in the Municipal Code.

Construction phasing would occur in as few steps as possible to minimize disruptions to SCRRA operations and surrounding community. Construction equipment may include front-end loaders, rubber-tired dozers, cranes, haul trucks, and water trucks.

Material imports, equipment, and construction personnel would access the Project area via West Walnut Avenue. As shown in Figure 2, temporary construction areas are anticipated to be 0.58 acre and would be limited to the area immediately adjacent to the existing culvert. Potential construction staging areas include areas immediately east and adjacent to the Project site (Figure 2).

Construction activities would be scheduled during time frames that allow for exclusive track occupancy by construction crews to minimize effects on SCRRA operations. To the greatest extent possible, construction activities would be scheduled during the daytime, and nighttime work would be minimized. The Project would also include weekend work when SCRRA service is reduced. Construction activities would require temporary lighting, which is anticipated to cover the Project site any time night work is occurring, at least during weekend work windows.

Operation

The Project consists of a culvert replacement project. No expansion or extension of the existing culvert footprint is proposed and the existing two mainline tracks would continue to service SCRRA passenger trains. The proposed project is maintenance oriented and would not provide additional capacity that would otherwise result in increased train operations or movements.

Permits and Approvals

The project is subject to SCRRA's discretionary approval under the California Environmental Quality Act (CEQA) and SCRRA will serve as the CEQA lead agency. Additionally, the project is expected to receive federal funding from the Federal Transit Agency (FTA) and would be subject to the National Environmental Policy Act (NEPA). Other potential Project approvals and permits may include, but are not limited to, the following:

- City of Orange sanitary sewer discharge, traffic safety permits, temporary construction easement, grading, etc.

Project Description

Project Overview

The Southern California Regional Rail Authority (SCRRA) is proposing the Orange Subdivision Milepost (MP) 205.80 Culvert Rehabilitation Project (Project). The Project would involve infrastructure improvements to an existing reinforced concrete arch culvert located at MP 205.80 on SCRRA's Orange Subdivision in the City of San Clemente, California. Rehabilitation activities under the Project would include strengthening and repairing of the existing concrete walls and recoating of the 8- by 6-foot arch structure, which would be protected in place.

Project Goals and Objectives

The Project was identified in SCRRA's *2020 Rehabilitation Plan* (October 2020). The *2020 Rehabilitation Plan* provides a thorough evaluation of the condition of key SCRRA infrastructure, including bridges, culverts, and tunnels. The purpose of the plan is to identify the age and condition of SCRRA infrastructure, provide rehabilitation and/or replacement recommendations, where necessary, and identify sources of available funding to carry out any proposed improvements.

SCRRA's 2020 *Rehabilitation Plan* identifies the Project as a high priority project for the Orange Subdivision. The existing 8- by 6-foot, 4-inch reinforced concrete arch culvert, which was built in 1913, is currently pass its service life. Inspection reports have identified slight spalling of the concrete within the arch culvert, headwalls and wingwalls. The Project's objective would align with SCRRA's *2020 Rehabilitation Plan* by maintaining safety and reliability of the existing rail system and supporting infrastructure.

Project Location

The Project is located on SCRRA's Orange Subdivision at MP 205.80 within the southern portion of the City of San Clemente, California. The existing concrete arch culvert is located approximately 125 feet south of the Plaza a la Playa cul-de-sac and approximately 1,200 feet northwest of Calafia Beach Park and serves as a pedestrian underpass to Riviera Beach from Plaza a la Playa cul-de-sac. Riviera Beach is located immediately west of the culvert and single-family residential homes are located immediately east of the culvert. The San Clemente Pedestrian Beach Trail runs parallel to, and east of, the existing railroad mainline. Figure 1 shows the regional location of the Project. Figure 2 shows the Project location and study area (Latitude: 33.408 and Longitude: -117.609 within the USGS San Clemente 7.5-minute quadrangle).

As shown in Figure 3, the existing concrete arch culvert is identified as part of Public Access Point 14: Riviera in the City of San Clemente Local Coastal Program (LCP) Land Use Plan. The concrete arch culvert is described as a concrete storm drain tunnel under the existing railroad tracks with the tunnel providing the easiest route to access the beach from the surrounding area.

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Figure 1. Regional Location

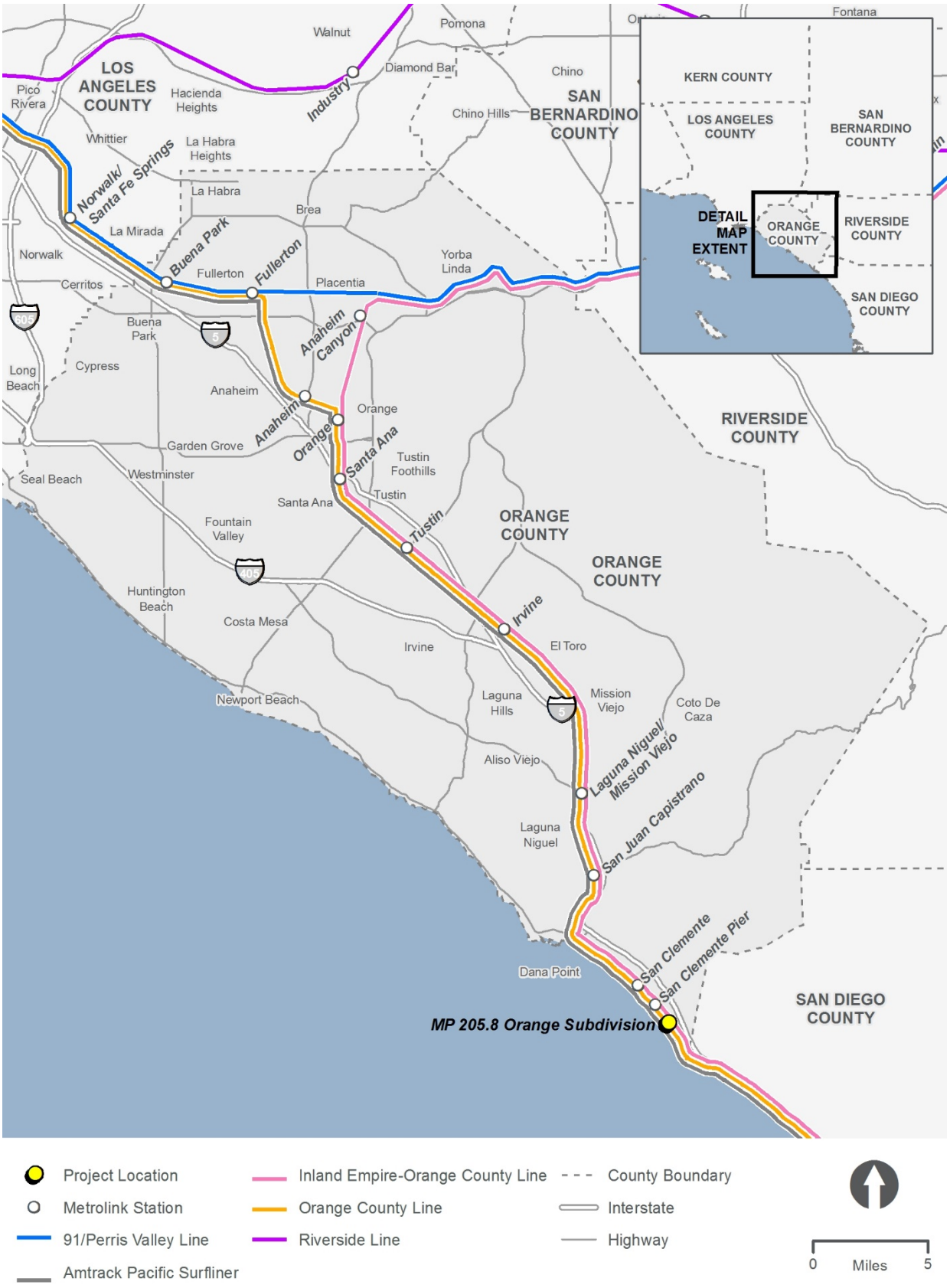

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Figure 2. Project Study Area

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Figure 3. Riviera Beach Coastal Access

Project Components

The Project would include infrastructure improvements to an existing reinforced concrete arch culvert located at MP 205.80 on SCRRA's Orange Subdivision. Rehabilitation activities under the Project would include strengthening and repairing of the existing concrete walls and recoating of the 8- by 6-foot arch structure, which would be protected in place. The following sections describe the Project components including the proposed physical improvements, construction, and operational information.

Physical Improvements

Structures

The Project would involve the rehabilitation of the existing 8- by 6-foot reinforced concrete arch culvert constructed in 1913. Repairs would include the removal of loose concrete around the spalled areas and repair with new concrete and/or grouting to match the existing surface condition. Retrofit strategies for the existing arch culvert may include strengthening of the arch through means such as using bonded or anchored steel plate or fiber reinforced polymer (FRP) composites. The existing structure would be protected in place during Project construction.

Drainage

Under existing conditions, the arch culvert conveys drainage runoff from the eastern side of the railroad to the west thereby reducing the potential for localized flooding of the mainline tracks and surrounding residential areas. The culvert also serves as a pedestrian underpass to allow access to the beach. A concrete lined drainage extends northeast of the culvert and adjacent to a residential area. Rehabilitation of the culvert would maintain the existing drainage patterns upstream of the existing culvert. Minor inlet and outlet protection may be required.

Construction

Construction phasing would occur in as few steps as possible to minimize disruptions to Metrolink operations and the surrounding community. Repairs and recoating of the culvert surfaces would require minimal material imports with repairs anticipated to occur over the course of a few weeks.

If the FRP composite method is used for rehabilitation of the concrete arch culvert, it is assumed that all material, equipment, and construction personnel would access the Project area via Boca Del Canon and the San Clemente Pedestrian Beach Trail, north of the Project site. As shown in Figure 2, temporary construction areas would be limited to the area immediately adjacent to the existing arch culvert. Potential construction staging areas include an area northwest of the arch culvert.

If the bonded or anchored steel plate method is used for rehabilitation of the concrete arch culvert, it is assumed that all material, equipment, and construction personnel would access the Project area via Boca Del Canon and the San Clemente Pedestrian Beach Trail, north of the Project site. A crane would be placed on the embankment south of the existing tracks to transport the steel plates from construction truck to the opening of the concrete arch culvert.

Construction activities would be scheduled during time frames that allow for exclusive track occupancy by construction crews to minimize effects on SCRRA operations. To the greatest extent possible, construction activities would be scheduled during the daytime. The Project may also include weekend work when Metrolink service is reduced. During repair activities, the culvert is anticipated to be closed to foot traffic for safety and security reasons. However, beach users would still be able to access the beach further south at Public Access Point 15: Montalvo, approximately 450 feet south of the culvert via the San Clemente Pedestrian Beach Trail.

The City of San Clemente Municipal Code (Section 8.48.090E) exempts noise sources associated with construction activities (building, plumbing, electrical, mechanical, or repairs) between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and between the hours of 8:00 a.m. and 6:00 p.m. on Saturday. For grading, landscape, irrigation construction, and right of way encroachment, permitted activities can occur between 7:30 a.m. to 5:30 p.m. Monday through Friday. Most construction would coincide with the hours specified in the Municipal Code.

Operations

The Project is a culvert rehabilitation project. No expansions or extensions of the culvert footprint are proposed, and the existing mainline track would continue to service SCRRA trains. The proposed Project is maintenance oriented and would not provide additional capacity that would otherwise result in increased train operations or movements.

Permits and Approvals

The Project is subject to SCRRA's discretionary approval under the California Environmental Quality Act (CEQA) and SCRRA will serve as the CEQA lead agency. Additionally, the Project is expected to receive federal funding from the Federal Transit Agency (FTA) and would be subject to the National Environmental Policy Act (NEPA). Other potential Project approvals and permits may include, but are not limited to, the following:

- Regional Water Quality Control Board (Region 9) Section 401 Water Quality Certification
- Regional Water Quality Control Board (Region 9) Section 402: National Pollutant Discharge Elimination System Permit
- United States Army Corps of Engineers: Section 404 Nationwide Permit
- California Department of Fish and Wildlife (Region 5): Section 1600 Lake and Streambed Alteration Program
- California Coastal Act Federal Coastal Consistency Certification (agency carrying out certification – City of San Clemente, USACE, FTA, or CCC to be determined)
- City of San Clemente noise waiver

Project Description

Project Overview

The Southern California Regional Rail Authority (SCRRA) is proposing the Orange Subdivision Milepost (MP) 207.20 Culvert Replacement Project (Project). The Project would include the in-kind replacement of the existing 24-inch oval reinforced concrete pipe (RCP) culvert and associated structures (i.e., headwalls, wingwalls, or other outlet erosion protection as necessary) within the City of San Clemente, California.

Project Goals and Objectives

The Project was identified in SCRRA's *2020 Rehabilitation Plan* (October 2020). The *2020 Rehabilitation Plan* provides a thorough evaluation of the condition of key SCRRA infrastructure, including bridges, culverts, and tunnels. The purpose of the plan is to identify the age and condition of SCRRA infrastructure, provide rehabilitation and/or replacement recommendations, where necessary, and identify sources of available funding to carry out any proposed improvements.

SCRRA's *2020 Rehabilitation Plan* identifies the Project as a high priority project for the Orange Subdivision. The existing 24-inch oval RCP was originally constructed in 1919 and, due to its age and deteriorating condition, requires replacement to minimize the potential for localized flooding within the Project area. The existing RCP would be replaced with a similar RCP culvert structure and contained within the railroad right-of-way. The Project replacement would align with SCRRA's *2020 Rehabilitation Plan* by maintaining safety and reliability of the existing passenger rail system and supporting infrastructure.

Project Location

The Project is located within SCRRA's Orange Subdivision at MP 207.20 within the southern portion of the City of San Clemente, California. The existing RCP culvert is located approximately 0.38 mile southwest of the Interstate 5 (I-5) intersection with Cristianitos Road and Avenida Del Presidente. The beach is located immediately west of the culvert and single-family residential homes are located immediately east of the Project site. Figure 1 shows the regional location of the Project. Figure 2 shows the Project location and study area (Latitude: 33.390515 and Longitude: -117.597533) within the USGS San Clemente 7.5-minute quadrangle.

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Figure 1. Regional Location

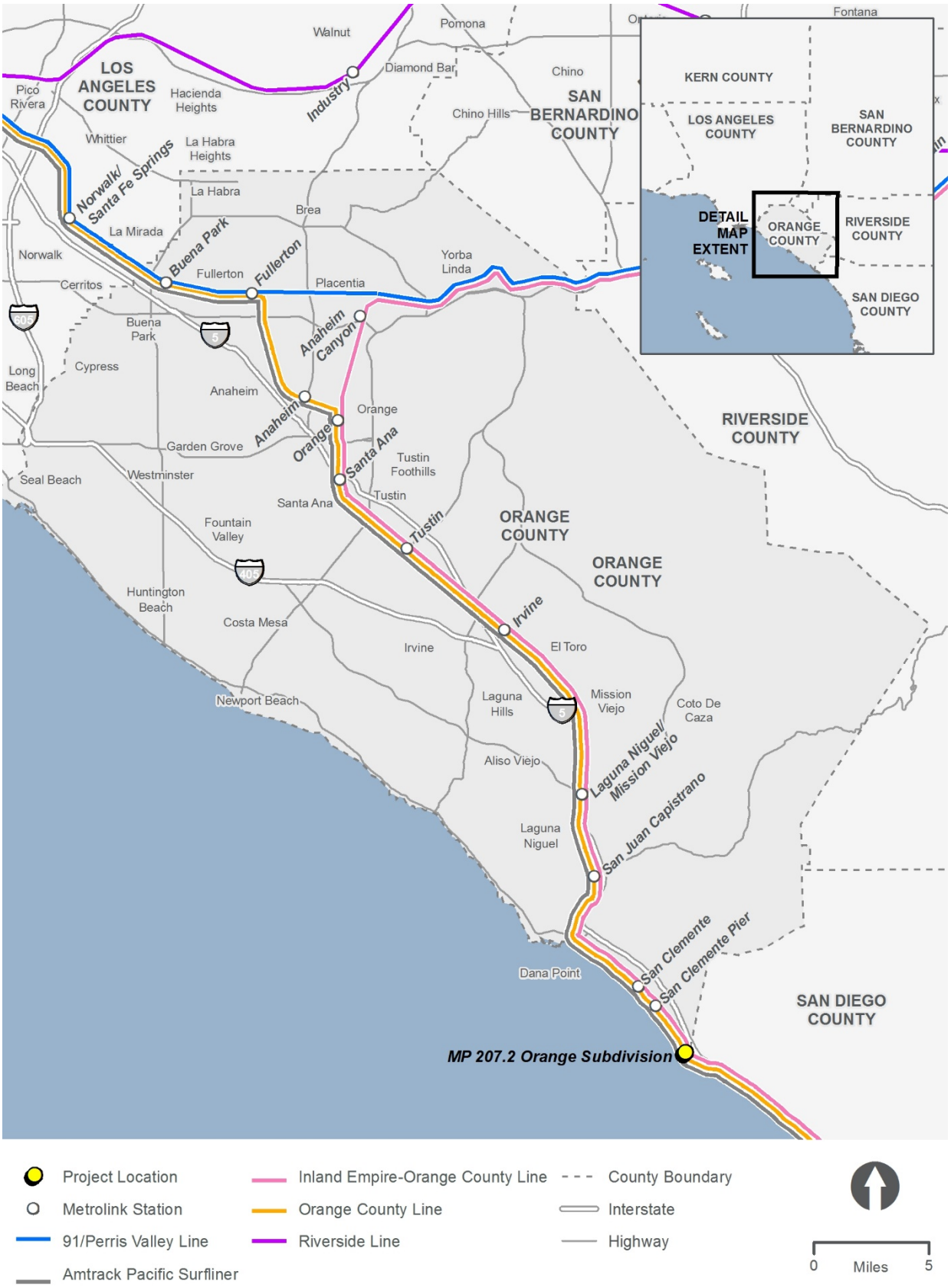

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Figure 2. Project Study Area

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Project Components

The Project would include the in-kind replacement of the existing 24-inch oval RCP culvert and associated structures (i.e., headwalls, wingwalls, or other outlet erosion protection as necessary) located at MP 207.20 on SCRRA's Orange Subdivision. The following sections describe the Project components including the proposed physical improvements, construction, and operational information.

Physical Improvements

Structures

The Project would replace an existing oval RCP culvert located at MP 207.20, which was constructed in 1919. The existing RCP culvert is approximately 2 feet wide by 22 feet in length. The culvert is responsible for conveying drainage runoff from the east side of the mainline track to the beach on the west. Previous inspection reports have identified degrading concrete in the pipe, headwalls and wingwalls, misalignment in the RCP joints, and leaning ballast retainer. In response to its age and current condition, this Project would replace the existing RCP culvert with a new similar RCP or CMP culvert structure, including new headwalls, wingwalls, and other inlet and outlet erosion protection, as necessary. The Project would also involve the protection-in-place of existing utilities including existing drainage structures. The culvert replacement and supporting improvements would be required to comply with SCRRA Design Criteria Manual and standard specifications.

Drainage

The existing drainage patterns would be maintained. The RCP culvert serves to redirect runoff flows from the residential areas east of the existing railroad mainline to the beach and ocean immediately west. Replacement of the RCP culvert would help to improve runoff flows and alleviate localized flooding and erosion on the railroad mainline and surrounding area, respectively. Excavation activities may occur as a part of the Project and a National Pollutant Discharge Elimination System Permit (NPDES) may be required to be filed with the local Regional Water Quality Control Board.

Construction

Project construction is anticipated to be approximately 4 months in duration. Construction phasing would occur in as few steps as possible to minimize disruption to SCRRA operations and to the surrounding community. Construction equipment may include front-end loaders, rubber-tired dozers, cranes, haul trucks, and water trucks.

It is assumed that all material, equipment, and construction personnel would access the Project area via the Trestles Beach Trail, south of the Project site and existing railroad tracks. As shown in Figure 2, temporary construction areas are anticipated to be 0.19 acre and would be limited to the area immediately adjacent to the existing culvert. Potential construction staging areas include areas adjacent to the Trestles Beach Trail and railroad right-of-way (Figure 2).

Construction activities would be scheduled during time frames that allow for exclusive track occupancy by construction crews to minimize effects on SCRRA operations. To the greatest extent possible, construction activities would be scheduled during the daytime, and nighttime work would be minimized. The Project would also include weekend work when SCRRA service is reduced.

The City of San Clemente Municipal Code (Section 8.48.090E) exempts noise sources associated with construction activities (building, plumbing, electrical, mechanical, or repairs) between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday and between the hours of 8:00 a.m. and 6:00 p.m. on Saturday. For grading, landscape, irrigation construction, and right of way encroachment, permitted activities can occur between 7:30 a.m. to 5:30 p.m. Monday through Friday. To conduct these activities beyond this time period or on Saturday and Sundays, approval from the City would be required. Most construction would coincide with the hours specified in the Municipal Code. However, for certain stages, work through the weekend, nighttime, and federal holidays would be required.

Operations

The Project proposes the in-kind, replacement of an existing 24-inch RCP culvert with a similarly sized culvert structure. No expansion or extension of the existing culvert footprint is proposed and the structure would support a single, mainline track that would continue to service SCRRA trains. The proposed Project is maintenance oriented and would not provide additional capacity that would otherwise result in increased train operations or movements.

Permits and Approvals

The Project is subject to SCRRA's discretionary approval under the California Environmental Quality Act (CEQA) and SCRRA will serve as the CEQA lead agency. Additionally, the Project is expected to receive federal funding from the Federal Transit Agency (FTA) and would be subject to the National Environmental Policy Act (NEPA). Other potential Project approvals and permits may include, but are not limited to, the following:

- Regional Water Quality Control Board (Region 9) Section 401 Water Quality Certification
- Regional Water Quality Control Board (Region 9) Section 402: National Pollutant Discharge Elimination System Permit
- United States Army Corps of Engineers: Section 404 Nationwide Permit
- California Department of Fish and Wildlife (Region 5): Section 1600 Lake and Streambed Alteration Program
- California Coastal Act Federal Coastal Consistency Certification (agency carrying our certification – City of San Clemente, USACE, FTA, or CCC to be determined)
- City of San Clemente noise waiver