

Chapter 2 Project Description

The purpose of this chapter is to describe the OC River Walk Project (project) for the public, reviewing agencies, and decision-makers. According to Section 15124 of the California Environmental Quality Act (CEQA) Guidelines, a complete project description must contain the following information: (1) the precise location and boundaries of the project, as shown on a detailed project site map and a regional map; (2) a statement of the objectives sought by the project; (3) a description of the project's technical, economic, and environmental characteristics; and (4) a statement of the intended uses of the Environmental Impact Report (EIR), including discretionary actions. This chapter also includes a list of agencies expected to use the EIR in their decision-making and a list of permits and other approvals required to implement the project.

2.1 Project Location and Setting

The project site is located along the Santa Ana River corridor, generally extending from Orangewood Avenue north to Ball Road and the existing Anaheim Coves at Burris Basin. It generally encompasses approximately a 2-mile stretch of the Santa Ana River, covering approximately 111 acres. It is approximately 15 miles upstream from the Pacific Ocean and adjacent to Angel Stadium, Anaheim Regional Transportation Intermodal Center (ARTIC), the Honda Center, and the Arena Corporate Center (ACC) buildings on the west side in the City of Anaheim. The ARTIC, the Honda Center, and the ACC buildings are all part of the OCVIBE Master Site Plan Project (OCVIBE Project). On the east side of the Santa Ana River, in the City of Orange, the project is near the Sandra Hutchens Regional Law Enforcement Training Center (a facility that includes a combat shooting range), the Orange County Public Works (OCPW) offices, the Stadium Promenade shopping mall, the Extended Stay America – Orange, and the Kinder Morgan Orange Terminal. The project site's regional setting is shown on Figure 2-1, Regional Location, while a closer view of the site and the surrounding local vicinity is shown on Figure 2-2, Local Vicinity. The project is primarily located in the City of Orange and partially located in the City of Anaheim, with many different landowners and jurisdictional bodies. Figure 2-3, Project Site and Adjacent Ownerships, shows the ownership of the project site and adjacent properties. As shown on Figure 2-3, the Santa Ana River is within the Orange County Water District's (OCWD) jurisdiction north of the Union Pacific Railroad (UPRR) and within the Orange County Flood Control District's (OCFCD) jurisdiction south of the UPRR. Within the boundaries of the project site, five overcrossings and/or bridges span the Santa Ana River: Ball Road Bridge, UPRR overcrossing, Katella Avenue Bridge, Metrolink/Los Angeles-San Diego-San Luis Obispo Rail Corridor (LOSSAN Corridor) railroad overcrossing, and Orangewood Avenue Bridge. Additionally, State Route (SR-) 57 crosses the Santa Ana River.

2.1.1 Existing Land Uses

The Santa Ana River is the largest watershed drainage south of the Sierra Nevada, approximately 2,700 square miles and 100 miles in length, with more than 50 tributaries connecting to it. The U.S. Army Corps of Engineers (USACE) Santa Ana River Mainstem Project, documented in the 1988 General Design Memorandum, was designed and constructed in the 1980s with the main purpose of flood protection and flood risk reduction to protect Southern California from large storm events. The Santa Ana River within the project site boundaries is composed of a rock-lined embankment and soil-bottomed trapezoidal-shaped channel that functions primarily as a flood protection structure, providing stormwater conveyance and water resource management and protecting the adjacent lands from flooding. It was designed to provide protection for a Standard Project Flood, which is equal to a 190-year storm event. It has an average base width of 320 feet, rock-lined side slopes of 2:1, and an unlined soil/sand bottom. Hydrologically, it is a prime watershed location for aquifer recharge. Two reinforced concrete drop structures¹ in the Santa Ana River are within the project site, approximately 7 feet high and stretching across the bottom of the riverbed: one between Ball Road and UPRR and another between the Metrolink/LOSSAN Corridor and SR-57. The public is not authorized to be within the Santa Ana River channel or on the channel's grouted rip-rap embankments.

The northern end of the project site connects to the existing Anaheim Coves, a joint project between the City of Anaheim, OCWD, and Southern California Edison (SCE). Anaheim Coves was completed in 2019 and is a 26-acre nature park that offers approximately 2.5 miles of multi-use trail, fitness zones, native habitat, educational elements, and nature play area. The Anaheim Coves trail extends north along the edge of Burris Basin, an offline (not in main flow path of the river) water recharge/storage basin just north of Ball Road adjacent to the project site and the Santa Ana River. Figure 2-4, Existing Project Site Views, and Figures 2-4a through 2-4d show existing views of the Santa Ana River looking south at four vantage points.

Existing Santa Ana River Trail and Maintenance Road

The existing Santa Ana River Trail (SART) runs along the east bank on top of the existing river embankment north of Katella Avenue and along the west bank on top of the existing river embankment south of Katella Avenue. A connection between the east and west banks is provided on the northern side of Katella Avenue Bridge, which links to the SART underpass at Katella Avenue. In addition to the Katella Avenue underpass on the western embankment, there are existing underpasses at SR-57 and Orangewood Avenue within the project site boundaries on the west bank. On the eastern side, the SART includes two underpasses within the project site

¹ Drop structures were constructed as part of the U.S. Army Corps of Engineers Santa Ana River Mainstem Project in the 1970s to provide enhanced flood protection for the region. By creating a sudden drop in elevation of the riverbed, drop structures control the velocity of the flowing water and reduce the water's energy to prevent erosion of the riverbed and banks, increasing flood protection and stability.

boundaries that allow for uninterrupted bike and pedestrian passage: one under UPRR and another under Ball Road. An approximately 8.3-acre area owned by the County of Orange/OCFCD provides nearly 200 feet of open space adjacent to the SART on the east bank. The existing SART, including underpasses, is shown on Figure 2-5, Existing Condition – Surface.

The west bank has a maintenance road extending north from Katella Avenue, which crosses under Ball Road and continues along the west bank of the river north of the project boundary. The existing maintenance road on the west bank includes one underpass at Ball Road and multiple access ramps down to the riverbed within the project site boundaries. South of Katella Avenue, there is a maintenance road along the east bank of the river with multiple access ramps down to the riverbed within the project site boundaries. These maintenance roads and access ramps, shown on Figure 2-5, are heavily utilized by OCPW, OCWD, OC Watershed, Orange County Sheriff Department, and OCFCD to monitor and maintain the river and to utilize the Collins Yard, the OCFCD Storage Yard, the OCPW and Orange County Parks SART Storage facility, and the Orange County Sheriff Training Facility. They are used by vehicles only and fenced off when not in use.

Existing Underground Utilities

Several storm drains outlet into the Santa Ana River, as shown on Figure 2-6, Existing Condition – Underground. The Collins Channel, an existing channelized tributary, also outlets into the Santa Ana River between Katella Avenue and the Metrolink/LOSSAN Corridor from the eastern side. Additionally, the existing groundwater replenishment system (GWRS) pipeline runs along the west bank of the Santa Ana River.

The Orange County Sanitation District (OCSAN) operates the Santa Ana River Interceptor sewer pipeline, which runs along the east bank from the northern boundary of the project site to the Metrolink/LOSSAN Corridor, where it crosses the Santa Ana River and continues south along the west bank. A smaller OCSAN trunk sewer line crosses the river at Katella Avenue and continues west to State College Boulevard.

2.1.2 Surrounding Land Uses

On the west side of Santa Ana River, the project site south of Katella Avenue is adjacent to various urban land uses, such as Angel Stadium, the ARTIC, and a proposed linear park planned by the City of Anaheim north of Orangewood Avenue between Angel Stadium and the Santa Ana River in the City of Anaheim. The project site north of Katella Avenue is adjacent to the Honda Center, the ACC office buildings, the vacant former Ball Road Basin, and The Islands Golf Center. The Honda Center is an indoor arena, the home of the Anaheim Ducks of the National Hockey League, that hosts a variety of sports and entertainment events. The Islands Golf Center is a golf facility set on a water basin with hitting stalls, floating targets, and putting greens for practice. North of the project site is Burris Basin, an offline (not in main flow path of the river) OCWD groundwater recharge basin, and Anaheim Coves, a nature park with 2.5 miles

of multi-use trails. The former Ball Road Basin is conceptually being considered by the City of Anaheim to be developed as a mixed-use project with a high-density residential component.

The OCVIBE Project area includes approximately 92.08 net acres and extends from the Southern California Edison Easement area to the north, State Route 57 to the west, the confluence of the State Route 57 and the Santa Ana River to the south, and the Santa Ana River to the east. The OCVIBE Project is adjacent to the OC River Walk. The OCVIBE Project is a mixed-use development with up to 2,250 residential units, 576,680 square feet of office, 1.7 million square feet of commercial space, and open space to be developed in multiple phases. Phase I of the OCVIBE Project began construction in the second quarter of 2024, which includes construction of new streets and infrastructure, parking structures, an office building, market hall, concert hall, and an urban park. All phases of the OCVIBE Project are expected to be completed by 2032.

The uses south of Katella Avenue that are adjacent to the Santa Ana River on the eastern side include the Sandra Hutchens Regional Law Enforcement Training Center (a facility that includes a combat shooting range), the OCPW offices, and other various industrial park uses. The surrounding uses north of Katella Avenue are industrial, office, entertainment, and hotel uses, including the Stadium Promenade shopping mall and the Kinder Morgan Orange Terminal in the City of Orange (refer to Figure 2-4).

2.2 Project Objectives

In accordance with Section 15124(b) of the CEQA Guidelines, the City of Anaheim, as the lead agency, identified the following objectives for the project:

1. Adopt the OC River Walk Conceptual Master Plan to further enhance and accentuate existing recreational areas, facilitate pedestrian and bicycle access, and promote the use of the river corridor open space area for the community benefit.
2. Implement projects identified in the OC River Walk Conceptual Master Plan that will create visually appealing outdoor public amenities that will benefit and promote environmental and community health, recreation, safety, entertainment, wayfinding, art, education, cultural awareness, beauty, connectivity, water supply, economic, and natural resource needs.
3. Provide seamless and cohesive improvements across jurisdictions on the project site to benefit the public and the area's aesthetics.
4. Implement projects to transform and improve the river and riverbed's groundwater recharge potential and improve the river corridor's ecology (flora and fauna).
5. Maintain and enhance flood protection capacity and resiliency.
6. Enhance connectivity and community access by leveraging the project site's location near ARTIC, major entertainment venues, and adjacent mixed-use developments.

2.3 Project Background and Purpose

In 2021, the OC River Walk Engineering Feasibility Study (Feasibility Study) identified 17 design opportunities along the Santa Ana River within the project site. The opportunities outlined in the Feasibility Study align with the USACE Operating Principles, as well as the California State Coastal Conservancy's Santa Ana River Conservancy Program goals of (1) protection and preservation of water resources through multi-benefit projects, (2) habitat and wildlife preservation and enhancement, and (3) equitable education and recreation access. The 17 opportunities were split into three categories and outlined in the Feasibility Study as shown below.

Active Transportation

- Bikeway/pedestrian trail extension: Katella Avenue to Anaheim Coves (including UPRR undercrossing) along the west bank of the river
- Trail culvert undercrossing at Ball Road
- SART east bank addition of river from Katella Avenue to Orangewood Avenue
- Bike/pedestrian bridge across the Santa Ana River
- River Walk width expansion and connectivity
- Widen existing bridges for bikes/pedestrian lanes
- SART pinch point relief (two locations)

River Activation

- River impoundments (inflatable rubber dams north of Orangewood and north of ARTIC)
- Riverbank modifications
- Urban stormwater treatment
- River recreation/programming

Community Amenities

- Cantilever decks
- Engagement with adjacent spaces
- Stepped river embankment
- Integrated public education/art
- Upland habitat restoration
- Landscape enhancements

Opportunities, as outlined in the Feasibility Study, are defined as individual projects with specific locations or typologies that can be applied to multiple locations. The Feasibility Study served as the launching point for the OC River Walk Conceptual Master Plan and design documents for multiple projects within OC River Walk. The integrated purposes of the OC River Walk Conceptual Master Plan are as follows:

1. Increase public recreation and connectivity by creating and improving a robust active transportation network.
2. Catalyze economic growth and development by implementing flexible public spaces and strengthening connections to adjacent communities.
3. Increase water resource resilience and recreational activities by creating two water recharge impoundments created by three inflatable rubber dams.
4. Enhance the ecology of the river and surrounding region with native upland planting and increased open space where possible.
5. Improve visual and physical public access to the river.
6. Maintain and enhance flood protection capacity and resiliency.
7. Use varying means of media to integrate public art to provide a deeper meaning and connection with the river and education programming to convey the significance and history of the river to elevate the visitor experience and identity of the project.
8. Prioritize safety by enhancing connectivity and using site lighting to improve visibility and sense of safety.

2.3.1 Orange County Water District Groundwater Replenishment System Turnout Structure

On May 18, 2022, the OCWD adopted the Initial Study/Mitigated Negative Declaration (IS/MND) for the Recycled Water Conveyance Improvement Project. This project includes the installation of an outlet facility (referred to as a turnout or pipeline turnout structure) to enable the diversion of treated water from the GWRS into the Burris Basin for groundwater recharge. It also includes modifying the existing operational protocol for releasing GWRS water into the Carbon Creek Diversion Channel. For discharge in the SAR, a National Pollution Discharge Elimination System (NPDES) permit from the Regional Water Quality Control Board (RWQCB) and an amendment to OCWD's existing Title 22 Reuse permit from Division of Drinking Water to allow impoundment of GWRS water within the SAR. Currently, ultra-pure water from the GWRS discharges at a rate of 100 million gallons per day (MGD) into four OCWD recharge basins upstream of the project site.

The GWRS turnout structure is planned to be located in the southeastern portion of the Burris Basin, adjacent to the Santa Ana River, and is included within The OC River Walk project site. The Burris Basin, an existing groundwater recharge basin owned and operated by the OCWD, is part of the OCWD's recharge system network in central Orange County. An existing GWRS pipeline that varies between 66 and 60 inches extends from the OCWD's GWRS plant in Fountain Valley, running along the Santa Ana River embankment to other recharge basins north of Burris Basin. From the Burris Basin, the OCWD can use the Burris Pump Station to move ultra-pure water to the Santiago Basin, further supporting groundwater recharge.

The project would require modifications to this turnout structure, allowing additional options to discharge into either the pipeline leading to the two impoundments or directly into the river, thereby supplying ultra-pure GWRS water to the impoundments.

2.4 Project Components

The OC River Walk Conceptual Master Plan (PACE 2025) consists of various multi-purpose improvements to transform the Santa Ana River corridor and portions of the existing SART, along with related off-site improvements necessary for its implementation. The main components of the OC River Walk Conceptual Master Plan involve creating two water impoundments by installing three inflatable rubber dams, modifying the riverbanks, constructing two pedestrian/bike bridges, providing new trails, improving existing trails, creating new and protection of existing access ramps, constructing two new undercrossings on the west bank at the UPRR and the Metrolink railroad, providing enhanced community recreation amenities (e.g., terraced seating, nature play areas, parklets, plazas, gathering areas for large-scale events, festivals, and other activities, water access, kayak launch, etc.), and other improvements. Figure 2-7, Proposed Impoundments and Trail Improvements, illustrates the impoundments and storm drain diversion, and trail improvement components of the OC River Walk Conceptual Master Plan. Figure 2-8, Overall Project Elements, illustrates the active transportation and river activation components, including approximate locations for enhanced recreational facilities and potential future park areas. These improvements would require the implementation of 19 project elements, as listed in Table 2-1, OC River Walk Conceptual Master Plan Elements, and illustrated on Figures 2-8a through 2-8d, which have been categorized into four groups: Group A – Impoundments, Storm Drain Diversions, and Embankments; Group B – New Pedestrian/Bike Bridges; Group C – New Trails and Trail Improvements; and Group D – Enhanced Community Recreation Amenities. The project conforms with the design goals and function of the SAR described in the USACE 1988 General Design Memorandum. The project design (e.g., levee design, vegetation, and freeboard) would be reviewed and permitted by the USACE and the OCFCD through the 408 permitting process.

Table 2-1. OC River Walk Conceptual Master Plan Elements

No.	Conceptual Master Plan Elements	Quantity (Approximate) ¹
Group A: Impoundments, Storm Drain Diversions, and Embankments		
1	River Impoundments	
1a	North Impoundment and Inflatable Rubber Dam	3,000' length, 22 ac area, 110 AF volume Rubber Dam: 8' x 300'
1b	North Impoundment – Rubber Dam Concrete Foundation	310' x 24' x 2' = 700 CY reinforced concrete 10,000 CY of earthwork subgrade preparation
1c	North Impoundment – Rubber Dam Air Compressor, Controls, and Flow Bypass	10' x 10' x 7' precast concrete vault or building (preferred)

Table 2-1. OC River Walk Conceptual Master Plan Elements

No.	Conceptual Master Plan Elements	Quantity (Approximate) ¹
1d	South Impoundment and Inflatable Rubber Dam	1,700' length, 11.5 ac area, 90 AF volume Rubber Dam: 10' x 300'
1e	South Impoundment – Rubber Dam Concrete Foundation	310' x 24' x 2' = 700 CY reinforced concrete 10,000 CY of earthwork subgrade preparation
1f	South Impoundment – Rubber Dam Air Compressor, Controls, and Flow Bypass	10' x 10' x 7' precast concrete vault or building (preferred)
1g	Collins Channel – Inflatable Rubber Dam	Rubber Dam: 6' x 45'
1h	Collins Channel – Rubber Dam Concrete Foundation	60' x 24' x 2' = 130 CY 1,500 CY of earthwork subgrade preparation
1i	Collins Channel – Rubber Dam Air Compressor and Controls	10' x 10' x 7' precast concrete vault or building (preferred)
2.	Impoundment Evacuation Pumps	4 pumps at 5 MGD ea. (20 MGD total), 85 HP ea. (340 HP total)
3.	Pipeline from Pump Station to GWRS Turnout (N. of Orangewood Avenue to Burris Basin)	8,000 LF, 30-40" HDPE
4.	GWRS Turnout – Concrete Flow Control Structure with Dechlorination Facilities (Located at South End of Burris Basin) – Off-Site Improvement	50 MGD
5.	Storm Drain Diversions (Dry-Weather Flow)	
5a	Anaheim – Storm Drain Outlets w/ Flap Gates	8 gates, 18"-54"
5b	Anaheim – Diversion Manholes	8 manholes
5c	Anaheim – Diversion Pump Stations	2 pump stations w/ 2 pumps ea., 125 GPM and 5 HP per pump
5d	Anaheim – Storm Drain Diversion Pipe to Sewer	4-6" PVC pipe, 2,200 LF
5e	Orange – Storm Drain Outlets w/ Flap Gates	7 gates, 18"-54"
5f	Orange – In-Channel Diversion Structure at Collins Channel	TBD
5g	Orange – Diversion Manholes	7 manholes
5h	Orange – Diversion Pump Stations	1 pump station w/ 2 pumps, 200 GPM and 7.5 HP per pump; 2 pump stations w/ 2 pumps ea., 125 GPM and 5 HP per pump
5i	Orange – Storm Drain Diversion Pipe to Sewer	4-6" PVC pipe, 7,250 LF
5j	Wet Weather Storm Drain Diversion to Impoundments ¹	±200 AF
6.	River Embankments	9,600 LF total
6a	North Impoundment Embankment	6,200 LF, 23' avg. height to 26' max, up to 33' at drop structure
6b	South Impoundment Embankment	3,400 LF, 23' avg. height to 26' max, up to 33' at drop structure

Table 2-1. OC River Walk Conceptual Master Plan Elements

No.	Conceptual Master Plan Elements	Quantity (Approximate) ¹
Group B: New Pedestrian/Bike Bridges		
1.	Pedestrian/Bike Bridge North of Katella Avenue	400 LF, 36'-58' width, 3 River Piers
2.	Pedestrian/Bike Bridge North of Orangewood Avenue	350 LF, 12'-18' width, 5 River Piers
3.	Bridge Retaining Walls	
3a	New Pedestrian/Bike Bridge N. of Katella West Bank Retaining Wall #1	500 LF, <8' height
3b	New Pedestrian/Bike Bridge N. of Katella West Bank Retaining Wall #2	500 LF, <8' height
3c	New Pedestrian/Bike Bridge N. of Katella East Bank Retaining Wall #3	500 LF, <8' height
Group C: New Trails and Trail Improvements		
1.	Trail West Bank – Katella Avenue to Anaheim Coves	6,400 LF total, 18' typ. width
1a	UPRR – Undercrossing (New Undercrossing)	500 LF, 20' typ. width
1b	UPRR Undercrossing Retaining Wall	500 LF, <10' height
1c	UPRR – At-Grade Crossing (Existing Maintenance Access)	100 LF, 18' typ. width
1d	OC River Walk and River Road Retaining Wall	750 LF, <8' height
1e	Ball Road Culvert Undercrossing (Existing 14x14 RCB)	800 LF, 18' typ. width
1f	Ball Road Bridge Undercrossing w/ City and County and OCWD (Existing Maintenance Access)	TBD
1g	River Access/Kayak Ramp South of Cerritos (Existing Ramp)	TBD
1h	Interim UPRR Crossing at Phoenix Club Drive (Existing RR Crossing and New Interim Connection Trail)	TBD
1i	Replace Access Road Only (For New Pedestrian/Bike Bridge North of Katella Ave.)	N/A
2.	Trail West Bank – Katella Avenue to Orangewood Avenue	4,000 LF, 18' typ. width
2a	Embankment Seating and Steps	350 LF
2b	Metrolink RR Undercrossing (Existing Undercrossing)	800 LF, 20' typ. width
2c	Metrolink Underpass Retaining Wall	900 LF, <12' height
2d	River Walk South Embankment Seating and Steps	450 LF
2e	SR-57 Underpass Trail Widening	400 LF
2f	SR-57 Retaining Wall	400 LF, <14' height
3.	Trail East Bank Katella Avenue to Ball Road	4,300 LF, 18' typ. width
3a	Replace Access Road Only (For New Pedestrian/Bike Bridge North of Katella Avenue)	N/A
3b	Improve Trail w/ Terrace and Community Access	4,300 LF, 12'-40' width
3c	East Bank Park/River Terrace Retaining Wall #1	500 LF, <8' height
3d	City of Orange Water Recreation Opportunity ¹	N/A
3e	East Bank Park/River Terrace Retaining Wall #2	1,000 LF, <8' height

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No.	Conceptual Master Plan Elements	Quantity (Approximate) ¹
4.	Trail East Bank Katella to Orangewood: SART – Main Line Reroute to East Bank of River	4,000 LF, 18' typ. width
Group D: Enhanced Community Recreation Amenities		
1.	River Recreation – North Impoundment	
1a	Kayaking and Water Recreation Activities (kayak launch ramp is identified in Group C 1g.)	22 ac
1b	Swimming / Wading Recreational Opportunity	1-3 ac
1c	Recirculation and Water Feature Pumps ¹	1,000-5,000 GPM (1.5-7.5 MGD)
1d	Water Feature Elements (Water show, water screen, etc.) ¹	TBD
1e	Swimming Water Quality Pumps and Treatment ¹	5,000-10,000 GPM
2.	River Recreation – South Impoundment	
2a	Kayaking and Water Recreation Activities	11.5 ac
2b	Under SR-57 – Lighting and Other Amenities	TBD
2c	Recirculation and Water Feature Pumps ¹	1,000-5,000 GPM (1.5-7.5 MGD)
2d	Water Feature Elements ¹	TBD
3.	OCVIBE Lot B Parking Lot, Potential Future OC River Walk Park	2.2 ac
4.	Park / River Terrace: East Bank North of Katella Avenue	
4a	East Bank (City of Orange) Katella Avenue to UPRR	8.3 ac
4b	UPRR to Ball Road	2.2 ac
5.	Riverbed Between Impoundments (future recreation TBD)	3.8 ac, 650 LF
6.	Art / Education / Signage (Conceptual locations)	
6a	Iconic Signage ¹	TBD
6b	Bridge Mural and Lighting at freeway underpass	TBD
6c	Mosaic / Art Installations	TBD
6d	Reflective Shade Canopies	TBD
6e	Zen Zone / Wildflower Spaces ¹	TBD
6f	River Poetry Walk	TBD
6g	Interactive Educational Components	TBD
6h	Wayfinding Signage ¹	TBD
6i	Conceptual Locations for Art/Signage Opportunities ¹	TBD

Notes: ac = acres; AF = acre-feet; CY = cubic yards; GPM = gallons per minute; HDPE = high-density polyethylene; HP = horsepower; LF = linear feet; MGD = million gallons per day; N/A = Not Applicable; TBD = to be determined; typ. = typical; UPRR = Union Pacific Railroad; All project dimensions and locations are approximate as of the time of EIR preparation and have been assumed for analysis purposes.

¹ Project element is not specifically located at this time or encompasses the entire project site.

Stepped riverbank modifications may be considered to occur north of the UPRR adjacent to the former Ball Road Basin. The proposed trail improvements north of the UPRR would connect to the Anaheim Coves and create a trail and recreation connection between the OC River Walk and the Anaheim Coves.

The OC River Walk Conceptual Master Plan includes 19 main project elements, as listed in Table 2-1. These elements are grouped into four categories, which include various project components. For CEQA analysis, it is assumed that these various components could be implemented simultaneously or at different stages within an approximately 10-year period.

Additionally, all necessary new and/or upgrades to existing on- and off-site utilities and systems, such as electrical facilities, lighting, landscaping, irrigation, seating, and signage to implement various components of the project, would be provided in compliance with applicable City of Anaheim and City of Orange rates, rules, and regulations; municipal codes; the California Green Building Standards Code; and any applicable engineering standards and specifications, as deemed necessary by the approving agency. The key elements of the OC River Walk, organized into Groups A through D, are described below. The dimensions (e.g., lengths, heights, volumes) and locations specified in each element are approximate as of the time of EIR preparation and have been assumed for analysis purposes.

Public Law 84-99, Emergency Response to Natural Disasters, is the USACE's basic authority to provide for emergency activities in support of state and local governments prior to, during, and after a flood event. Under PL 84-99, the USACE can provide both emergency technical and direct assistance in response to flood and coastal storms and can assist if there is a flood threat from damage caused by earthquakes to flood risk management projects. The SAR is currently eligible for Public Law 84-99 program coverage, and it should be noted that the project would not change this eligibility status.

Group A – Impoundments, Storm Drain Diversions, and Embankments

There are six project elements in Group A, as described below and illustrated on Figure 2-8a, Proposed Improvements – Group A.

Element 1. Impoundments: The project includes two impoundments, bodies of water that would be maintained within the river for an extended period of time. These impoundments would be created by the installation of three inflatable rubber dams: (1) one approximately 8 feet high and 300 feet long, located approximately 200 feet north of the Metrolink/LOSSAN Corridor near ARTIC to produce the north impoundment; (2) one approximately 10 feet high and 300 feet long, approximately 250 feet north of Orangewood Avenue to produce the south impoundment; and (3) one approximately 45 feet long within Collins Channel to prevent impounded water from backing up into the tributary channel and serve as a barrier against dry weather flow entering the impoundments. Figure 2-9, Rubber Impoundments, illustrates the proposed impoundment dimensions. These rubber dams would create opportunities for additional groundwater recharge locations. They would be inflated during dry conditions, allowing the OCWD to discharge ultra-pure water from their GWRS into the river and impound it upstream of the rubber dams. The water surface area from the tapered shoreline to the north impoundment would be 22 acres and

3,000 feet long, with an estimated water surface elevation (WSEL) of 153 feet and an estimated water volume of 110 acre-feet. The water surface area from the existing drop structure to the south impoundment would be approximately 11.5 acres and 1,700 feet long, with an estimated WSEL of 145 feet and an estimated water volume of 90 acre-feet. The impoundment section view is shown on Figure 2-9.

Approximately 12 MGD of ultra-pure water would recharge into the groundwater aquifer through these two impoundments. During storm events, the inflatable rubber dams would be deflated to maintain the river's hydraulic capacity for flood conveyance.

Element 2. Impoundment Evacuation Pumps: A large pump station and pipeline (Element 3) would be constructed at the southern end of the south impoundment, north of Orangewood Avenue, to pump ultra-pure water to Burris Basin, one of the OCWD's off-river spreading basins, when a storm approaches rather than discharging it to the ocean. The pump station would house four 85-horsepower evacuation pumps, each with a capacity of 5 MGD, totaling 20 MGD. The pump station would be electrically powered.

Element 3. Pipeline: An approximately 8,000-linear-foot, 30- to 40-inch high-density polyethylene pipeline would be constructed from the south impoundment pump station north of Orangewood Avenue to the turnout at Burris Basin (off site). Two fill lines with valves would connect the pipeline to the north and south impoundments so that this pipeline could be used to fill either impoundment. The pipeline would provide gravity flow for approximately 15 to 30 MGD of ultra-pure water from the GWRS into the impoundments and provide a pathway to evacuate impounded water using the impoundment pump station (Element 2).

Element 4. GWRS Turnout Structure: A concrete flow control structure with dechlorination facilities, capable of handling a maximum of 50 MGD, would be constructed at the southern end of the Burris Basin. This structure would be connected by the 30- to 40-inch pipeline described in Element 3. The turnout structure has been proposed by the OCWD to discharge ultra-pure GWRS water into the Burris Basin. The OCWD adopted an IS/MND for the installation and operation of the GWRS turnout structure to the Burris Basin in May 2022. For the purposes of this project, the turnout structure approved by the OCWD would be modified to provide additional options to discharge either into the pipeline to the south impoundment pump station or directly into the river, supplying ultra-pure GWRS water for the impoundments.

Element 5. Storm Drain Diversions (Dry-Weather Flow): Several diversion stations would be provided to divert dry-weather flow away from the impoundments, either into a nearby sanitary sewer or downstream through gravity pipes or pump stations. A dry-weather storm drain diversion is a system that moves polluted water from storm drains into the sanitary sewer system for treatment. This would help to prevent any pollutants from entering the ultra-pure water in the impoundments. These facilities include storm drain outlets with flap gates, diversion manholes,

diversion pump stations, and pipes to existing sewer lines. An in-channel diversion structure would also be provided at Collins Channel. Pump stations would be electrically powered.

Element 6. River Embankments: Approximately 3.5 miles of riprap-lined riverbanks exist along the western and eastern sides of the Santa Ana River, between Ball Road and Orangewood Avenue. Although riprap is highly functional for bank protection, modifications are proposed to improve versatility and usability by providing safe public access and engagement with the Santa Ana River while maintaining flood protection. Approximately 9,600 feet of embankment would be constructed on both the eastern and western sides of the north and south impoundments.

The existing riprap would be upgraded with soil cement and reinforced concrete construction methods, increasing stability and erosion protection for flood protection systems. Soil cement, up to 8 feet thick, would replace the current 18 to 24 inches of riprap, providing smoother integration with adjacent land uses and the river.

Embankment improvements to portions of the river outside the immediate vicinity of the two impoundments may be also necessary to facilitate other anticipated elements of the project, including trails, river access, and flood conveyance/flood protection. Improving and strengthening the base structure of the embankments would provide a consistent and stable foundation for these elements to be integrated into the river's edge. Above and below the 100-year flood elevation, terraced concrete steps would be provided for public access, seating, landscaping, and other recreational uses (which are described further in Group C). Existing and proposed access ramps would ensure OCFCD and OCWD access. The project is intended to provide access for bulldozers and heavy equipment on the embankment around inflatable dams and drop structures by placing soil over the grade control structures.

Group B – New Pedestrian/Bike Bridges

There are three project elements in Group B, as described below and illustrated on Figure 2-8b, Proposed Improvements – Group B.

Element 1. Pedestrian/Bike Bridge North of Katella: To further improve mobility between both sides of the Santa Ana River, the project includes a non-motorized bridge dedicated to pedestrians and bicyclists. This east–west bridge would be approximately 400 feet long and 36 to 60 feet wide, with retaining walls along both banks. The bridge elevation would be approximately 174 feet, providing adequate freeboard during storm events. The concept design includes three cantilever overlooks. Upon completion, this bridge would functionally replace the existing SART river crossing at the Katella Avenue bridge for non-motorists.

Element 2. Pedestrian/Bike Bridge North of Orangewood Avenue: To further improve mobility between both sides of the Santa Ana River, the project includes a second non-motorized bridge dedicated to

pedestrians and bicyclists. This bridge would be approximately 350 feet long and 12 to 18 feet wide, located north of Orangewood Avenue, providing multiple safe connections between the riverbanks.

Element 3. Bridge Retaining Walls: Three retaining walls would support the pedestrian/bike bridge north of Katella Avenue (Group B, Element 1). Two would be located on the west bank and one on the east bank. Retaining walls are not expected to be needed for the pedestrian/bike bridge north of Orangewood Avenue (Element 2).

Group C – New Trails and Trail Improvements

There are four project elements in Group C, as described below and illustrated on Figure 2-8c, Proposed Improvements – Group C.

Element 1. West Bank Trail Connection from Katella Avenue to Anaheim Coves: The trail connection would extend from Katella Avenue to Anaheim Coves. The new trail would include three undercrossing at ultimate condition: one for the UPRR and two for Ball Road.

During the interim condition, there would be two options to cross the UPRR: one at the new at-grade crossing along the riverbank and one at the existing at-grade crossing at Phoenix Club Drive. The new interim at-grade crossing would be approximately 100 feet long and 18 feet wide. The existing at-grade crossing is approximately 380 feet to the west; therefore, using this existing at-grade crossing would require a detour from the trail, and an interim connection to this at-grade crossing would be provided. At ultimate condition, an approximately 500-foot-long UPRR undercrossing would be constructed to provide a safe, grade-separated trail crossing under the UPRR.

There is an existing paved maintenance-only Ball Road Bridge undercrossing, which would be improved as part of the trail connection for public use. Additionally, a second undercrossing could be provided by repurposing an existing box culvert under Ball Road near Phoenix Club Drive. The existing 14' x 14' box culvert is currently needed, but once the new Burris Basin overflow is constructed, it will no longer be needed by OCWD to transfer water to the former Ball Road Basin south of Ball Road. Therefore, the culvert could be repurposed as a grade-separated trail crossing under Ball Road for pedestrians and bicyclists. The Ball Road Basin is not part of the project and is planned to one day be developed as future residential use by OCVIBE.

The west bank trail system would include an approximately 750-foot-long and up to 8-foot-high retaining wall along the OC River Walk boundary and the planned River Road and a river access/kayak ramp south of Cerritos Avenue using the existing maintenance ramp.

Additionally, other improvements related to the west bank trail system could include landscaping and irrigation, separated bike and pedestrian trails, lighting, and amenities such as fitness equipment, children's play areas, shade structures, bench seating, and drinking fountains.

Element 2. West Bank Trail Connection from Katella Avenue to Orangewood Avenue: This trail connection would extend from Katella Avenue to Orangewood Avenue. As shown on Figure 2-5, existing SART, underpasses, and maintenance access exist between Katella Avenue and Orangewood Avenue, and the project would provide improvements to this existing trail system. It would include an undercrossing at the Metrolink/LOSSAN Corridor and a widening of the existing SR-57 underpass trail. The undercrossing would be approximately 800 feet long and 20 feet wide, while the retaining wall for the SR-57 underpass would be about 900 feet long and up to 12 feet high. About 400 feet of the existing SR-57 freeway underpass would be widened from 35 feet to about 55 feet, and a retaining wall of equal length (up to 14 feet high) would be provided. The trail would pass along the existing ARTIC station, the future Meadow Park (as part of the OCVIBE Project), and the future River Park between the project site and Angel Stadium (as part of a separate City project). Recreational facilities, including embankment seating and steps, would be provided along the trail adjacent to the future Meadow Park and River Park. Additionally, the following lists various trail-related improvements that may be included as needed; the locations of these amenities have not yet been determined:

- Grade-separated pathways
- Benches/seating
- Gathering tables
- Wayfinding/signage
- Shade structures
- Trees
- Landscaping
- Irrigation
- Lighting
- Art exhibits
- Children play areas
- Fitness stations
- Drinking fountains

Element 3. East Bank Trail Connection from Katella Avenue to Ball Road: The existing SART runs along the east bank north of Katella Avenue, and there is an existing access/maintenance underpass beneath Katella Avenue. The project would improve the existing SART to provide new access for the new pedestrian/bike bridge north of Katella Avenue, terraced overlooks and river access, and various water recreation opportunities. Retaining walls would also be provided: one adjacent to the proposed terraced overlooks and river access and another along the trail near the river access. Additionally, other trail-related improvements as listed under Group C, Element 2, could be included as needed.

Element 4. East Bank Trail Connection from Katella Avenue to Orangewood Avenue: There is an existing maintenance access between Katella Avenue and Orangewood Avenue used by vehicles

only and fenced off for public access. The project would enhance this section of the SART and reroute the main SART line to the east bank. In areas where trail segments are expected to be used by bulldozers for maintenance, bulldozer-access pavers would be selected to minimize track damage.

Group D – Enhanced Community Recreation Amenities

There are six project elements in Group D, as described below and illustrated on Figure 2-8d, Proposed Improvements – Group D.

Elements 1 and 2. River Recreation – North and South Impoundment: Potential future recreational activities range from passive (non-contact) to active programmed recreation such as kayaking (or other forms of non-motorized boating), stand-up paddle boarding, urban beaches, and potentially swimming along the embankment or floating recreational features. These elements would also include recirculation and water feature pumps, pumps for circulation and treatment to provide the water quality necessary for swimming and other direct human contact activities, and equipment for the various active water recreation activities.

Element 3. OCVIBE Lot B Parking Lot to OC River Walk Park: This approximately 2.2-acre area is owned by OCFCD and occasionally used for river maintenance staging and access. It is currently leased to OCVIBE and is designated as a future parking lot within the OCVIBE project boundary. Given this area's proximity to the OC River Walk, there could be an opportunity to change its use for future park and other public use as part of the OC River Walk Project. As a potential future park/open space, the site could expand the OC River Walk project's open areas and provide river ramp access for kayaking and other water recreation activities. Improvements would require prior approval by OCVIBE.

Element 4. Park/River Terrace – East Bank North of Katella: This area comprises approximately 10.5 acres on the east bank between Katella Avenue and Ball Road, providing opportunities for future park development with various improvements. The OCFCD owns the 8.3-acre portion between Katella Avenue and the UPRR, and the County of Orange owns the remaining 2.2 acres without any specific department within the County jurisdiction.

Element 5. Riverbed between Impoundments: The approximately 3.8-acre area of exposed riverbed created by the impoundments offers future recreational opportunities, although no specific program has been identified yet.

Element 6. Art/Education/Signage: The project would integrate art and educational features throughout the OC River Walk to enhance the visitor experience and reinforce the project's identity. Table 2-1 lists various components in this art/education/signage element, and Figure 2-8d shows their approximate locations. The quantity and specific locations of various components would be determined later. Some of the main components include but are not limited to giant iconic signage, an interactive educational component to emphasize the importance of the impoundments

for regional water resilience and groundwater recharge, decorative LED lighting and murals on the bridges and freeway underpass, shade structures, and the River Poetry Walk, which is public art concept with the poetic subject matter centered around the river and showcase the diversity of the people and communities in the region. Additionally, other trail-related improvements as listed under Group C, Element 2, could be included as needed.

Circulation and Trail System

The project would include a trail system that consists of a pedestrian-only, bike-only, and shared paths, as shown on Figure 2-10, Trail Circulation System. These three trail types would be generally designed based on the following five typical trail conditions:

- **Grade-Separated Bike and Pedestrian Paths:** An approximately 12-foot shared bike path grade separated next to an approximately 12-foot concrete pedestrian path.
- **Shared Promenade:** An approximately 26-foot-wide concrete promenade.
- **Separated Bike and Pedestrian Path:** An approximately 12-foot shared asphalt bike path separated by a planted buffer with varied width depending on available right-of-way width and an approximately 12-foot split concrete and decomposed granite pedestrian path.
- **Raised Cycle Path With Buffer:** An approximately 10-foot cycle path with a painted buffer between a 5-foot concrete or decomposed granite pedestrian path.
- **Shared Mixed-Use Trail With Adjacent Soft Path:** An approximately 17-foot-wide path consisting of a shared asphalt bike path adjacent to a five-foot decomposed granite pedestrian path.

Figure 2-11, Project Rendering – South of Cerritos River Access, and Figure 2-12, Project Rendering – South of SR-57 Freeway, illustrate simulated project site views of the Santa Ana River south of Katella Avenue river access looking south with ARTIC and “The Big A” sign in the background and view of the river and the enhanced recreational facilities looking north.

Off-Site Improvements

To implement the OC River Walk Conceptual Master Plan, several off-site improvements would be required outside the project boundary, including a new GWRS turnout structure and three tie-ins to a connection pipeline to OCSAN sewer lines, as shown on Figure 2-13, Off-Site Improvements. The GWRS turnout structure would have a 50 MGD capacity at Burris Basin and connect to the 30- to 40-inch pipeline (Group A, Element 3). The OCWD anticipates that typical daily flows would range from no flow to approximately 10 MGD. The project would require modification to the approved GWRS turnout structure to provide additional options to discharge either into the pipeline to the south impoundment pump station or directly into the river, supplying ultra-pure GWRS water for the impoundments. Two sewer tie-ins would be located within the City of Anaheim—one south of the SR-57 freeway and one north of Katella Avenue—and one in the

City of Orange at Katella Avenue. A 4- to 6-inch off-site connection pipeline from the diversion pump station north of Orangewood Avenue on the west bank would connect to the OCSAN tie-in.

The project would also require other off-site electrical utility improvements to power the pump stations and other improvements that require electricity.

2.4.1 Project Construction

The project is anticipated to take place in multiple phases over approximately 10 years. The construction is tentatively scheduled between the second quarter of 2026 and the second quarter of 2036 at the earliest. The initial phase of construction would include various elements in Groups B and C, such as construction of a bridge or various trail improvements. The initial construction is expected to take approximately 24 to 36 months.

2.5 Discretionary Actions

- Approval of the OC River Walk Conceptual Master Plan
- Certification of the EIR
- Adoption of the Mitigation Monitoring and Reporting Program
- Minor update to Figure 4, Existing and Planned Bikeway Network, of the City's Circulation Element (refer to Figure 2-14, Proposed Bikeway Network).

2.5.1 Other Agency Approvals

Under CEQA, state and local agencies (other than the lead agency) with discretionary authority over a project or aspects of a project are considered responsible agencies. Federal agencies are not responsible agencies under CEQA. The following federal, state, regional, and local agencies may have discretionary authority over the project:

- Lead agency
 - Approval of Street Improvement Plans
 - Issuance of grading permits
 - Encroachment and access permit applications
- Federal
 - U.S. Fish and Wildlife Service (USFWS) – Approval of Sections 7 and 10(a) of the federal Endangered Species Act (FESA) compliance
 - USACE – Approval of Section 404 Permit and Section 408 Permit, flood contingency plan review and approval
- State
 - California Department of Fish and Wildlife (CDFW) – Approval of Section 1602 Permit

- California Department of Transportation (Caltrans) – Approval of access and encroachment permits within Caltrans right-of-way (i.e., SR-57 freeway), any public artwork within Caltrans right-of-way
- State Historic Preservation Office (SHPO) – Approval of Section 106 compliance
- California Public Utilities Commission – Approval of railroad undercrossings at UPRR north of Katella and at Metrolink/LOSSAN adjacent to ARTIC, possible GWRS waterline encroachment permit and access agreement.
- California Department of Water Resources – Approval of groundwater management permit (if not covered by the OCWD)
- California State Water Board, Division of Drinking Water – Approval of Title 22 Reuse Permit Amendment for GWRS water, amendment to the OCWD's existing Title 22 permit
- Regional
 - RWQCB – Approval of Section 401 Water Quality Certification; Approval of NPDES Permit; Approval of amendments to OCWD's Waste Discharge Requirements and Master Recycling Permit for the GWRS
 - Southern California Regional Rail Authority – Approval of encroachment/right-of-entry and road crossings permits related to Metrolink, access and installation permitting for public artwork
 - UPRR – Approval of encroachment/right-of-way entry and road crossing permit related to UPRR
 - Southern California Edison – Approval of encroachment permit
- Local
 - City of Orange – Approval of encroachment and access permits; minor amendments to the City of Orange General Plan Circulation and Mobility Element and the Bikeways Master Plan may be necessary as improvements are undertaken.
 - OCPW and OCFCD – Approval of encroachment and conditional use permits, construction and general use permits, flood contingency plan review and approval, amendment to OCWD-OCFCD agreement for maximum height of OCWD dams within the SAR, OCFCD permit for modifications to undercrossing
 - Orange County Parks – Approval of General Use Permit for portions of SART
 - OCWD – Approval of encroachment and use permits, approval of ownership and maintenance agreements, amendment to OCWD-OCFCD agreement for maximum height of OCWD dams within the SAR, modification/relocation of existing at-grade infrastructure

- OCSAN – Approval of any on and off-site sewer improvements (encroachment permits, permit to discharge dry-weather flow to sewer)
- Orange County Transportation Authority – Approval of access permit

Some of the above-listed permits are described in detail below.

CDFW Section 1602 Permit. The CDFW requires notification for any project or activity that will take place within or in the vicinity of a river, stream, or lake or its tributaries. Section 1602 of the California Fish and Game Code requires that any entity, including any state or local governmental agency, provide written notification to the CDFW before beginning any construction project that will (1) substantially divert or obstruct the natural flow of or change the natural flow or the bed, channel, or bank of any river, stream, or lake; (2) substantially change or use any material from a streambed, bank, or channel; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can be transported into any river, stream, or lake.

RWQCB Section 401 Water Quality Certification. The State Water Resources Control Board (SWRCB) and the RWQCBs promulgate and enforce narrative and numeric water quality standards to protect water quality and to adopt and approve Water Quality Control Plans. The SWRCB and the RWQCBs also regulate discharges of harmful substances to surface waters, including wetlands, under the federal Clean Water Act (CWA) and the Porter-Cologne Water Quality Control Act (Porter-Cologne). If issuance of a Section 404 permit is required, it will be subject to Water Quality Certification by the RWQCB under the CWA Section 401.

RWQCB NPDES Permit. The CWA requires an NPDES permit for any discharge of pollutants from a point source to waters of the United States. This law and its regulations also apply to stormwater in certain circumstances. In 1987, Congress amended the CWA to require implementation, in two phases, of a comprehensive national program for addressing stormwater discharges. Phase I requires NPDES permits for stormwater discharge from many priority sources, including medium and large municipal separate storm sewer systems (MS4s), and several categories of industrial activity, including construction activity that disturbs 1 or more acres of land. Phase II of the stormwater program requires permits for stormwater discharges from certain MS4s serving a population of less than 100,000.

SHPO Section 106 Compliance. For projects with federal funding or requiring federal approvals, Section 106 of the National Historic Preservation Act of 1966, as amended by U.S. Code, Title 16, Section 470 et seq., and the Code of Federal Regulations, Title 36, Section 800, includes provisions for protection of significant archaeological and historical resources. Procedures for dealing with previously unsuspected cultural resources discovered during construction are identified in the Code of Federal Regulations, Title 36, Section 800 (for implementing Section 106 processes). The administering agency is SHPO and the federal lead agency. Section 106 compliance is required to obtain a Section 404 permit from the USACE.

USFWS Sections 7 and 10(a) of FESA. Sections 7 and 10(a) of FESA regulate actions that could jeopardize endangered or threatened species. Section 7 describes a process of federal interagency consultation for use when federal actions may adversely affect listed species. In this case, take can be authorized by a letter of biological opinion issued by the USFWS for nonmarine-related listed species issues. A Section 7 consultation (formal or informal) is required when there is a nexus between endangered species' use of a site and impacts to USACE jurisdictional areas or to other areas for which a federal action is required. Section 7 consultations with the USFWS are initiated by the federal agency that will be taking a federal action on the project (e.g., USACE initiates the consultation if it is reviewing a Section 404 permit application that results in impacts to occupied listed species habitat). Section 10(a) allows issuance of permits for incidental take of endangered or threatened species with preparation of a Habitat Conservation Plan when there is no federal nexus. The term "incidental" applies if the taking of a listed species is incidental to, and not the purpose of, an otherwise lawful activity. A Habitat Conservation Plan demonstrating how the taking would be minimized and how steps taken would ensure the species' survival must be submitted for issuance of Section 10(a) permits.

USACE Section 404 Permit. The USACE regulates the nation's waterways and wetlands and is responsible for implementing and enforcing Section 404 of the CWA. The USACE regulations require that any activity that discharges fill material or requires excavation in waters of the United States, including wetlands, must obtain a Section 404 permit.

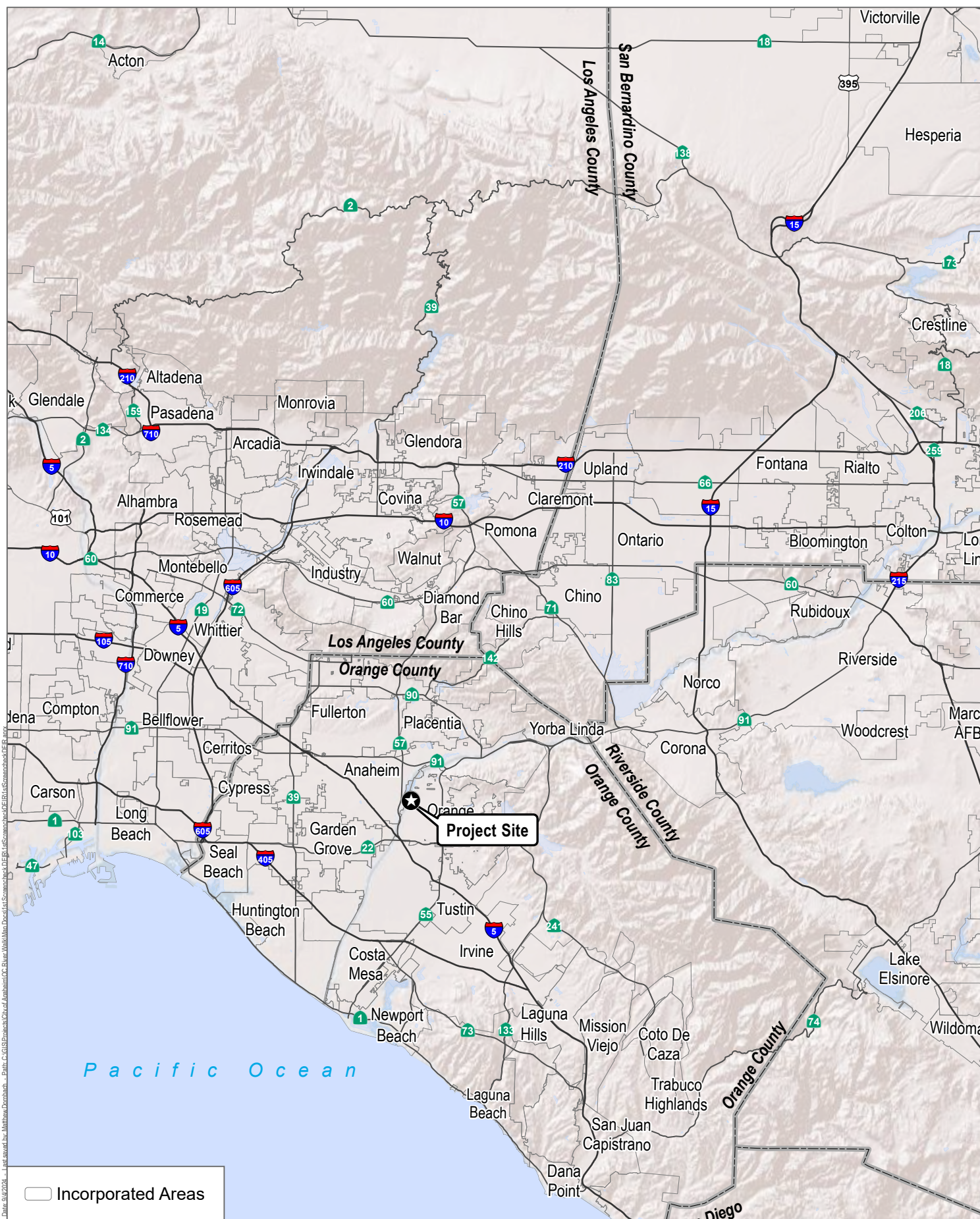
USACE Section 408 Permit. This permit would allow the City of Anaheim to alter a USACE civil works project, various improvements in the Santa Ana River.

California Code of Regulations, Title 22, Reuse Permit. This code title refers to state guidelines for how treated and recycled water is discharged and used. It would allow the project to use treated recycled water to replenish groundwater aquifers, following the regulations outlined in Title 22 regarding water reuse and quality standards; essentially, it is a permit to use recycled water for indirect potable reuse through groundwater recharge.

The project would also require temporary construction easements to be identified and secured from the following stakeholders for the duration of the project:

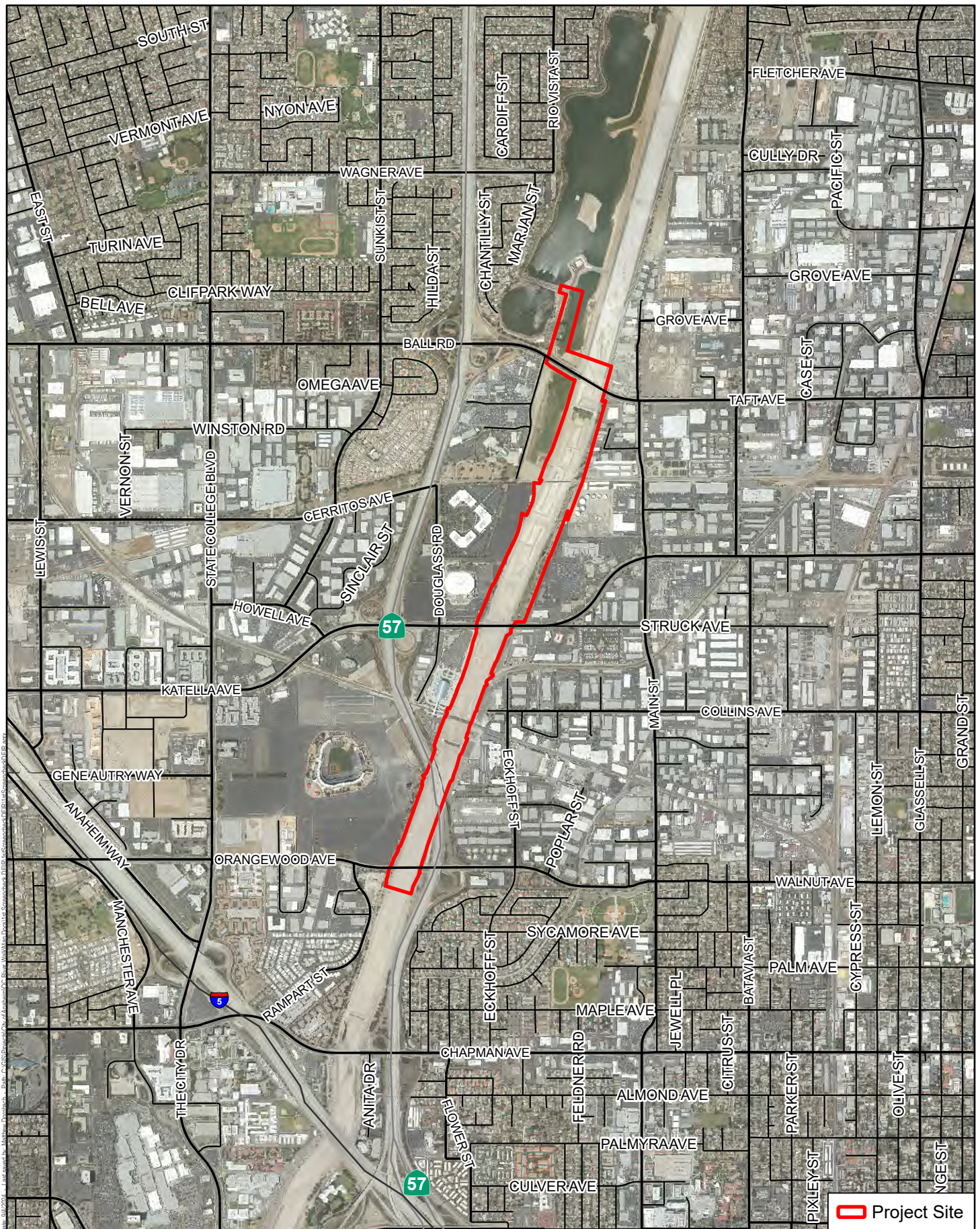
- OCWD
- OCFCD
- Orange County Parks
- Orange County Transportation Authority
- California Public Utilities Commission
- Southern California Edison

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Source: ESRI 2020.

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Source: Eagle Imagery 2017.



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Feet

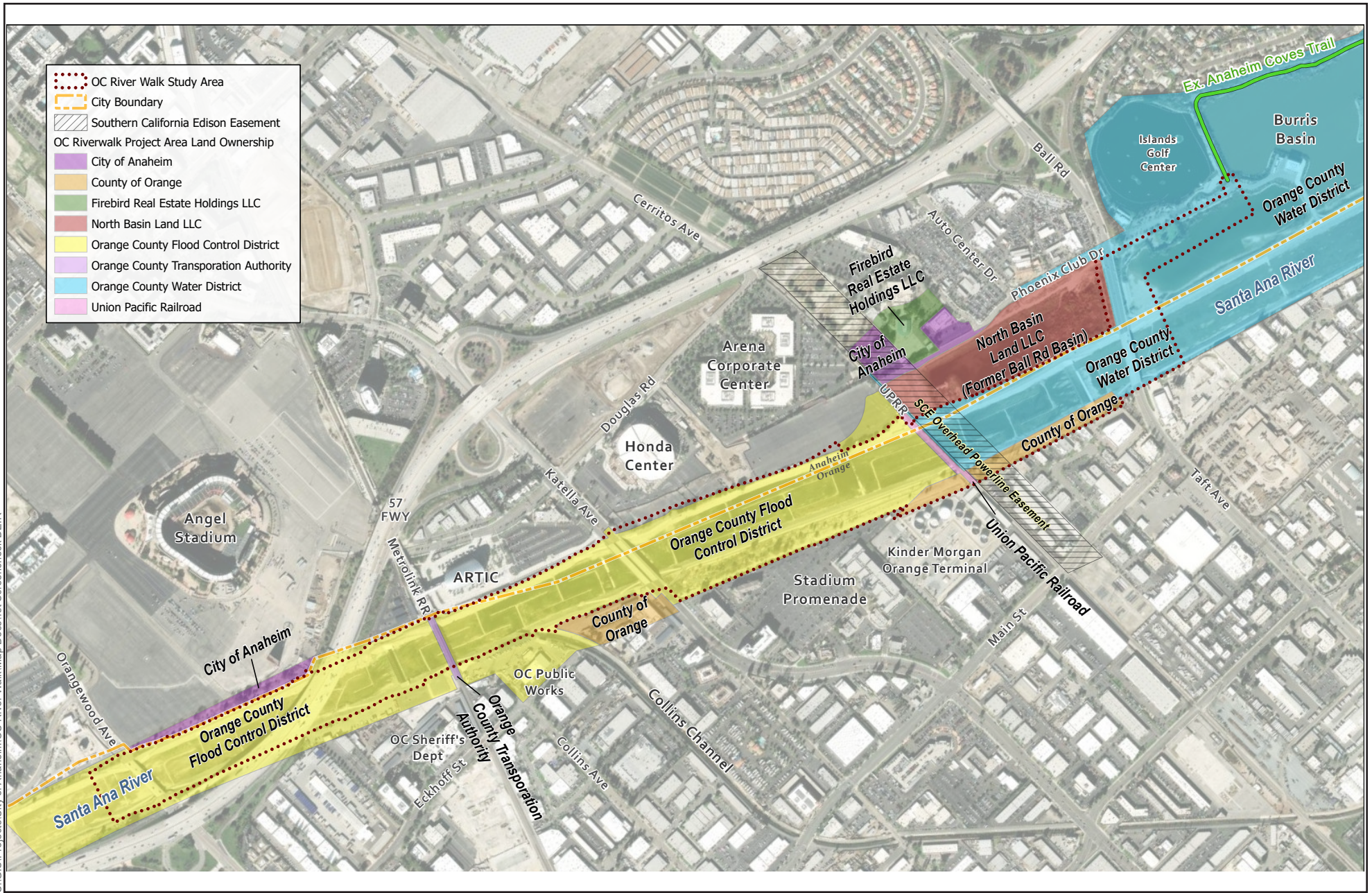
Figure 2-2

Local Vicinity

OC River Walk

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Source: Pacific Advanced Civil Engineering, Inc. (PACE).



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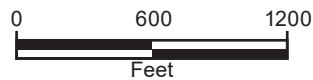
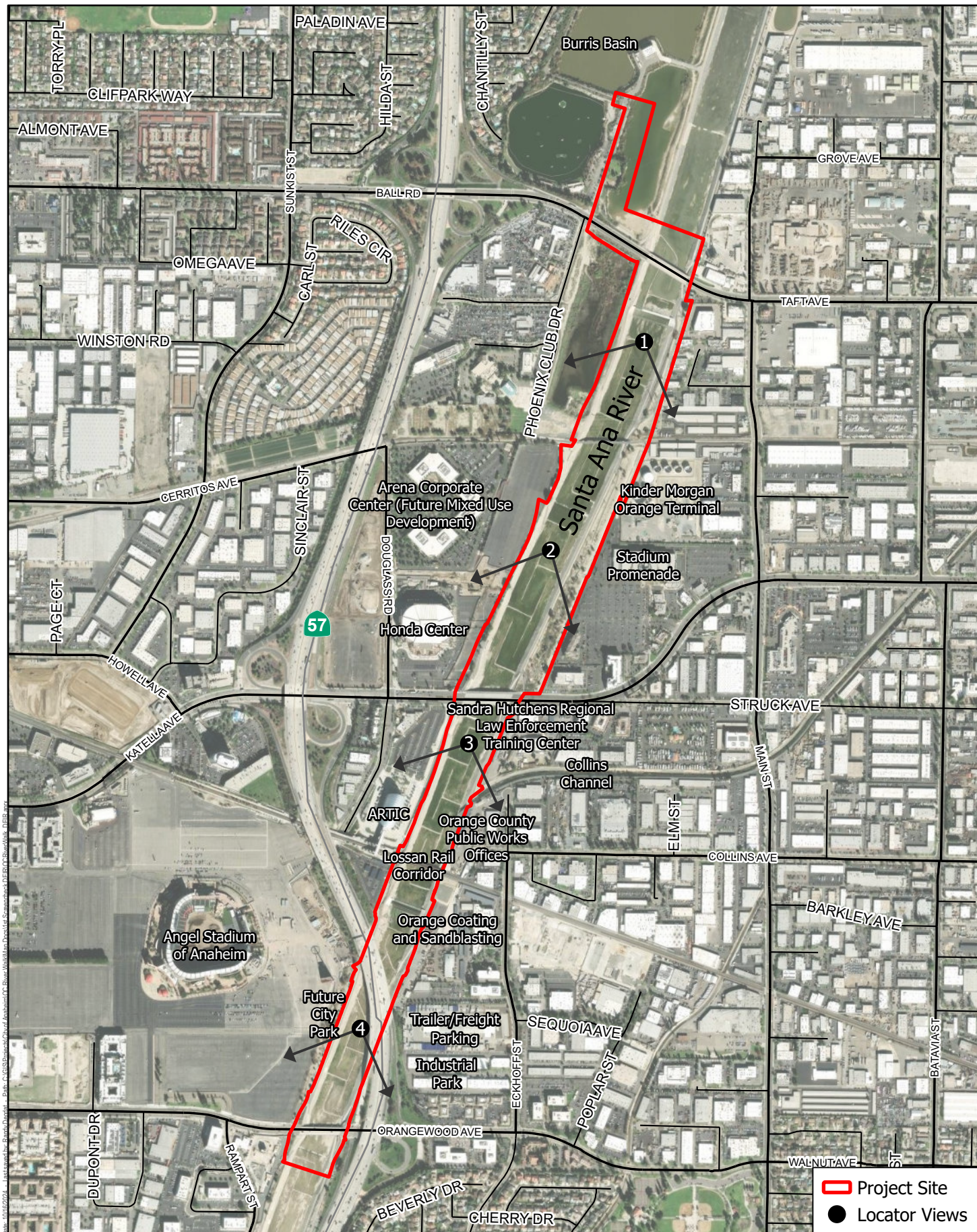


Figure 2-3

Project Site and Adjacent Ownerships

OC River Walk

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Source: Eagle Imagery 2017.



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Figure 2-4

Existing Project Site Views

OC River Walk

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Source: OC River Walk Conceptual Master Plan 2024.



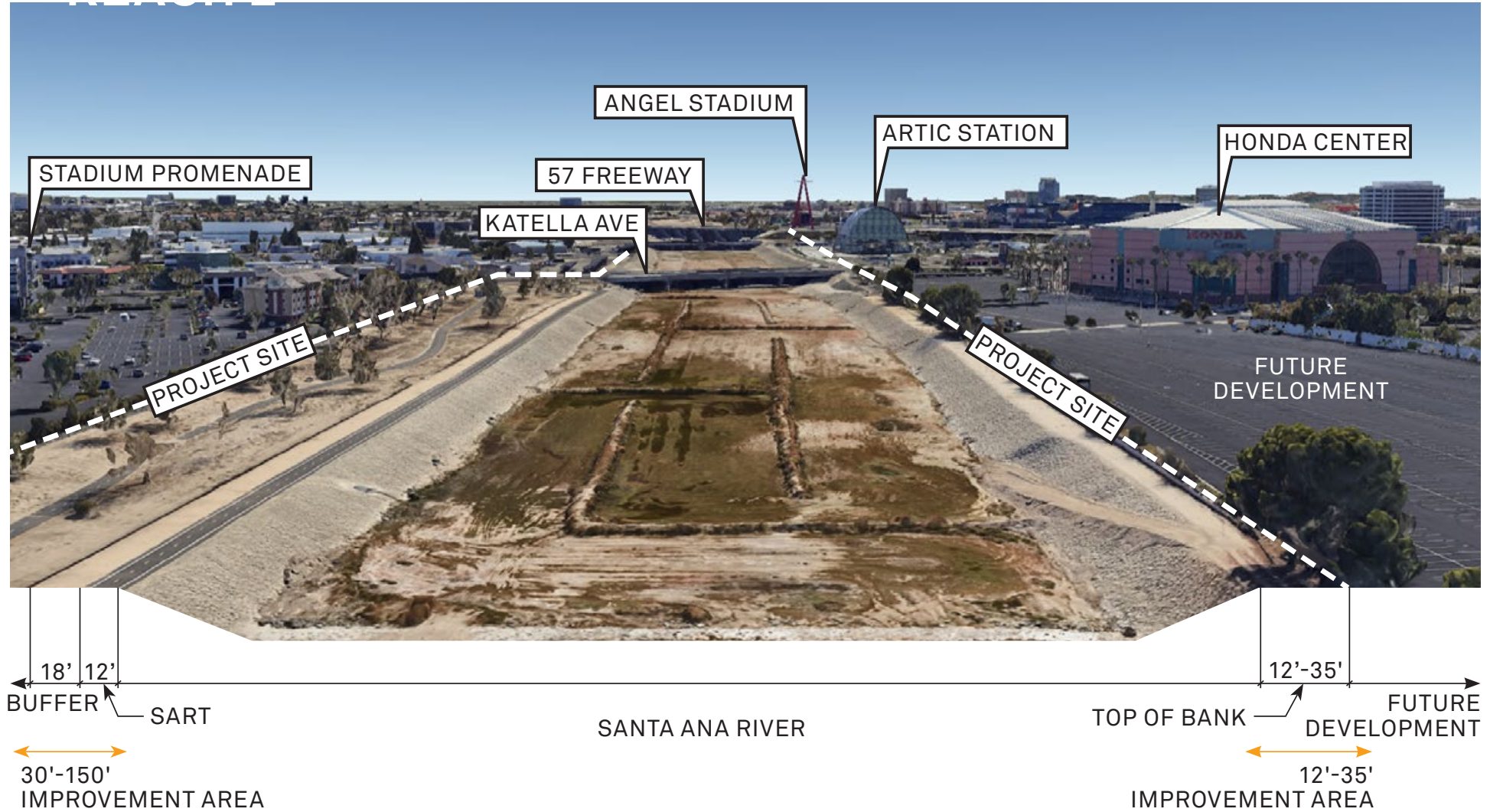
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Figure 2-4a

Existing Project Site Views

OC River Walk

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Source: OC River Walk Conceptual Master Plan 2024.



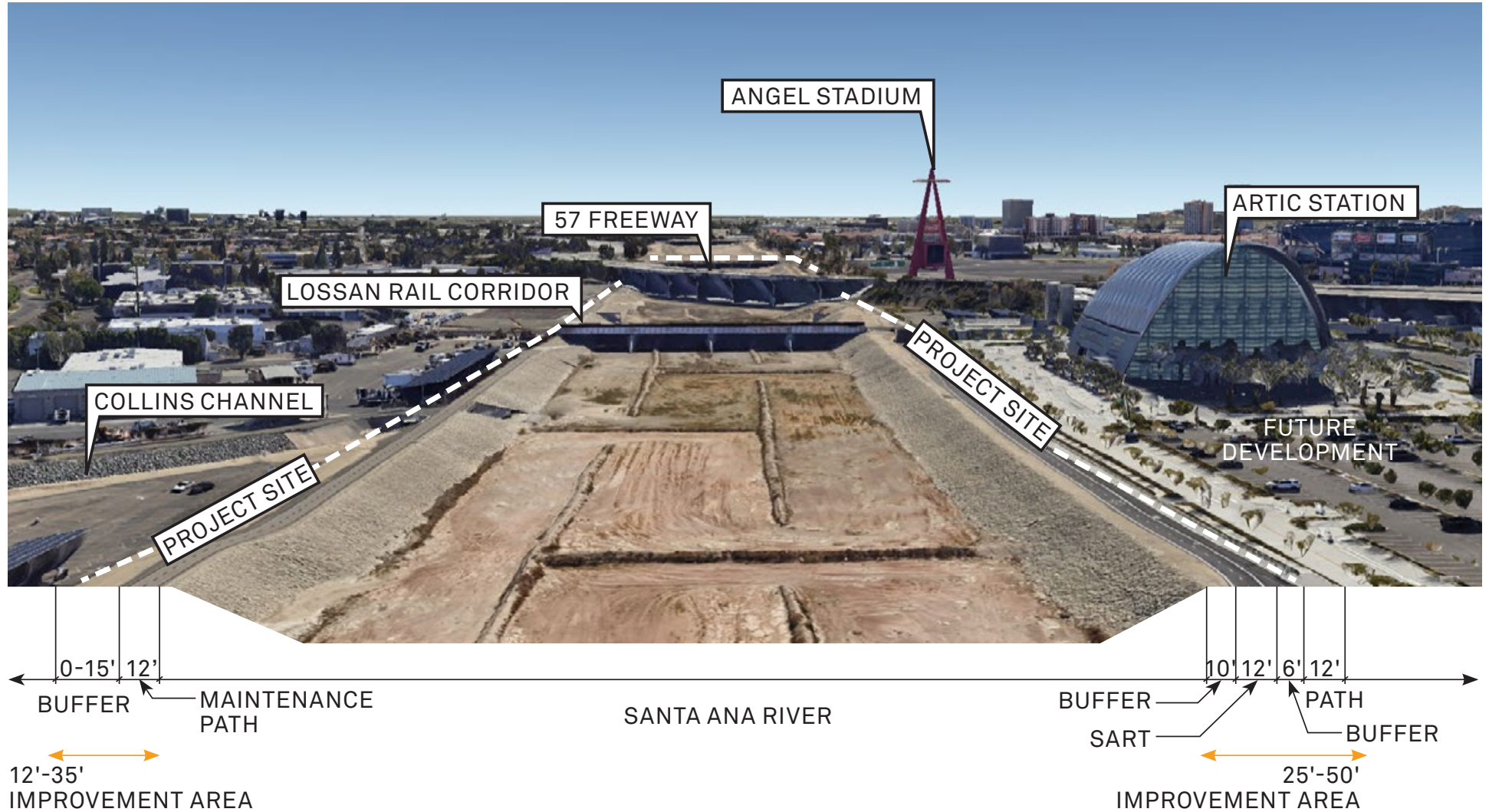
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Figure 2-4b

Existing Project Site Views

OC River Walk

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Source: OC River Walk Conceptual Master Plan 2024.



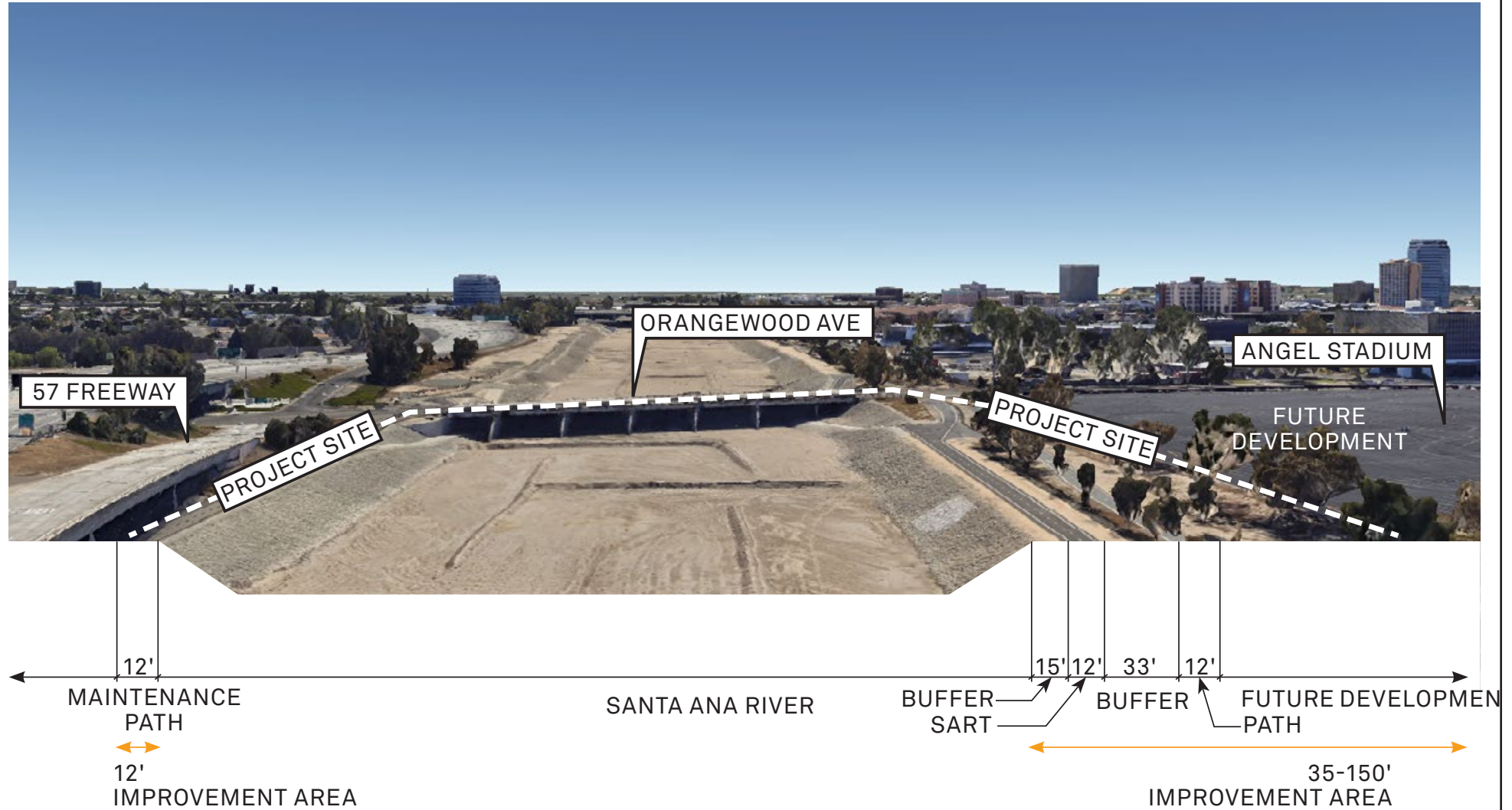
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Figure 2-4c

Existing Project Site Views

OC River Walk

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Source: OC River Walk Conceptual Master Plan 2024.



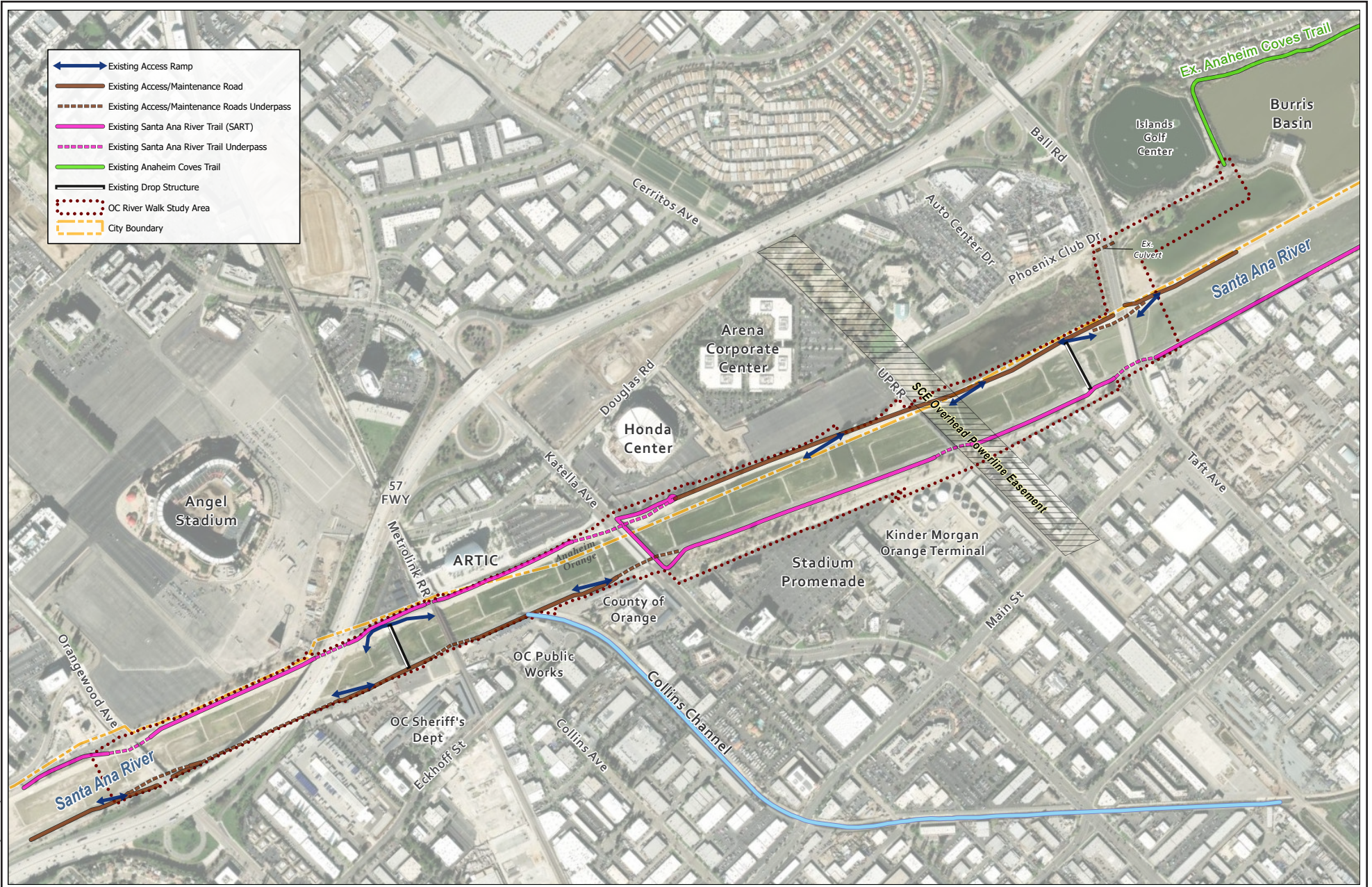
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Figure 2-4d

Existing Project Site Views

OC River Walk

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Source: Pacific Advanced Civil Engineering, Inc. (PACE),



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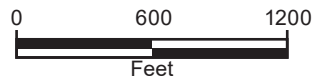
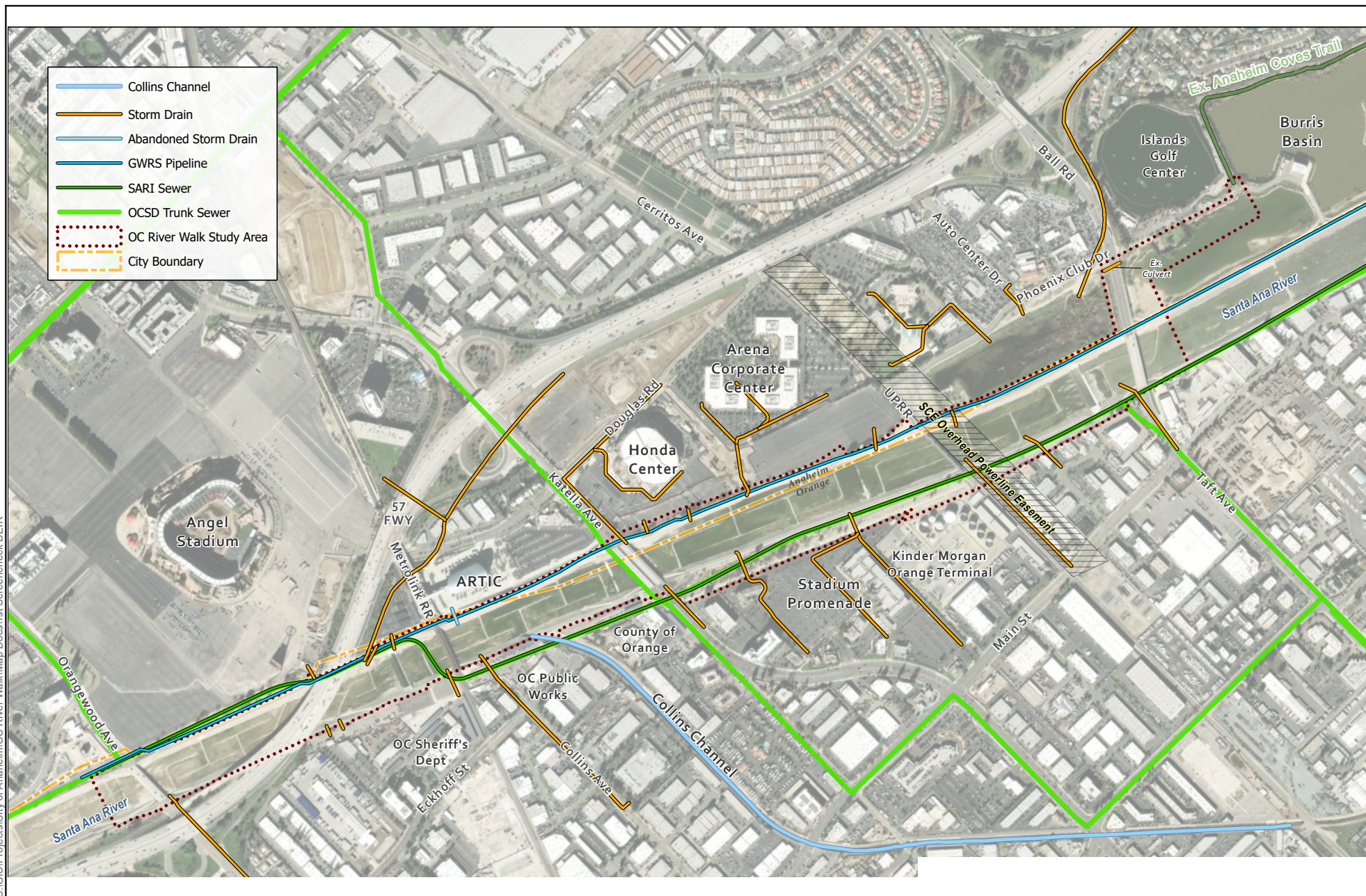


Figure 2-5

Existing Condition - Surface

OC River Walk

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Source: Pacific Advanced Civil Engineering, Inc. (PACE).

Figure 2-6

Existing Condition - Underground

OC RiverWalk

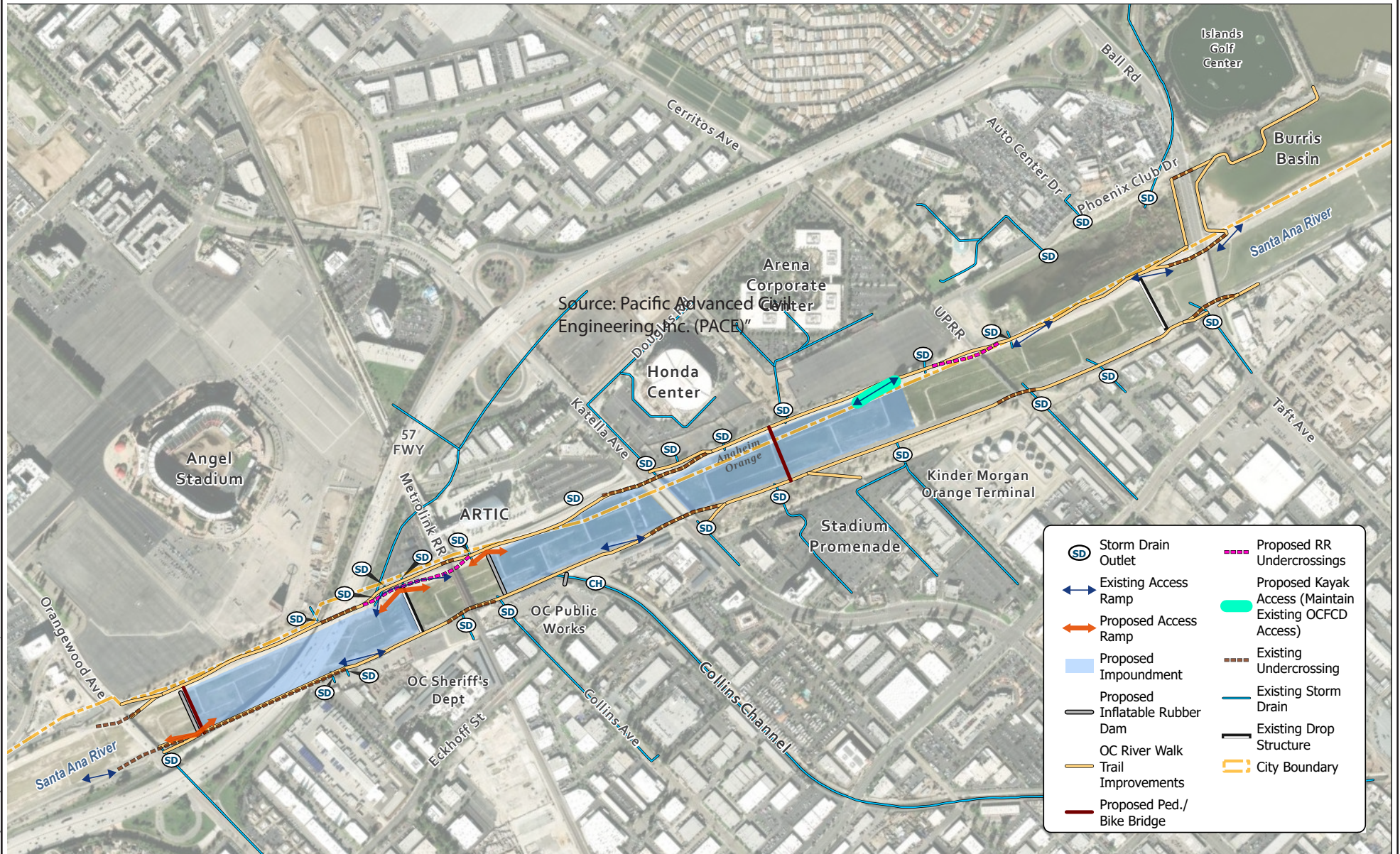


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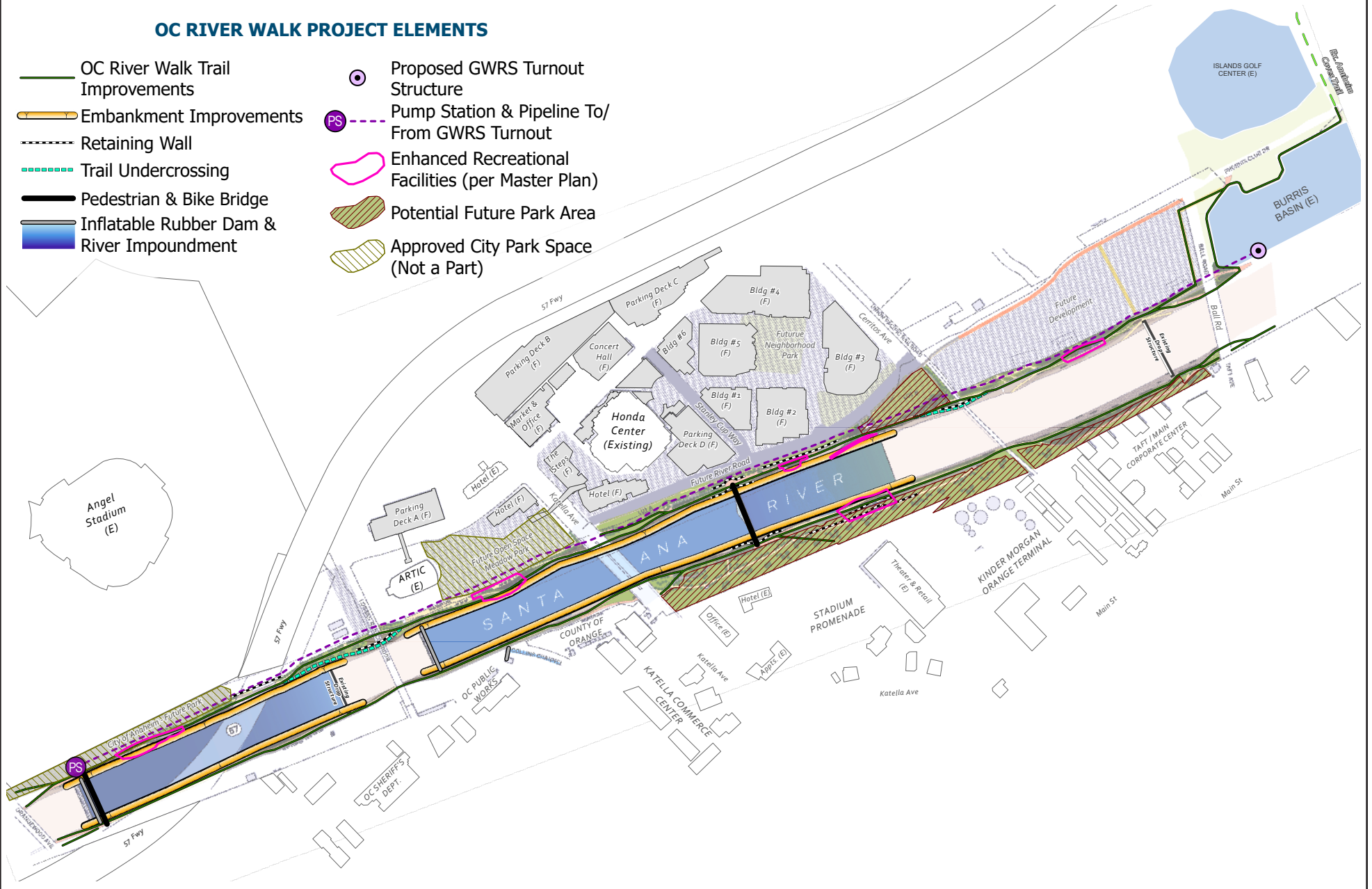
Source: Pacific Advanced Civil Engineering, Inc. (PACE).



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OC RIVER WALK PROJECT ELEMENTS

-  OC River Walk Trail Improvements
-  Embankment Improvements
-  Retaining Wall
-  Trail Undercrossing
-  Pedestrian & Bike Bridge
-  Inflatable Rubber Dam & River Impoundment
-  Proposed GWRS Turnout Structure
-  Pump Station & Pipeline To/ From GWRS Turnout
-  Enhanced Recreational Facilities (per Master Plan)
-  Potential Future Park Area
-  Approved City Park Space (Not a Part)



Source: Pacific Advanced Civil Engineering, Inc. (PACE), 2025.



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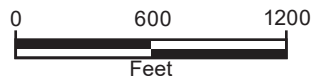


Figure 2-8

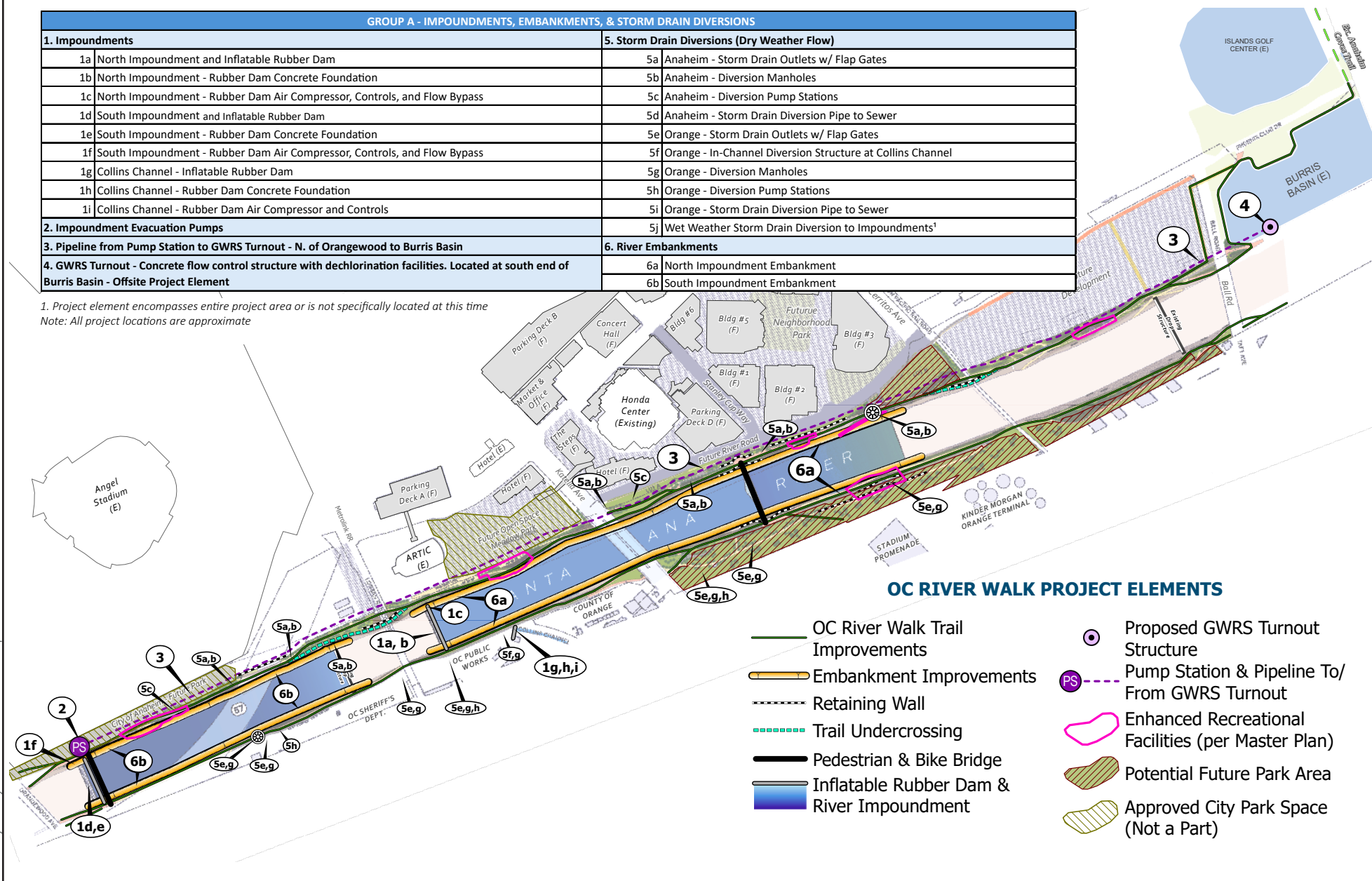
Overall Project Elements

OC River Walk

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GROUP A - IMPOUNDMENTS, EMBANKMENTS, & STORM DRAIN DIVERSIONS	
1. Impoundments	5. Storm Drain Diversions (Dry Weather Flow)
1a North Impoundment and Inflatable Rubber Dam	5a Anaheim - Storm Drain Outlets w/ Flap Gates
1b North Impoundment - Rubber Dam Concrete Foundation	5b Anaheim - Diversion Manholes
1c North Impoundment - Rubber Dam Air Compressor, Controls, and Flow Bypass	5c Anaheim - Diversion Pump Stations
1d South Impoundment and Inflatable Rubber Dam	5d Anaheim - Storm Drain Diversion Pipe to Sewer
1e South Impoundment - Rubber Dam Concrete Foundation	5e Orange - Storm Drain Outlets w/ Flap Gates
1f South Impoundment - Rubber Dam Air Compressor, Controls, and Flow Bypass	5f Orange - In-Channel Diversion Structure at Collins Channel
1g Collins Channel - Inflatable Rubber Dam	5g Orange - Diversion Manholes
1h Collins Channel - Rubber Dam Concrete Foundation	5h Orange - Diversion Pump Stations
1i Collins Channel - Rubber Dam Air Compressor and Controls	5i Orange - Storm Drain Diversion Pipe to Sewer
2. Impoundment Evacuation Pumps	5j Wet Weather Storm Drain Diversion to Impoundments¹
3. Pipeline from Pump Station to GWRs Turnout - N. of Orangewood to Burris Basin	6. River Embankments
4. GWRs Turnout - Concrete flow control structure with dechlorination facilities. Located at south end of Burris Basin - Offsite Project Element	6a North Impoundment Embankment
	6b South Impoundment Embankment

1. Project element encompasses entire project area or is not specifically located at this time
 Note: All project locations are approximate



Source: PACE Advanced Water Engineering 2025.

Figure 2-8a

Proposed Improvements - Group A

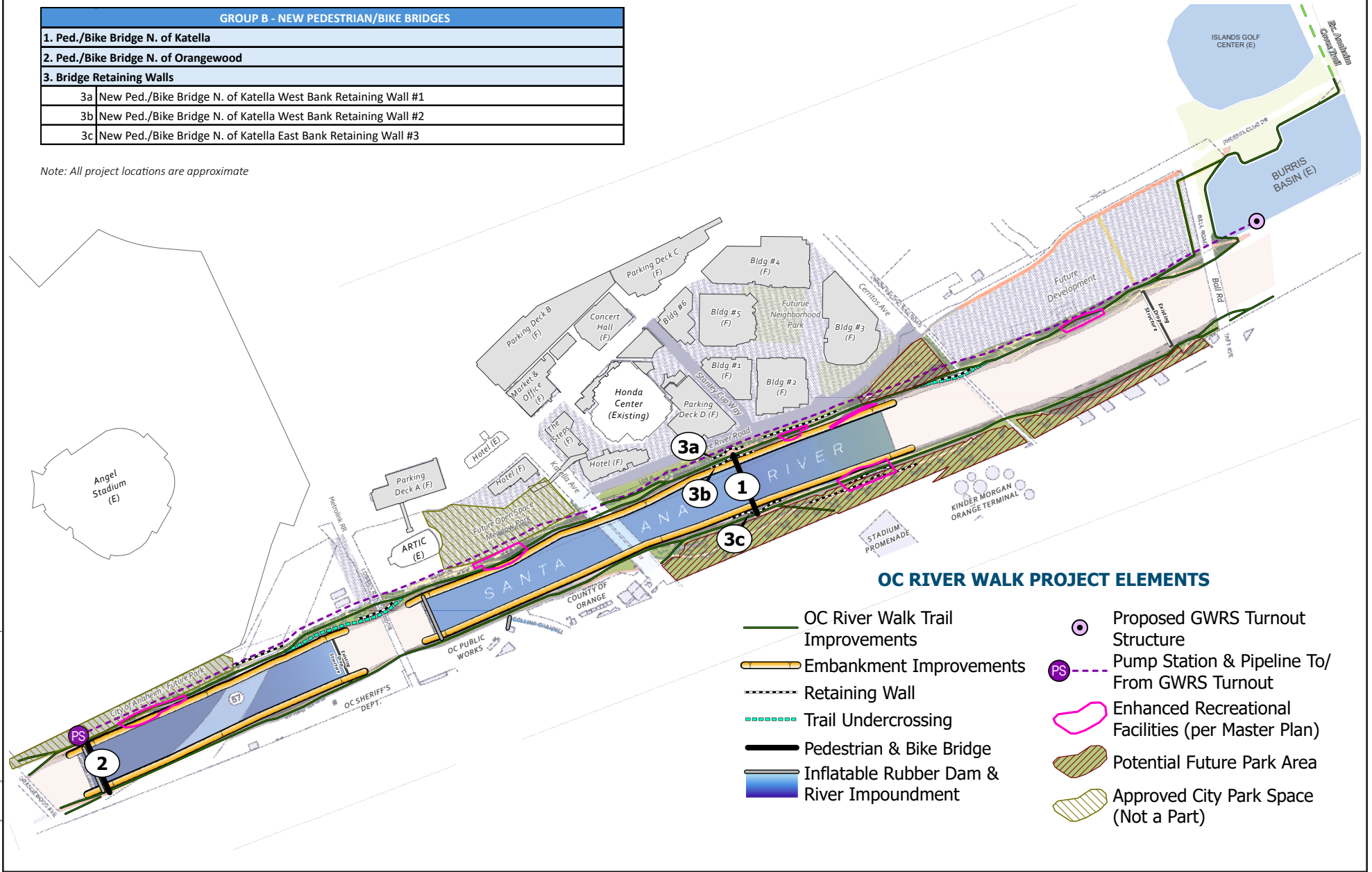
OC River Walk



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GROUP B - NEW PEDESTRIAN/BIKE BRIDGES	
1. Ped./Bike Bridge N. of Katella	
2. Ped./Bike Bridge N. of Orangewood	
3. Bridge Retaining Walls	
3a	New Ped./Bike Bridge N. of Katella West Bank Retaining Wall #1
3b	New Ped./Bike Bridge N. of Katella West Bank Retaining Wall #2
3c	New Ped./Bike Bridge N. of Katella East Bank Retaining Wall #3

Note: All project locations are approximate



OC RIVER WALK PROJECT ELEMENTS

- OC River Walk Trail Improvements
- Embankment Improvements
- Retaining Wall
- Trail Undercrossing
- Pedestrian & Bike Bridge
- Inflatable Rubber Dam & River Impoundment
- Proposed GWRS Turnout Structure
- Pump Station & Pipeline To/From GWRS Turnout
- Enhanced Recreational Facilities (per Master Plan)
- Potential Future Park Area
- Approved City Park Space (Not a Part)

Source: PACE Advanced Water Engineering 2025.

Figure 2-8b

Proposed Improvements - Group B

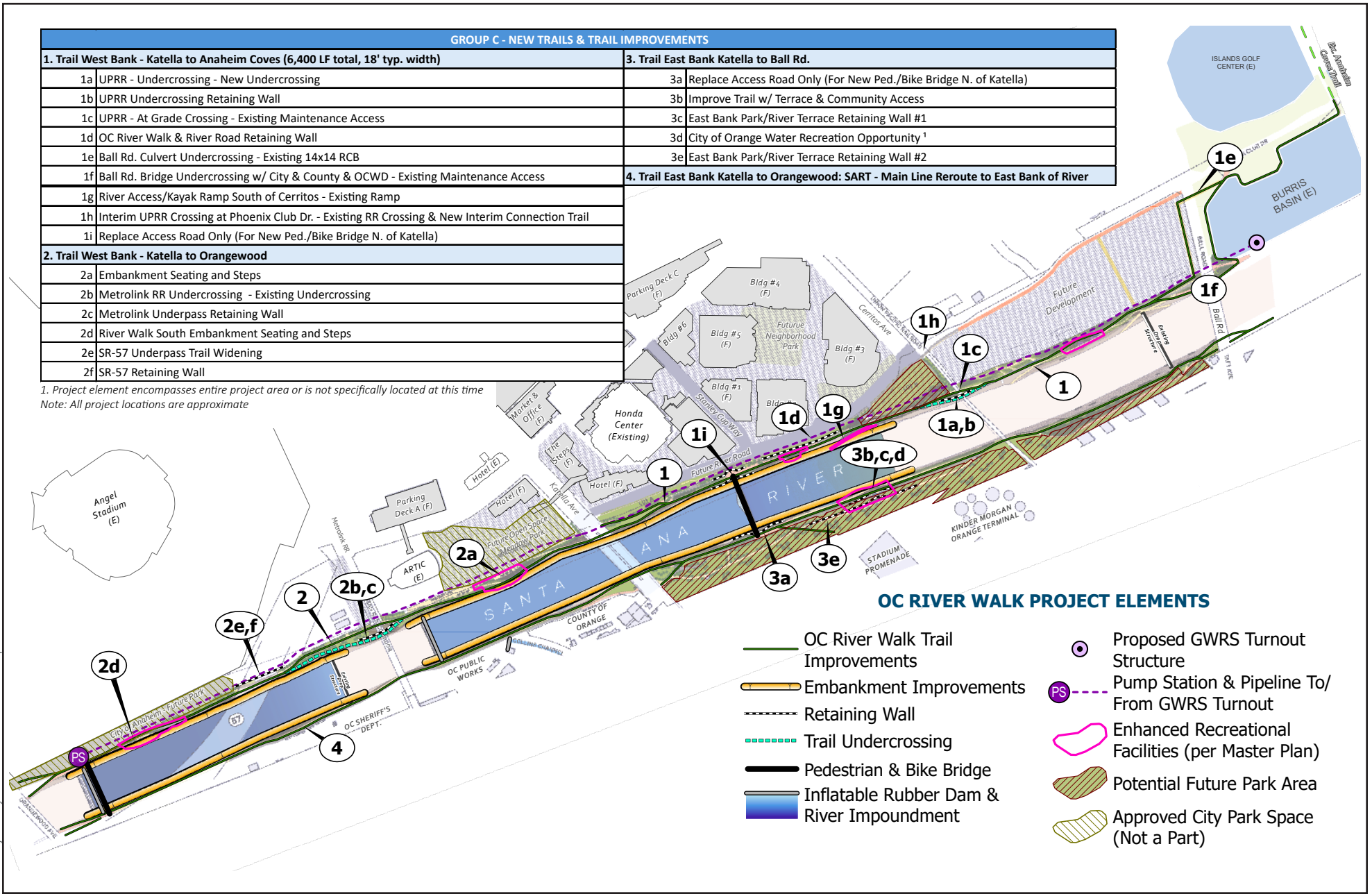
OC River Walk



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Source: PACE Advanced Water Engineering 2025.



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Figure 2-8c

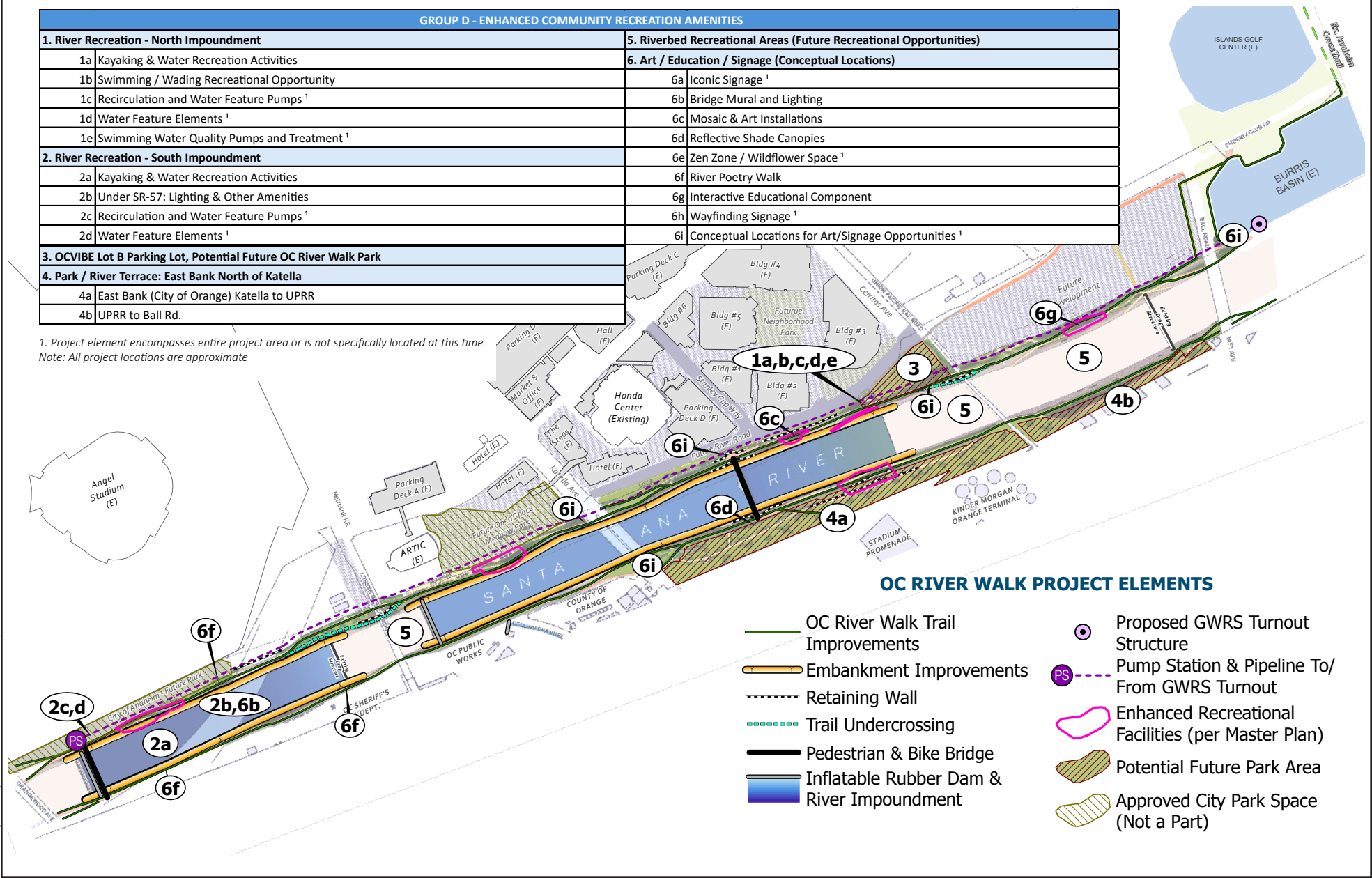
Proposed Improvements - Group C

OC River Walk

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GROUP D - ENHANCED COMMUNITY RECREATION AMENITIES	
1. River Recreation - North Impoundment	
1a	Kayaking & Water Recreation Activities
1b	Swimming / Wading Recreational Opportunity
1c	Recirculation and Water Feature Pumps ¹
1d	Water Feature Elements ¹
1e	Swimming Water Quality Pumps and Treatment ¹
2. River Recreation - South Impoundment	
2a	Kayaking & Water Recreation Activities
2b	Under SR-57: Lighting & Other Amenities
2c	Recirculation and Water Feature Pumps ¹
2d	Water Feature Elements ¹
3. OC VIBE Lot B Parking Lot, Potential Future OC River Walk Park	
4. Park / River Terrace: East Bank North of Katella	
4a	East Bank (City of Orange) Katella to UPRR
4b	UPRR to Ball Rd.
5. Riverbed Recreational Areas (Future Recreational Opportunities)	
6. Art / Education / Signage (Conceptual Locations)	
6a	Iconic Signage ¹
6b	Bridge Mural and Lighting
6c	Mosaic & Art Installations
6d	Reflective Shade Canopies
6e	Zen Zone / Wildflower Space ¹
6f	River Poetry Walk
6g	Interactive Educational Component
6h	Wayfinding Signage ¹
6i	Conceptual Locations for Art/Signage Opportunities ¹

1. Project element encompasses entire project area or is not specifically located at this time
 Note: All project locations are approximate



Source: PACE Advanced Water Engineering 2025.

Figure 2-8d

Proposed Improvements - Group D

OC River Walk

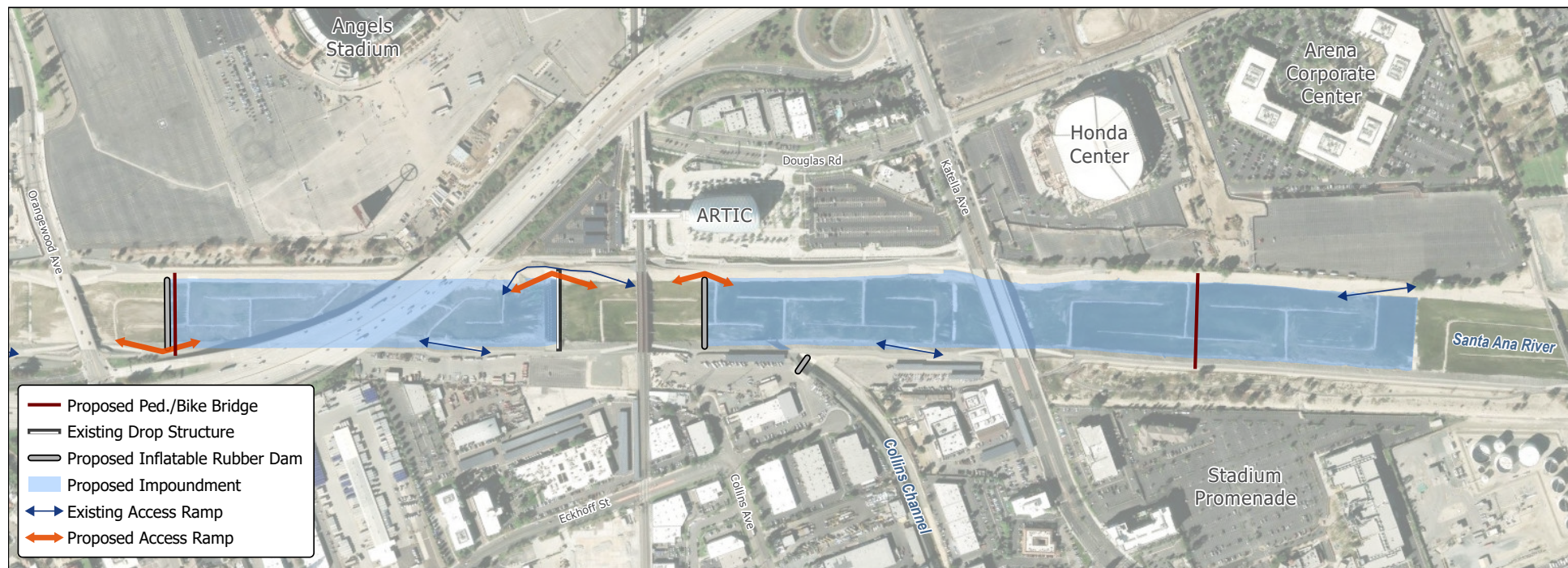
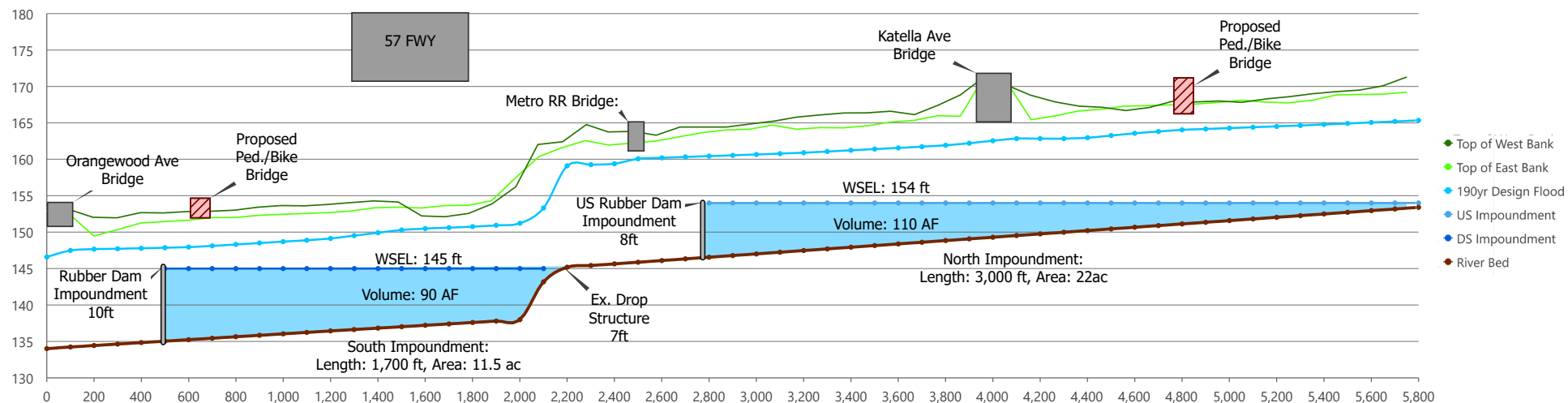


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C:\GIS\Projects\City of Anaheim\OC River Walk\Map Docs\1st Screencheck DEIR



Source: Pacific Advanced Civil Engineering, Inc. (PACE), 2025.



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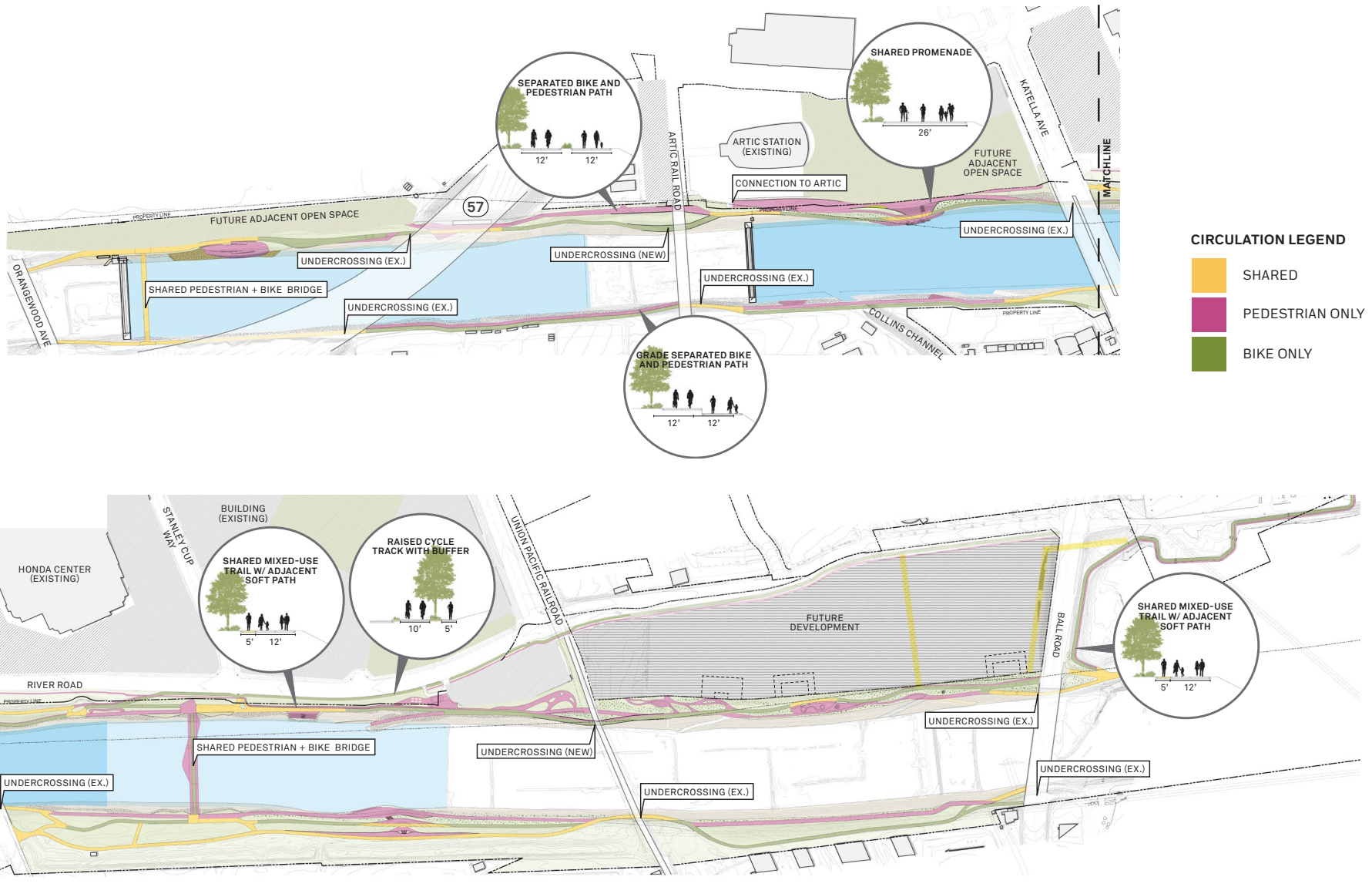


Figure 2-9

Rubber Impoundments

OC River Walk

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Source: PACE Advanced Water Engineering 2024.



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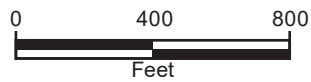


Figure 2-10
Trail Circulation System
OC River Walk

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Source: PACE Advanced Water Engineering 2024.



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Figure 2-11

Project Rendering - South of Cerritos River Access

OC River Walk

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Source: PACE Advanced Water Engineering 2024.



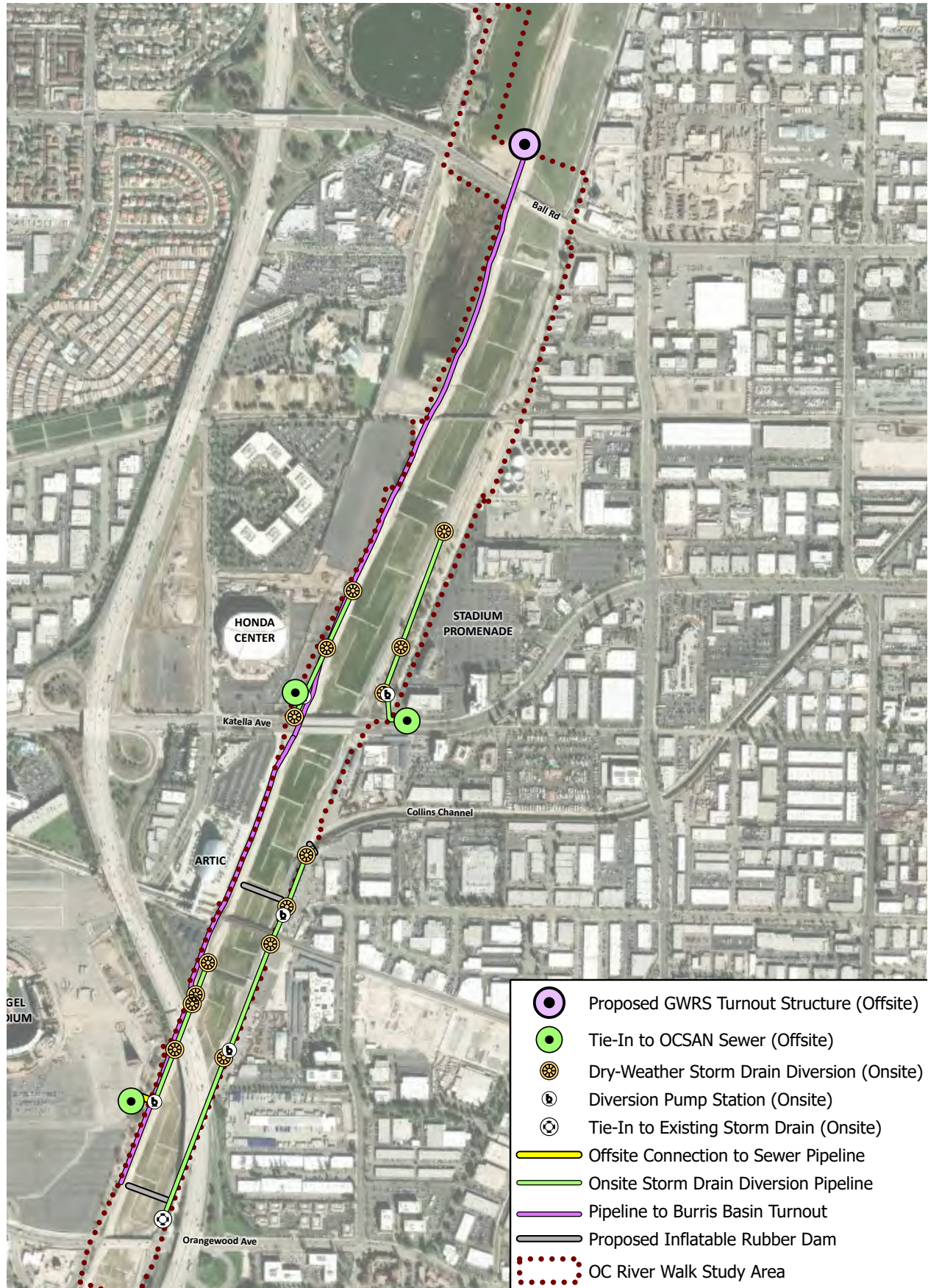
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Figure 2-12

Project Rendering - South of SR-57 Freeway

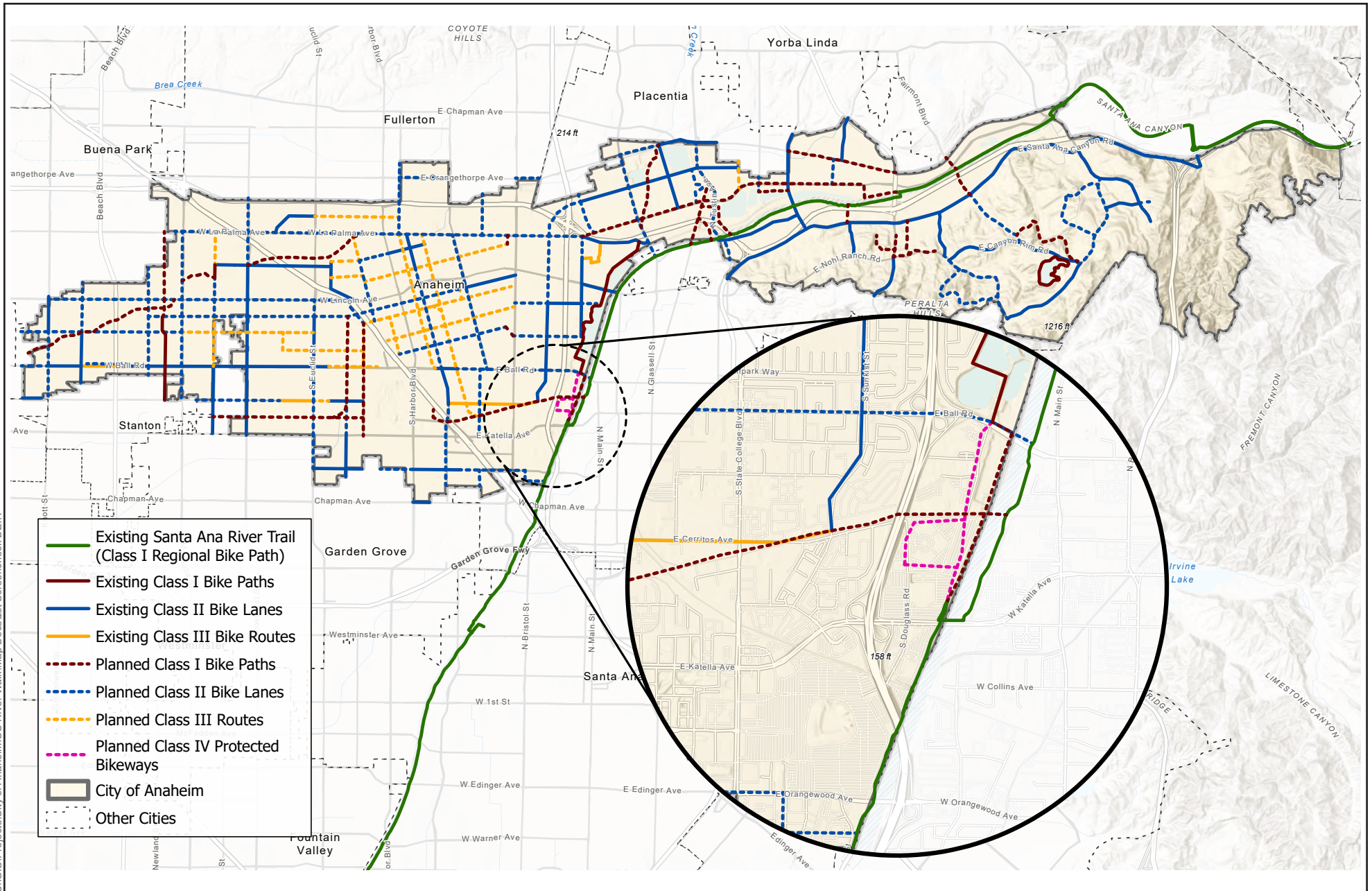
OC River Walk

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Source: Pacific Advanced Civil Engineering, Inc. (PACE), 2025.

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Source: PACE Advanced Water Engineering 2025.

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