CALIFORNIA DEPARTMENT OF TRANSPORTATION, DISTRICT 7
STATE ROUTE 1 VENTURA OVERHEAD BRIDGE (No. 52-0040) REPLACEMENT PROJECT
COASTAL PLANNED DEVELOPMENT (PD) PERMIT,
CASE NO. PL22-0114

A. PROJECT INFORMATION

1. **Request:** The applicant requests approval of a Coastal Planned Development (PD) Permit be granted to authorize the demolition of Ventura Overhead (OH) Bridge No. 52-0040, and construction of a new bridge, widening of Emma Wood State Beach Access Road, and Class I Bike Lane improvements. (Case No. PL22-0114).

2. **Applicant/Property Owner:** California Department of Transportation (Caltrans)

3. **Applicant's Representative:** Joben Penuliar, Caltrans District 7, 100 South Main Street, MS-016A, Los Angeles, CA 90012

4. **Decision-Making Authority:** Pursuant to the Ventura County CZO (Section 8174-5 and Section 8181-3 et seq.), the Planning Director is the decision-maker for the requested Coastal PD Permit.

5. **Project Site Size, Location, and Parcel Number:** The project is located within Caltrans right-of-way of Ventura County State Route 1 (SR 1) between Post Mile (PM) 21.3 to PM 21.9 and within Emma Wood State Beach Access Road (Access Easement), in the unincorporated area of Ventura County (Exhibit 2).

7. **Project Site Land Use and Zoning Designations (Exhibit 2):**

   a. Countywide General Plan Land Use Map Designation: Open Space

   b. Coastal Area Plan Land Use Map Designation: Agriculture and Recreation

   c. Zoning Designation: COS-10 ac-sdf (Coastal Open Space 10-acre minimum lot area- slope density formula).

8. Adjacent Zoning and Land Uses/Development (Exhibit 2):

Location in Relation to the Project Site	Zoning	Land Uses/Development
North	COS-10-ac-sdf (Coastal Open Space, 10 acres minimum lot area, slope density formula)	Open Space Union Pacific Railroad
East	COS-10-ac-sdf (Coastal Open Space, 10 acres minimum lot area, slope density formula)	Open Space U.S. 101 Freeway
South	COS-10-ac-sdf (Coastal Open Space, 10 acres minimum lot area, slope density formula)	Open Space Emma Wood State Beach
West	COS-10-ac-sdf (Coastal Open Space, 10 acres minimum lot area, slope density formula)	Beach and Pacific Ocean

9. History: The Ventura Overhead (OH) Bridge (Bridge No. 52-0040) was built in 1934, widened in 1961, and seismically retrofitted in 1997.

10. Project Description: The California Department of Transportation proposes to demolish the existing Ventura Overhead (OH) Bridge (Bridge No. 52-0040) located at State Route 1 (SR 1) between Post Miles 21.3 through 21.9 and construct a new bridge.

Demolition of Ventura OH Bridge No.52-0040

The California Department of Transportation, together with the Contractor retained for the project, will begin the demolition with the removal of the bridge deck and soffit between girders. Excavators with hammers or concrete crushing equipment will be used to crush the rest of the concrete bridge super structure. The remaining steel girders will be cut and removed in the spans over the railroad tracks followed by bents and abutment walls being removed. The contractor selected by Caltrans to construct the project will be required to prepare a bridge removal plan ("Demolition Plan") to be reviewed and approved by Caltrans, Union Pacific Railroad (UPRR), and Ventura County. The plan will include detailed demolition methods for ocean and beach, and railroad track protection.

Construction of a New OH Bridge

The new bridge will have an elevation of 57.10 feet and will be 55 feet wide and 614 feet in length. The bridge deck provides a north- and southbound lane (12 feet wide) and 8-foot shoulder on either side of the traffic lane. A Class I Bike Lane (10-feet wide) would be located on the southern side of the bridge deck for north-

and southbound bicyclists. The bike lanes will be separated from ongoing traffic by a concrete barrier (3 feet 8 inches in height on the side of the travel lane) with a pedestrian railing (24 inches in height) on top. For areas where the bike lanes are located above the UPRR tracks, a 7 foot 10-inch-tall fence will be installed. The bridge will include abutment/retaining walls on the north and south side of the bridge and six columns to support the five spans and three bents. Architectural texture will be incorporated into the left and right side of the retaining walls and inside the face on both abutments stem walls. Four standard lights (rail mounted electroliers) at 15 foot in height will be installed above the north bound lane of bridge deck.

Emma Wood State Beach Access Road

Emma Wood State Beach Access Road will be widened by 8 to 10 feet landward; this will require approximately 3,150 cubic yards of grading and construction of retaining walls to retain the slope supporting SR 1, and construction of the new bridge abutments.

Class I Bike Lane

The Class I Bike Lane located on the southern side of the bridge deck would continue north onto SR 1 south bound lane. The concrete barrier that separates bicyclists from motorists across the bridge will continue north until the Emma Wood State Beach entrance road.

Omer Rains Coastal Bike Trail Connection to SR 1

The Omer Rains Coastal Bike Trail terminates at SR 1. After exiting the Omer Rains Coastal Bike Trail at PM 21.3, a Class I Bike Lane will be constructed to restrict bicyclists to the seaward side of SR 1. A new 65 foot long 12-foot-wide pedestrian bridge with pedestrian railing will span over an existing culvert and provide immediate access to the Class I Bike Lane from Omer Rains Trail. The bike lane will be separated from ongoing traffic by a concrete barrier (3 feet 8 inches in height on the side of the travel lane) with a pedestrian railing (24 inches in height) on top. Bike lane railing will be interrupted at SR 1 Station 1130 to 1131, to retain access to on-street parking and avoid removal of existing trees. The Class I Bike Lane continues onto the seaward side of SR 1, across the new Ventura OH bridge, until PM 21.8 (Emma Wood State Beach entrance).

Bicycle lanes will be delineated with green-colored pavement to identify the bike lane from the roadway.

Crosswalk/Pedestrian Hybrid Beacons (PHB)

At SR1 PM 21.8, a crosswalk and two PHB will provide a transition redirecting northbound bicyclists to the northbound Class I Bike Lane. Two 30-foot-tall light

posts with two 26-foot-tall PHB will be installed to notify south and north bound motorists of the approaching crosswalk. The project will include the installation and replacement of electrical conduits and equipment at PM 21.8 to accommodate the crosswalk and PHB.

Signs/Pavement Delineation

A total of 25 existing signs will be replaced and a total of 17 new signs will be installed along and in proximity to the bridge. All signs would be located within the Caltrans right-of-way and are "wayfinding signs" (i.e., Coastal Access, Coastal Trail), directional, or are necessary to ensure public safety.

Tree Removal

Three Monterey cypress trees[1] are located on the slope that supports SR 1 adjacent to Emma Wood State Beach access road; all three trees will be removed. Eight replacement trees of the same species will be planted. The replacement trees will collectively be of comparable size, and planted in the same general location as, the three Monterey cypress being removed.

Habitat Restoration

The Emma Wood Beach access road widening will permanently remove approximately 0.04 acres (1,742 sq. ft.) of degraded and isolated Environmentally Sensitive Habitat Areas (ESHA), specifically disturbed Quailbrush-Lemonade Berry Scrub. The abutments for the elevated pedestrian bridge that will span a culvert will remove approximately 336 sq. ft. of native vegetation, which includes California rye grass, Coyote brush, Mulefat, Saltbrush and cottonwood, that is also considered ESHA. A Habitat Restoration, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan will be implemented that requires the planting of 4,157 square feet of local, indigenous native vegetation to offset the loss of 2,078 sq. ft. of degraded ESHA.

Temporary impacts related to staging areas, construction activities, and the temporary bicycle overcrossing bridge (prefabricated bridge), will disturb approximately 1.04 acres of disturbed Big Saltbrush Scrub/Successional Big Salt Brush Scrub. All temporary impacts will be restored on a 1:1 ratio immediately following completion of construction of the project.

Seacliff Exit 78

Seacliff Exit 78 (U.S. 101 North and Southbound) on- and off-ramps will remain open throughout construction activities.

[1] In accordance with Ventura County Coastal Zoning Ordinance § 8178-7.3, the three Monterey cypress trees do not constitute ESHA, Native, Historic or Heritage.

Temporary Bike/Pedestrian Path

While the bridge is out of commission, a temporary bike/pedestrian path of travel will be constructed to provide access around the construction zone. As bicyclists exit the Omer Rains Coastal Bike Trail onto SR 1, the temporary path of travel will be separated from construction traffic by K rail. At Station 1131, a temporary 12 foot wide by 20-foot-long paved path will direct users to the southbound shoulder adjacent to the Number 3 Lane on U.S. 101. The path of travel will be separated from vehicular traffic by K-rail with plywood attached above. At Station 1745, an 8-foot-wide temporary overcrossing (prefabricated bridge) will direct path users from U.S. 101, over UPRR, and back onto SR 1. The temporary bike/pedestrian bridge will be at height clearance of 22 feet and 1 inch above the UPRR. A Portable Changeable Message Sign (PCMS) and two “Shoulder Closed” signs will be installed on south bound U.S. 101 for the duration of the temporary path of travel.

Batch Plant

A mobile batch plant will be installed, the location has yet to be determined, but the Batch Plant will be in the Caltrans right-of-way and will not impact coastal resources and public access to and from the beach. Equipment for the mobile batch plant includes but is not limited to a batching system, water supply system, concrete admixture supply system, and air supply system.

Traffic Control

Traffic control measures will be implemented throughout the project. Construction areas will be closed off to the public by concrete barriers. Temporary construction signs and digital message boards would be installed at the construction zone informing motorists, bicyclists, and pedestrians that construction activities are underway and access through the area will be detoured.

Temporary Road Closures

Exit 72 SR 1 North, PCH/State Beaches: The project will temporarily close Exit 72; U.S. 101 north bound traffic will be routed approximately 7 miles north to the Seacliff exit where the motorist can get onto SR 1 southbound. As part of traffic handling measures, the existing signs for Exit 72 will be covered and a PCMS will be placed along the US 101 shoulder to indicate that Exit 72 is closed. Stationary Mounted Construction Area Signs will be installed along US 101 and SR 1 to indicate the road closure and detour.

Emma Wood State Beach Access Road will remain open during construction, if temporary closure is required, flagmen will be used to maintain traffic flow. A temporary barrier system comprised of K rail will allow for construction access below the bridge and to allow continued access to Emma Wood State Beach.

Construction Hours/Duration

November – March: Monday through Friday 7:00 AM to 5:00 PM
April – September: Monday through Friday 7:00 AM to 7:00 PM

The project is estimated to take approximately 26 months to complete (all construction activities); Ventura OH Bridge No.52-0040 is expected to be out of commission for approximately 18-20 months.

Permanent and Temporary Easements

Caltrans will acquire permanent easements and temporary construction easements from UPRR, Wood-Claeyssens Foundation, and California State Parks, prior to construction.

(Exhibit 3)

B. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) COMPLIANCE

Pursuant to CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (Title 14, California Code or Regulations, Division 6, Chapter 3, Section 15000 et seq.), the proposed project is subject to environmental review. The State Legislature through the Secretary for Resources has found that certain classes of projects are exempt from CEQA environmental impact review because they do not have a significant effect on the environment. These projects are declared to be categorically exempt from the requirement for the preparation of environmental impact documents.

Staff has determined that the proposed project qualifies for Class 1 (Section 15301 - Existing Facilities), Class 2 (Section 15302 - Replacement or Reconstruction) and Class 3 (Section 15303 - New Construction of Small Structures) categorical exemptions pursuant to CEQA Guidelines.

Caltrans is requesting approval of a Coastal Planned Development (PD) Permit (Case No. PL22-0114) to demolish an existing bridge (Ventura OH BR No 52-0040) between State Route (SR) 1 (Pacific Coast Highway), Post Mile (PM) 21.3 and 21.9, and the construction of a new bridge on the same site as the bridge to be removed. The proposed project also includes improvements to the Emma Wood State Beach access road, and the construction of a Class 1 Bike Lane that includes a crossing over a culvert at SR 1 PM 21.3, two Pedestrian Hybrid Beacons and crosswalk, and installation of electrical conduits and equipment at SR 1 PM 21.8. The project will impact approximately 2,078 square feet (sq. ft.) of degraded isolated environmentally sensitive habitat. Caltrans proposes to implement a Habitat Restoration, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan that requires the planting of 4,157 square feet of local, indigenous native vegetation be planted to offset the loss of 2,078 sq. ft. of degraded

ESHA.[2] Three Monterey cypress will be removed; the trees are native to Monterey but not locally. None of the trees qualify as ESHA or heritage trees. While the trees are not protected, Caltrans is proposing to plant eight replacement trees of the same species. The replacement trees will, collectively, be of comparable size and be planted in the same general location as the three Monterey cypress trees being removed.

SUITABILITY OF USE OF CATEGORICAL EXEMPTION:

Class 1, Section 15301, Existing Facilities

> *Class 1 projects consist of the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of existing or former use.*

Examples of Class 1 exemptions include repair and maintenance of existing highways and streets, bicycle facilities, and road grading for the purpose of public safety. An existing bridge (Ventura OH BR No 52-040) will be demolished and a new bridge constructed in the same location. The bridge was built in 1934, widened in 1961 and seismically retrofitted in 1997. Caltrans has assigned a Sufficiency Rating of 39.6 percent to Ventura OH BR No 52-040; Sufficiency Ratings range from zero to 100, with zero representing an entirely insufficient or deficient bridge, and 100 representing an entirely sufficient bridge. The bridge needs to be replaced due to numerous cracks and spalls in the bridge columns and the steel bents being exposed to the elements, resulting in rust and delamination, which pose a safety hazard. The bridge provides essential public access for legally permitted development providing a major route for the residents, bicyclists, and motorists getting access onto SR 1 from the north and merging onto U.S. 101 if travelling south. The replacement bridge will be in the same location and have substantially the same purpose and capacity as the structure it will replace.

The proposed project also includes the construction of a Class 1 Bike Lane. A Class 1 Bike Lane currently exists and follows the path of travel. Improvements involve putting both north and southbound bike lanes on the southern side of SR 1 from Omer Rains Bike Trail, across the new bridge, continuing this bike lane north to Emma Wood Beach access road, and adding a striped crosswalk across SR 1 to redirect northbound bicyclists to the eastern side of SR 1. The existing and proposed Class I Bike Lane is located entirely within the Caltrans road right of way.

Therefore, the Class 1 exemption would apply.

Class 2, Section 15302 - Replacement or Reconstruction:

> *Class 2 projects consist of the replacement or reconstruction of existing structures and facilities where the new structure will be located on the same site as the structure*

[2] The Habitat Restoration Plan must include restoring the plant communities referenced in the Initial Study Biological Assessment (ISBA) (Caltrans, dated June 16, 2022 and amended on July 31, 2023, and October 9, 2023).

replaced and will have substantially the same purpose and capacity as the structure replaced.

The Ventura OH BR No 52-0040 will be demolished and a new bridge constructed in the same location. The existing bridge provides a path for northbound travelers going to County and State campgrounds, the Rincon Parkway, coastal beaches, and the coastal communities of Solimar, Faria, and Seacliff, and a path for southbound travelers getting onto U.S. 101. When the bridge is out of commission, travelers will need to use the Seacliff Exit, approximately 7 miles north of the project site, to access SR 1 and U.S. 101. The replacement bridge will be in the same location as the bridge it will replace and will have substantially the same purpose and capacity. For the design of the new bridge, Caltrans requested information on the potential hazards corresponding to extreme coastal events caused by landward propagation of high-energy waves and high-water levels during extreme storms and high tides. A Coastal Hazards Assessment was prepared by ESA, dated December 2022. Since the project site is exposed to high waves, the assessment analyzed extreme waves and water levels propagated landward (referred to as the wave runup) on different beach profiles. Other important factors for design that were considered include the effect of sea-level rise (SLR), which is incorporated in calculations, and estimation of wave runup extents. The bridge has been designed to afford a clearance height beginning at approximately 10 feet from the road surface to approximately 50 feet at the highest elevation. This is to account for potential flooding, wave run-up, and sea level rise. The bridge deck is the same approximate width as the existing bridge at 55 feet. The replacement bridge will involve no expansion of capacity as no additional travel lanes will be added. The circulation will be modified by locating the Class 1 Bike Lane on the south side of the bridge deck instead of the bike lane on either side of the bridge.

All affected property owners and residents, and County and State Parks will be notified in advance of construction activities. Temporary construction signs and digital message boards would be installed at the construction zone informing motorists, bicyclists, and pedestrians that construction activities are underway and access through the area will be detoured. The new bridge is expected to be operational approximately 18-20 months from the start of construction.

The Emma Wood State Beach access road is a two-lane striped access road that begins at SR 1 and heads south into the campground. The access road is protected by a seawall that ends just before the campground kiosk, followed by rock rip rap. A slope supporting SR 1 is located on the east side of the access road. The access road experiences wave action. The portion of the access road protected by the seawall ponds with water, but the road width is maintained; however, where the rock rip rap starts, the paved road narrows. To restore the road width to its design capacity of a striped two-lane paved access road, the slope supporting SR 1 will be graded, a retaining wall constructed, the road extended approximately 8-10 feet landward, within the access easement, and then repaved. Emma Wood State Beach access road will remain open during construction, if temporary closure is required, flagmen will be used to maintain traffic flow. A temporary barrier system

comprised of K rail will allow for construction access below the bridge and to allow continued access to Emma Wood State Beach.

The proposed project also includes the replacement of 25 existing signs with new signs of the same size, directional information, and location.

Therefore, the Class 2 exemption would apply.

Class 3, Section 15303 - New Construction of Small Structures:

> *Class 3 consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use for another where only minor modifications are made in the exterior of the structure. The numbers of structures described in this section are the maximum allowable on any legal parcel.*

The Class 1 Bike Lane improvements include the construction of an elevated path over a culvert. At Post Mile 21.3 (Emma Wood State Beach) is the Omer Rains Bike Trail. When the Omer Rains Bike Trail exits Emma Wood State Beach, the bike trail intersects with the SR 1 / U.S. 101 on- and offramp. The onramp provides motorists a route to U.S. 101 southbound; the offramp goes beneath U.S. 101 before daylighting at the Omer Rains Bike Trail/SR 1 intersection. This intersection exposes bicyclists and pedestrians to oncoming vehicles at a rate of speed of 45-55 mph. Project plans indicate a Class 1 Bike Lane will be constructed where the Omer Rains Bike Trail ends. The Class 1 Bike Lane will confine bicyclists to the seaward side of SR 1. An elevated path will be constructed adjacent to SR 1 and across a culvert that collects runoff from U.S. 101 at PM 21.3. The Class 1 Bike Lane will be separated from SR 1 by a railing except for areas where public parking occurs. The railing and bike lane continues across the bridge and the railing ends at the entrance to Emma Wood State Beach access road. At this location (PM 21.9), a crosswalk and two Pedestrian Hybrid Beacons will be installed to redirect bicyclists to the northbound bike lane along SR 1. All work associated with the elevated path, crosswalk, warning beacons, electrical conduits and equipment will occur in the Caltrans right-of-way.

The proposed project includes the installation of 17 new signs. The new signs provide warnings and directions that support the Class 1 Bike Lane improvements (crosswalk and lane changes).

Therefore, the Class 3 exemption would apply.

ANALYSIS OF EXCEPTIONS TO EXEMPTIONS, SECTION 15300.2:

Projects that are consistent with the categorical exemptions identified in CEQA Guidelines sections 15301 through 15333 are not automatically exempt from CEQA review. Section 15300.2 (Exceptions) of the State CEQA Guidelines outlines the cases in which projects that would normally be exempt from CEQA review would not be exempt. These exceptions are as follows.

(a) Location. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located, a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

CEQA Section 15300.2(a) does not apply to Class 1, Section 15301, Existing Facilities and Class 2, Section 15302, Replacement and Reconstruction, but does apply to Class 3, Section 15303 New Construction of Small Structures.

The project is in the coastal zone. Protected coastal resources include public access to the coastline, wetlands, and other environmentally sensitive habitat areas (ESHA). On September 9, 2022, the California Coastal Commission certified amendments to the Ventura County Local Coastal Program (LCP). The County's Coastal Area Plan (CAP) Figure 4.2.1 was replaced with Figure 4.1.3-1, North Coast Environmentally Sensitive Habitat Areas (ESHA). CAP Figure 4.1.3-1 includes a statement that the ESHA map may not depict the location of all ESHA and the precise boundaries of ESHA will be determined on a site-specific basis using site-specific biological surveys and maps.

For Case No. PL22-0114, an Initial Study Biological Assessment (dated June 16, 2022 and amended on July 31, 2023, and October 9, 2023) was prepared by Paul Caron, Biologist with the Department of Transportation. The site-specific survey indicated the elevated path leading from Omer Rains Bike Trail to the Class 1 Bike Lane will cross a culvert that functions as the outlet for a drainpipe that collects runoff from U.S. 101 during rain events. The condition of this outfall area following the 2023 rains showed vegetation was completely washed out. The area has begun to revegetate, is predominantly invaded by castor bean, and is considered degraded. The abutments for the elevated path will span the culvert however approximately 336 sq. ft. of native vegetation, which includes California rye grass, Coyote brush, Mulefat, Saltbrush and cottonwood, that is considered ESHA, will be removed.

The Emma Wood State Beach access road is designed as a two-lane road and is situated between a rock revetment/seawall, and the road shoulder, a slope supporting SR 1. To restore the road width to its design capacity of a striped two-lane access road, the road will be extended 8 to 10 feet landward requiring the slope supporting SR 1 to be graded, and a retaining wall constructed. The slope supporting SR 1 is vegetated; however, the area is isolated and not an extension of larger extent of ESHA. Approximately 0.04 acres of disturbed Quailbrush-Lemonade Berry Scrub that is considered ESHA will be removed. Additionally, three Monterey cypress trees are located on the slope; all three trees will be removed.

The Caltrans road right-of-way and State Beach access road provides no suitable habitat for any special-status wildlife species or features suitable for wildlife migration. The

ESHA to be removed is considered disturbed, degraded, not particularly high-quality, and isolated from lager undisturbed ESHA. The three Monterey cypress trees are not considered protected; these trees are native to Monterey, but not locally. None of the trees are considered heritage trees. The Monterey cypress trees do not exhibit characteristics that would designate the trees as ESHA. A habitat assessment was conducted by Caltrans (Exhibit 7, ISBA) and surveys conducted in 2018 and 2023 determined the trees were not suitable monarch butterfly overwintering/habitat.

The Ventura County Local Coastal Program (LCP) ESHA standards and Tree Protection Regulations prescribe procedures for evaluating biological resources and assessing the potential for direct and indirect impacts to these resources. The ESHA standards require that impacts to ESHA be offset through restoration, enhancement, or preservation of ESHA. Caltrans will be submitting a Habitat Restoration Plan, Habitat Maintenance and Monitoring Plan, and a Habitat Management Plan, that identifies areas where a total of 4,157 square feet of native vegetation will be planted to offset the loss of 2,078 sq. ft. of degraded ESHA. Areas to be planted with local, indigenous native vegetation will be monitored to ensure success, and preserved in perpetuity. Areas that will be restored will enhance, beautify, and provide new habitat.

The three Monterey cypress trees to be removed can be seen from U.S. 101 and SR 1 and show unique characteristics of weathering countless storms, and exposure to the ocean, fog, and other elements. As shown on the project plans (Exhibit 3, Sheet PP3), the three Monterey cypress trees are isolated on a slope supporting SR 1. A non-native tree can be protected if it is considered “ESHA,” “historic,” or “heritage”. The Ventura County CZO Section 8178-7.6.1(d), prescribes a 1:1 offset for the removal of a heritage tree that is in a prominent location as seen from public viewing areas. If the heritage tree is not an invasive or invasive watch list plant tree, the replacement trees can be of the same species. The three Monterey cypress trees are not native and could be considered moderately invasive if planted as a windbreak; the subject trees do not show evidence of becoming invasive, or outcompeting surrounding vegetation. Design of the replacement bridge and improvements to the Emma Wood State Beach access road warrant the removal; no alternative is available. While these three Monterey cypress trees are not considered ESHA, native, or heritage trees, and replacement is not required, Caltrans is proposing to plant eight Monterey cypress trees; the replacement trees collectively will be of comparable size and in the same general location as the trees being removed. The goal is to replace the same Monterey Cypress trees that are symbolic to this section of the California coast.

On December 12, 2018, a field survey was conducted by Diana Valadez (Caltrans) and no cultural materials were encountered. A Historic Property Survey Report was prepared by Diana Valdez and Claudia Harbert with Caltrans, dated May 21, 2019. No archaeological sites are recorded within 1 mile of the project area. The Caltrans Cultural Resources Database, the National Register of Historic Places, the California Register of Historical Resources, the California Historical Landmarks, the California Points of Historical Interest, and Ventura County Historical Landmarks and Points of Interest, all returned negative results for presence of additional cultural resources. No cultural

resources are expected to be encountered as the areas where the Class I Bike Lane is to be improved are in disturbed areas or within the road prism.

Based on the discussion above, staff has determined that the project is not located in a particularly sensitive environment and would not impact an environmental resource of hazardous or critical concern. Therefore, this exception to the categorical exemptions would not apply.

(b) Cumulative Impact. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

The California Transportation Commission (CTC) has allocated more than $1.1 billion for projects to repair and improve transportation infrastructure throughout the state. The allocation includes more than $533 million in funding from the federal Infrastructure Investment and Jobs Act of 2021 (IIJA) and more than $190 million in funding from Senate Bill (SB) 1, the Road Repair and Accountability Act of 2017. The following Caltrans District 7 projects located in Ventura County, have been funded:

Project No. 302404: Currently, Caltrans is conducting pavement rehabilitation (referred to as "101 Rehab Project") between Mussel Shoals and Faria Beach that will be constructed in three phases. Phase 1 consisted of individual slab replacements in the No. 1 (fast) lane in both directions, and replacement of the median shoulders in both directions. This phase is complete. Phase 2 consists of complete replacement of the No. 2 (middle) and No. 3 (slow) lanes, and replacement of the outside shoulder on the southbound side of U.S. 101. The U.S. 101 southbound lanes are reduced to two lanes: one lane remains on the coastal side of U.S. 101; a second lane just past Mussel Shoals crosses over the median to the northbound side of the highway and extends more than four miles to Faria Beach. Known as a bypass lane, it will remain in place until January 2024. No southbound traffic is diverted to SR 1. Phase 2 is underway and is expected to be completed in nine months. Phase 3 duplicates Phase 2 but occurs on the northbound lanes of U.S. 101 and is also expected to take nine months to complete. Local commuters have adjusted to the detours and know to expect delays.

Project No. 3311U4: Repair and replacement of guardrails along U.S. 101 and the installation of a motor vehicle pullout on the left side of the northbound offramp at Exit 72, PCH / State Beaches. The work will be done concurrently with the ramp closures for the Ventura Bridge Replacement project. The completion date for guardrail repairs/replacement is August 2024.

Project No. 322704: The installation of permanent Best Management Practices (BMPs), specifically Design Pollution Prevention Infiltration Areas (DPPIAs), along U.S. Highway 101, SR 1, and other routes outside the unincorporated area of Ventura County. This project was approved on March 3, 2023, and completion is scheduled for March of 2025. Project No. 322704 overlaps with Project No. 323904 (discussed below). A speed limit reduction along SR 1 is expected during construction of these two projects; however, SR

1 will remain open to traffic. In areas being actively paved, one lane will remain open with reverse flow controlled by flaggers. Both lanes and both bike lanes will reopen after paving operations are complete.

Project No. 323904: This project (referred to as "VEN-1 Cold Plane and Overlay AC Pavement Project") is a 7.1-mile section of SR 1 between Emma Wood State Beach Access Road (PM 21.3) and Seacliff Exit 78 (PM 28.4). The project is a pavement overlay and includes replacement of guardrails and signs, and construction of a crosswalk and warning beacons at Mondos Beach. On July 28, 2022, the project was approved. Project No. 323904 is expected to start construction on October 22, 2023 with a completion date of June 2026. County Parks will not be accepting reservations for the Rincon Parkway from October 21, 2023, to January 4, 2024; however, Faria and Hobson County Parks will remain open. To ensure area residents, and County and State Parks are informed of the project construction schedule, The project has been condition to require Caltrans identify the Public Information Officer (PIO) contact information. The PIO will be responsible for providing notification by mail and door hangers to area residents and County and State Parks. The public will be informed through social media outlets. Caltrans will also install digital message boards, temporary construction signs and "No Parking" signs, informing motorists, bicyclists, and pedestrians that construction activities are underway and access through the area will be detoured.

Project Number 319604: The Ventura Bridge Replacement project will be under construction simultaneously, with Project No. 302404, and Project No. 323904. Project No. 302404 must be completed prior to the start of construction for the Ventura Bridge Replacement Project. The Seacliff exits will be the only way property owners and residents living in the Seacliff, Faria, and Solimar beach communities, and campers staying at Hobson and Faria County Beach, Rincon Parkway, and Emma Wood State Beach, to access SR 1. The Ventura Bridge Replacement Project has been conditioned to ensure the Seacliff exits remain open throughout the construction of the project (Exhibit 4, Condition of Approval No. 1, Project Description). Coastal PD Permit, Case No. PL22-0114, has also been conditioned to ensure the same level of public notification that was assigned to Project No. 323904.

Caltrans projects are planned, prioritized, and ultimately earmarked for funding. For projects requiring permits from a local agency, the entitlement must be obtained by a specified date, or the funding is assigned to another project and the pending project is suspended until future funding sources become available. The Ventura Bridge Replacement Project will replace a bridge that has exceeded its lifespan, is showing signs of deteriorating, and will continue to be compromised over time. The bridge provides essential access to residential communities, and public campgrounds and beaches. The project also provides a Class 1 Bike Lane that is designed to improve safety for bicyclists and pedestrians. Caltrans has funding to construct the project and will reserve the funding if the entitlement is obtained by October 2023. If Coastal PD Permit Case No. PL22-0114 is not approved by October 2023, the project will be postponed until additional funding becomes available.

While numerous Caltrans projects are being performed simultaneously, and residents, beachgoers, bicyclists, pedestrians, and motorists will be inconvenienced by construction activities and road detours, all projects are considered necessary to preserve the highway facility as it was constructed, including restoring public safety for bridges and other highway structures.

Therefore, granting the requested Coastal PD Permit would not result in cumulative impacts. This exception to the categorical exemptions would not apply.

> *(c) Significant Effect. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.*

Staff has determined that no unusual circumstances would exist by the granting of the requested Coastal PD Permit. Caltrans is responsible for maintaining state highway facilities including replacing bridges and improving the State highway system that over time has been compromised by the weather, flooding, and intensification of use. The proposed bridge replacement and maintenance, repair, and upgrades to SR 1 is allowed in the COS zone with the granting of a Coastal PD Permit. All work will be located within the Caltrans right-of-way except for the widening of State Beach Access Road which will occur within access easements. The replacement bridge will have substantially the same purpose and capacity as the structure replaced and will involve no expansion of capacity as no additional travel lanes will be added. The Class 1 Bike Lane improvements to SR 1 will improve bicycle circulation and safety for both bicyclists and pedestrians by confining the path of travel to the seaward side of SR 1 from the Omer Rains Bike Trail, across the bridge, and to a signalized crosswalk that redirects bicyclists to the bike lane that follows the flow of traffic.

Caltrans will be submitting a Habitat Restoration Plan, Habitat Maintenance and Monitoring Plan, and a Habitat Management Plan, that identifies areas where a total of 4,157 square feet of local, indigenous native vegetation will be planted to offset the loss of 2,078 sq. ft. of degraded ESHA that will be removed for road, bridge, and bike lane improvements. Areas that will be restored will enhance, beautify, and provide new habitat. As shown on project plans (Exhibit 3, Sheet PP3), three Monterey cypress trees are proposed for removal. Design of the replacement bridge and improvements to the Emma Wood State Beach access road warrant the removal; no alternative is available. While not required, Caltrans is proposing to plant eight Monterey cypress trees; the replacement trees collectively will be of comparable size and in the same general location as the trees being removed (Exhibit 4, Condition No. 25). The goal is to plant the same trees to replace the Monterey Cypress symbolic of the California coast.

Based on the above discussion, the County has determined that there are no unusual circumstances related to the proposed Project and the proposed activities would not have a significant effect on the environment. Therefore, this exception to the categorical exemption would not apply.

(d) Scenic Highways. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

The proposed project would replace Ventura OH BR No 52-0040 and upgrade the Class 1 Bike Lane. The project site is not located on, or adjacent to a state designated scenic highway.[3]

Approximately 2,078 sq. ft. of ESHA will be removed; however, these areas are degraded, not particularly high-quality, isolated from lager undisturbed ESHA, and do not provide habitat for special status wildlife species or features suitable for wildlife migration. Three Monterey cypress will be removed; the trees are native to Monterey, but not locally. None of the trees are considered protected or are considered heritage or ESHA trees. Caltrans proposes to plant 4,567 sq. ft. of local, indigenous native vegetation to offset the loss of 2,078 sq. ft. of degraded ESHA (Exhibit 4, Condition Nos. 1 and 24). While not required, Caltrans is proposing to plant eight Monterey cypress trees of comparable size in the same general location as the three Monterey cypress trees being removed (Exhibit 4, Condition No. 25).

Therefore, this exception to the categorical exemptions would not apply.

(e) Hazardous Waste Sites. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

Pursuant to California Government Code Section 63962.5 and documentation on file with the Planning Division, the project site is not located on the State of California list of identified hazardous waste or hazardous substance sites. Therefore, this exception to the categorical exemptions would not apply.

(f) Historical Resources. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

No historic resources are located on or adjacent to the project site. Therefore, this exception to the categorical exemptions would not apply.

CONCLUSION:

[3] The only state designated highway in Ventura County is the northern portion of California State Route 33, more than 30 miles from the project site [Background Report for the Ventura County 2040 General Plan Update, Figure 6.5 (September 2020)].

Based on the above analysis, the proposed Project meets the qualifications of the Class 1 (Section 15301 – Existing Facilities), Class 2 (Section 15302 - Replacement or Reconstruction) and Class 3 (Section 15303 - New Construction of Small Structures) categorical exemptions. Staff has determined that no unusual circumstances or other exceptions set forth in CEQA Guidelines section 15300.2 preclude use of sections 15301, 15302, and 15303 categorical exemptions. Therefore, staff has determined that this Project is categorically exempt pursuant to sections 15301, 15302 and 15303 of the CEQA Guidelines and the project complies with the requirements of the CEQA Guidelines.

C. CONSISTENCY WITH THE GENERAL PLAN

The proposed project has been analyzed to and determined to be consistent with all applicable General Plan and Coastal Area Plan policies. A consistency analysis which evaluates the project's consistency with the policies of the General Plan is included as Exhibit 5 of this Staff Report.

D. ZONING ORDINANCE COMPLIANCE

The proposed project is subject to the requirements of the Ventura County CZO.

1. **Ventura County CZO Section 8175-5.9.a**: *New or expanded public works facilities (including roads, flood control measures, water and sanitation) shall be designed to serve only the potential population of the unincorporated and incorporated areas within LCP boundaries, and to avoid impacts on agriculture, and open space lands to the maximum extent feasible, and ensure that environmentally sensitive habitats (ESHA) are protected against any significant disruption of habitat values. See Section 8178-2.5.2(c) if such facilities are proposed within ESHA or buffer zone.*

   The project site is zoned Coastal Open Space, immediately to the east of the Coastal Open Space zone and approximately 525 feet to the east of the project site Coastal Agricultural zoned land. The new bridge will be built within the footprint of the existing bridge and will not impact agriculture land or impact undeveloped open space lands.

   As discussed, in Section A.9 (History), the Ventura Overhead Bridge was built in 1934, widened in 1961 and seismically retrofitted in 1997. As it stands, Caltrans assigned a Sufficiency Rating of 39.6 percent; Sufficiency Ratings range from zero to 100, with zero representing an entirely insufficient or deficient bridge, and 100 representing an entirely sufficient bridge. The bridge needs to be replaced due to numerous cracks and spalls in the bridge columns and the steel bents being exposed to the elements, resulting in rust and delamination, which pose a safety hazard. The bridge provides essential public access for legally permitted development providing a major route for the residents, bicyclists, and motorists getting access onto SR 1 from the north and merging onto U.S. 101 if travelling

south. The replacement bridge will be in the same location and have substantially the same purpose and capacity as the structure it will replace.

The proposed project also includes improvements to the Emma Wood State Beach access road, and the construction of a Class 1 Bike Lane that includes a crossing over a culvert at SR 1 PM 21.3.

The project will impact approximately 2,078 square feet (sq. ft.) of degraded isolated environmentally sensitive habitat. Caltrans proposes to implement a Habitat Restoration, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan that requires the planting of 4,157 square feet of local, indigenous native vegetation be planted to offset the loss of 2,078 sq. ft. of degraded ESHA (Exhibit 4, Condition No. 1, Project Description and Condition No. 24). Three Monterey cypress will be removed; the trees are native to Monterey but not locally. None of the trees are considered ESHA or heritage trees. The Tree Protection Regulations prescribe a 1:1 offset for the removal of a heritage tree that is in a prominent location as seen from public viewing areas. While not required, Caltrans proposes to plant eight Monterey cypress trees of comparable size in the same general location as the three Monterey cypress trees being removed. Additionally, tree protections measures will be implemented to avoid impacts to protected trees located within the construction area (Exhibit 4, Condition Nos. 25 and 26).

Based on the discussion above, the proposed project is consistent with CZO Section 8175-5.9.a.

2. **Ventura County CZO Section 8175-5.9.b**: *New service extensions required beyond the stable urban boundary (as shown on the LCP Land Use Plan maps) must be designed to mitigate any effects on agricultural viability.*

   Ventura County CZO Section 8175-5.9.c: *Electrical transmission line rights-of-way shall be routed to minimize impacts on the viewshed in the coastal zone, especially in scenic rural areas, and to avoid locations that are on or near sensitive habitats (ESHA), or recreational or archaeological resources, whenever feasible. Scarring, grading, or other vegetative removal shall be repaired and the affected areas revegetated with plants similar to those in the area to the extent that safety and economic considerations allow.*

   Ventura County CZO Section 8175-5.9.d: *In important scenic areas or environmentally sensitive habitat areas (ESHA), where aboveground transmission line placement would unavoidably affect views or ESHA, undergrounding shall be required where it is technically and economically feasible unless it can be shown that other alternatives are less environmentally damaging. When aboveground facilities are necessary, design and color of the support towers shall be compatible with the surroundings to the extent that safety and economic considerations allow.*

The project site is within the Caltrans right-of-way and an existing access easement at Emma Wood State Beach. No service extension will be required beyond the stable urban boundary as shown in the North Coast Land Use Map (Coastal Area Plan). The installation of the pedestrian hybrid beacons, utility boxes, and bridge lighting system will be above ground and require connection to existing utilities, but these facilities are not in ESHA or archaeologically sensitive areas. Except for the above ground facilities, the project will be conditioned to underground all utilities (Exhibit 4, Condition No. 15).

Based on the discussion above, the proposed project is consistent with CZO Sections 8175-5.9.(b), (c) and (d).

Ventura County CZO Section 8175-5.17.1: *Grading plans shall minimize all areas of earth disturbance. If it is determined that a project is feasible with less alteration of the natural terrain than is proposed, that project shall be denied.*

Ventura County CZO Section 8175-5.17.2: *All earth disturbance shall be designed to minimize impacts and alterations of physical features and processes of the site (i.e., geological, soils, hydrological, siltation, water percolation, runoff, the spread of invasive or invasive watch list species and adverse impacts on biological resources), to the maximum extent feasible. During the winter rainy season (October 1 – April 15), grading and brush/vegetation removal is prohibited, except when such activities are conducted in accordance with best management practices, and the Planning Director, in consultation with the Public Works Agency, determines that one or more of the following circumstances apply:*

a. Grading or brush/vegetation removal is necessary to remediate or prevent hazardous geologic conditions that endanger public health and safety.
b. A grading permit was issued, and grading was initiated prior to the rainy season, but was not completed due to unforeseen circumstances or construction delays, and completion of grading would be more protective of sensitive environmental resources or would reduce erosion and sedimentation.
c. Identified, active bird nesting/roosting sites at the project site prevented grading or brush/vegetation removal during the prior non-rainy season (April 16 – Sept. 30).
d. Minor grading or brush/vegetation removal is necessary to maintain safe public access on existing roads or trails in public parks managed by the California Department of Parks and Recreation.

Ventura County CZO Section 8175-5.17.3: *For permitted grading or brush/vegetation removal operations on hillsides with slopes that exceed 20 percent gradient, the smallest practical area of land shall be exposed at any onetime during development, and the length of exposure shall be kept to the shortest practicable amount of time. All erosion control measures, per the approved permit, shall be installed prior to any on-site grading and brush/vegetation removal activities.*

The Emma Wood State Beach access road is a two-lane striped access road that begins at SR 1 and heads south into the campground. The access road is protected by a seawall that ends just before the campground kiosk, followed by rock rip rap. A slope supporting SR 1 is located on the east side of the access road. The access road experiences wave action. To restore the road width to its design capacity of a striped two-lane paved access road, the slope supporting SR 1 will be graded, a retaining wall constructed, the road extended approximately 8-10 feet landward, within the access easement, and then repaved. This is a "pinch point" in the access to Emma Wood State Beach and modifying the slope is the only alternative to improve circulation in this area.

If tree removal and/or construction activities (i.e., demolition of the existing bridge and construction of the new bridge, etc.) occurs between January 1 through September 15, bird nesting surveys will be required (Exhibit 4, Condition No. 17).

Based on the discussion above, the proposed project is consistent with Ventura County CZO Sections 8175-5.17.1, 8175-5.17.2, and 8175-5.17.3.

Ventura County CZO Section 8175-5.17.4: *Sediment containment systems and erosion control methods (e.g., desilting basins or silt traps) shall be installed, per the approved grading permit, on the project site prior to or concurrent with the initial grading operations and maintained by the applicant through the development process to capture sediment from runoff waters. All captured sediment shall be retained on-site unless removed to an appropriate approved dumping location.*

Ventura County CZO Section 8175-5.17.5: *All stormwater protection measures shall be installed, per the approved grading permit, prior to any grading or brush/vegetation removal and prior to the winter rainy season (October 1 – April 15). All stormwater protection measures shall be maintained to function as designed throughout the winter rainy season. Where construction will extend into the winter rainy season, the following standards shall apply:*

a. *Suitable stabilization methods shall be used to protect all areas of disturbance from erosion. The appropriate methods shall be prepared by a qualified storm water designer and approved by the Ventura County Public Works Agency.*
b. *The smallest practical area of land shall be exposed at any one time during development, and the length of exposure shall be kept to the shortest practicable amount of time.*
c. *Stormwater quality protection measures for hillsides with slopes that exceed 20 percent gradient and for areas with ESHA or buffer zone shall be consistent with the standards required for "high risk sites".*

Ventura County CZO Section 8175-5.17.6: *All areas of disturbance shall be fully stabilized at the completion of rough grading. Within 90 days of rough grading, at*

least 60 percent of the disturbed areas shall be covered with native plantings, and all remaining areas shall be covered with mulch, rock lining, or similar materials to control erosion. Within ESHA or buffer zones, revegetation planting shall be of native grasses and shrubs, and completed in accordance with Sections 8178-2.7.4.2, 8178-7, and 8178-8. Outside ESHA or buffer zones, restoration planting shall be conducted in accordance with Section 8178-8.4.2.5.1.

Ventura County CZO Section 8175-5.17.7: *Development shall be designed so that any difference (i.e., increase) in storm flow rate or amount must either be percolated into the ground onsite or released at the undeveloped flow rate from the site. Site discharge shall occur in a manner that avoids adverse impacts downstream (in velocity or duration) as follows:*

a. Grading permit applications must include a hydrology and hydraulics report, prepared by a civil engineer, that includes a map showing the entire drainage area and the estimated runoff of the area.
b. The report shall examine several frequencies of storms consisting of 2-year, 10-year, 50-year, and 100-year events, and demonstrate that the proposed site drainage design will either retain or detain the difference between the pre-development storm flow rate and post-development storm flow rate for the storm events listed above.
c. The civil engineer preparing the hydrology and hydraulics report shall consider alternative, low-impact design methods to handle and improve stormwater quality runoff.

3. **Ventura County CZO Section 8175-5.17.8:** *Degradation of the water quality of groundwater basins or wet environments shall not result from development of the site. Pollutants such as chemicals, fuels, lubricants, raw sewage, or other harmful waste shall not be discharged into or alongside coastal streams, wetlands or other wet environments either during or after construction.*

   The demolition of the Ventura OH Bridge No. 52-0040 and the construction of the new bridge will occur near the Pacific Ocean. A Demolition Plan is required to be submitted the includes but is not limited to listing all hazardous materials handling, storage, and removal, and a Debris Containment and Collection Plan to ensure coastal resources are protected (Exhibit 4, Condition No. 22). The widening of Emma Wood State Beach Access Road will require approximately 3,159 cubic yards of grading and construction of a retaining wall to maintain the slope at SR 1. To ensure Best Management Practices (BMPs) are employed and maintained, and no runoff or contaminants enter the ocean, Caltrans will implement an erosion control plan (Exhibit 3, Project Plans, Sheets PL-2, PP1 – PP3, and Exhibit 4, Condition No. 30).

   Based on the discussion above, the project is consistent with Ventura County CZO Section 8175-5.17.4, 8175-5.17.5, 8175-5.17.6, and 8175-5.17.7.

Pursuant to the Ventura County CZO (Section 8174-4), the proposed use is allowed in the COS zone district with the granting of a Coastal PD Permit. Upon the granting of the Coastal PD Permit, the proposed project will comply with this requirement.

E. PD PERMIT FINDINGS AND SUPPORTING EVIDENCE [TREE PROTECTION REGULATIONS]

The Planning Director must make one or more of the following findings in order to determine that the proposed project is consistent with the permit approval standards of the Ventura County CZO (Section 8178-7.5.1.1 et seq.).

(a) The proposed findings and supporting evidence are as follows:

1. **The proposed project conforms to the development standards in Section 8178-7.4.**

2. **The proposed project is sited and designed to avoid the removal or transplantation of protected trees except as allowed by this Section 8178-7 and where no feasible alternative exists that would avoid or further minimize the removal, transplantation, or damage to protected trees.**

3. **To the maximum extent feasible, the proposed project is sited and designed to avoid any encroachment into the protected zone of a protected tree that would lead to the decline or death of the protected tree.**

4. **The adverse impact of tree removal, tree transplantation, or encroachment in the tree protected zone cannot be avoided because such impacts cannot be reduced or avoided through a feasible alternative.**

5. **All feasible mitigation measures that would substantially lessen any damage to protected trees were incorporated into the approved project through project design features or conditions of approval.**

6. **For trees classified as ESHA, the permit findings shall include those provided in Section 8181-3.5.3.**

   A new principal use is not being established and instead, the project involves the demolition of the existing Ventura Overhead (OH) Bridge (Bridge No. 52-0040) and construction of a new bridge in the same location and design capacity as the bridge to be replaced. Class 1 Bike Lane improvements include the installation of new structures; however, these structures (pedestrian path over an existing culvert, Pedestrian Hybrid Beacons (PHB), bike lane barriers) would all be located within

the Caltrans right-of-way and provide public safety improvements for bicyclists and pedestrians that currently do not exist.

As shown on the project plans (Exhibit 3, Sheet PP3), three Monterey cypress trees are located at PM 21.65, an isolated area on the slope supporting SR 1. Every effort has been made to avoid impacts to trees; however, the three Monterey cypress are located immediately adjacent to the bridge's abutments/retaining walls and will require removal. Class 1 Bike Lane improvements will also encroach upon six Monterey cypress trees; these trees are not proposed to be removed. As discussed in Section D of this staff report, none of the Monterey cypress trees are ESHA, native, historic, or heritage trees.

While not required, Caltrans is proposing to plant eight Monterey cypress trees; the replacement trees collectively will be of comparable size and in the same general location as the three Monterey cypress trees being removed. The goal is to replace the same Monterey Cypress trees that are symbolic to this section of the California coast.

The project has been conditioned to require a Tree Protection Plan (Exhibit 4, Condition no. 25) and Tree Health Monitoring and Reporting that requires Caltrans to implement tree protection measures throughout construction, and to monitor the health and condition of any protected trees that construction activities will come close to.

(b) In addition to the required findings in subsection "a" above, one or more of the following findings may be used to substantiate the reason for removal, transplantation, or encroachment of a protected tree:

1. **A protected tree's continued existence in its present form or location denies reasonable access to the subject property or denies the development of the principal permitted use that is the minimum necessary to provide a reasonable economic use of the property.**

2. **The location of a protected tree prevents the continuation or safe operation of an existing utility service and there are no feasible alternatives that would eliminate or reduce the impacts.**

3. **The protected tree(s) proposed for removal has a debilitating disease or is in danger of falling, and such conditions cannot be remedied through preservation procedures and practices, and the tree(s) is located in an area where falling limbs or trunks would be a danger to persons or property (i.e., existing structures).**

4. **The alteration or removal of a protected tree is required for a public works project that entails the repair and/or maintenance of drainage devices and**

road-side slopes and is the minimum design necessary to protect existing public roads.

None of the Monterey cypress trees that are proposed for removal or will be encroached upon are ESHA, native, historic or heritage trees. The removal of three Monterey cypress trees is required for a public works project that entails the repair and/or maintenance of road-side slopes and is the minimum design necessary to protect existing public roads. While these three Monterey cypress trees are not considered protected, Caltrans is proposing to plant eight Monterey cypress trees; the replacement trees collectively will be of comparable size and in the same general location as the trees being removed. The goal is to replace the same Monterey Cypress trees that are symbolic to this section of the California coast.

F. PD PERMIT FINDINGS AND SUPPORTING EVIDENCE

The Planning Director must make certain findings in order to determine that the proposed project is consistent with the permit approval standards of the Ventura County CZO (Section 8181-3.5 et seq.). The proposed findings and supporting evidence are as follows:

1. **The proposed development is consistent with the intent and provisions of the County's Certified Local Coastal Program [Section 8181-3.5.a].**

   Based on the information and analysis presented in Sections C and D of this staff report, the finding that the proposed development is consistent with the intent and provisions of the County's Certified Local Coastal Program can be made.

2. **The proposed development is compatible with the character of surrounding development [Section 8181-3.5.b].**

   The project site is on SR 1 PM 21.3 to PM 21.9 and within the Emma Wood State Beach access road, located between the Pacific Ocean to the west and US 101 to the east. The proposed project includes the demolition of Ventura Overhead (OH) Bridge No. 52-0040, and construction of a new bridge, widening of Emma Wood State Beach access road, Class I Bike Lane improvements, and a cross walk with pedestrian hybrid beacons at SR1 PM 21.8. The new bridge is in the same location and has the same design capacity as the bridge to be removed. The new bridge will not substantially change the character of the area or adversely affect nearby development. The design of the bridge is of a minimalistic approach with six columns in the substructure, abutments/retaining walls, and architectural texture. Class 1 Bike Lane improvements include elements to provide greater safety. Bike lanes will be painted green and, in some locations, separated from traffic lanes by a concrete barrier/railing. The pedestrian hybrid beacons will be mounted on a new 30-foot-tall light posts, the beacons will notify northbound and southbound traffic of the crosswalk. While the light posts with pedestrian hybrid beacons will alter the views of hillsides and beaches, and the green pavement markers and

railing are new, the crosswalk and equipment, and incidental pavement markings and barriers will comply with the California Manual of Uniform Traffic Control Devices and the Caltrans' current Manual for Assessing Safety Hardware and Caltrans Traffic Safety Guidance.

Caltrans will implement a Habitat Restoration Plan that will enhance areas not currently ESHA. Additionally, while not required, Caltrans is proposing to plant eight Monterey cypress trees to replace the removal of three Monterey cypress trees. The replacement trees will, collectively, be of comparable size and in the same general location as the three trees to be removed.

Based on the discussion above, this finding can be made.

3. **The proposed development, if a conditionally permitted use, is compatible with planned land uses in the general area where the development is to be located [Section 8181-3.5.c].**

   The proposed demolition of an existing bridge and construction of a new bridge and access improvements does not require a Conditional Use Permit. Thus, this finding does not apply to the project.

   Based on the discussion above, this finding can be made.

4. **The proposed development would not be obnoxious or harmful, or impair the utility of neighboring property or uses [Section 8181-3.5.d].**

   The project will require the temporary closure of Exit 72 of northbound US 101, access to Emma Wood State Beach and shoreline access points along Segment N-2 of the Coastal Trail will be available by rerouting US 101 north bound traffic to the Seacliff exit. Construction activities will require clearing, grubbing and grading, thus the project has been conditioned to ensure fugitive dust and other air contaminant are minimized (Exhibit 4, Condition Nos. 28 and 29). Additionally, the project construction is restricted to daytime hours between 7:00 AM to 5:00 PM from November to March and 7:00 AM to 7:00 PM from April to October, no night or weekend work will be required (Exhibit 4, Condition Nos. 1 and 20).

   Based on the discussion above, this finding can be made.

5. **The proposed development would not be detrimental to the public interest, health, safety, convenience, or welfare [Section 8181-3.5.e].**

   No effect of the project has been identified that would be detrimental to the public interest, health, safety, or welfare. The proposed bridge and access improvements would, in fact, enhance public safety. The purpose of the project is to maintain the integrity and access to SR1. The proposed Class 1 Bike Lane, crosswalk and

pedestrian hybrid beacons will improve safety along this section of the Coastal Trail.

Based on the discussion above, this finding can be made.

G. PLANNING DIRECTOR HEARING NOTICE, PUBLIC COMMENTS, AND JURISDICTIONAL COMMENTS

The Planning Division provided public notice regarding the Planning Director hearing in accordance with the Government Code (Section 65091), CZO (Section 8181-6.2 et seq.). On October 13, 2023, the Planning Division mailed notice to owners of property within 300 feet and residents within 100 feet of the property on which the project site is located. On October 13, 2023, the Planning Division placed a legal ad in the Ventura County Star.

G. RECOMMENDED ACTIONS

Based upon the analysis and information provided above, Planning Division Staff recommends that the Planning Director take the following actions:

1. **CERTIFY** that the Planning Director has reviewed and considered this staff report and all exhibits thereto, and has considered all comments received during the public comment process;

2. **FIND** that this project is categorically exempt from CEQA pursuant to Sections 15301 [Existing Facilities], 15302 [Replacement and Reconstruction] and 15303 [New Construction of Small Structures] of the CEQA Guidelines.

4. **MAKE** the required findings to grant a Planned Development Permit (Tree Protection Regulations) pursuant to Section 8178-7.5.1.1 of the Ventura County CZO, based on the substantial evidence presented in Section E of this staff report and the entire record;

5. **MAKE** the required findings to grant a Coastal PD Permit pursuant to Section 8181-3.5 of the Ventura County CZO, based on the substantial evidence presented in Section F of this staff report and the entire record;

4. **GRANT** Coastal PD Permit [Case No. PL22-0114], subject to the conditions of approval (Exhibit 4).

5. **SPECIFY** that the Clerk of the Planning Division is the custodian, and 800 S. Victoria Avenue, Ventura, CA 93009 is the location of the documents and materials that constitute the record of proceedings upon which this decision is based.

The decision of the Planning Director is final unless appealed to the Planning Commission within 10 calendar days after the permit has been approved, conditionally approved, or denied (or on the following workday if the 10th day falls on a weekend or holiday). Any

aggrieved person may file an appeal of the decision with the Planning Division. The Planning Division shall then set a hearing date before the Planning Commission to review the matter at the earliest convenient date.

If you have any questions concerning the information presented above, please contact Noe Torres at (805) 654-3635 or noe.torres@ventura.org.

Prepared by:

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Reviewed by:

Jennifer, Manager
Residential Permit Section
Ventura County Planning Division

EXHIBITS

Exhibit 2	Maps
Exhibit 3	Plans
Exhibit 4	Conditions of Approval
Exhibit 5	General Plan Consistency Analysis
Exhibit 6	ESA Coastal Hazards Report
Exhibit 7	Initial Study Biological Assessment

COUNTY of VENTURA

Ventura County, California
Resource Management Agency
GIS Development & Mapping Services
Map created on 09-21-2023

RMAgis

County of Ventura
Planning Director Hearing
Case No. PL22-0114
Exhibit 2 - Maps

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Disclaimer: This Map was created by the Ventura County Resource Management Agency, Mapping Services - GIS which is designed and operated solely for the convenience of the County and related public agencies. The County does no twarrant the accuracy of this mapand no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

RH

COUNTY of VENTURA

Ventura County,California
Resource Management Agency
GIS Development & Mapping Services
Map Created on 09-21-2023
Source: Vexcel 2022

RMAgis

County of Ventura
Planning Director Hearing
Aerial Photography
PL22-0114

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Disclaimer: This Map was created by the Ventura County Resource Management Agency, Mapping Services - GIS which is designed and operated solely for the convenience of the County and related public agencies. The County does no twarrant the accuracy of this mapand no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

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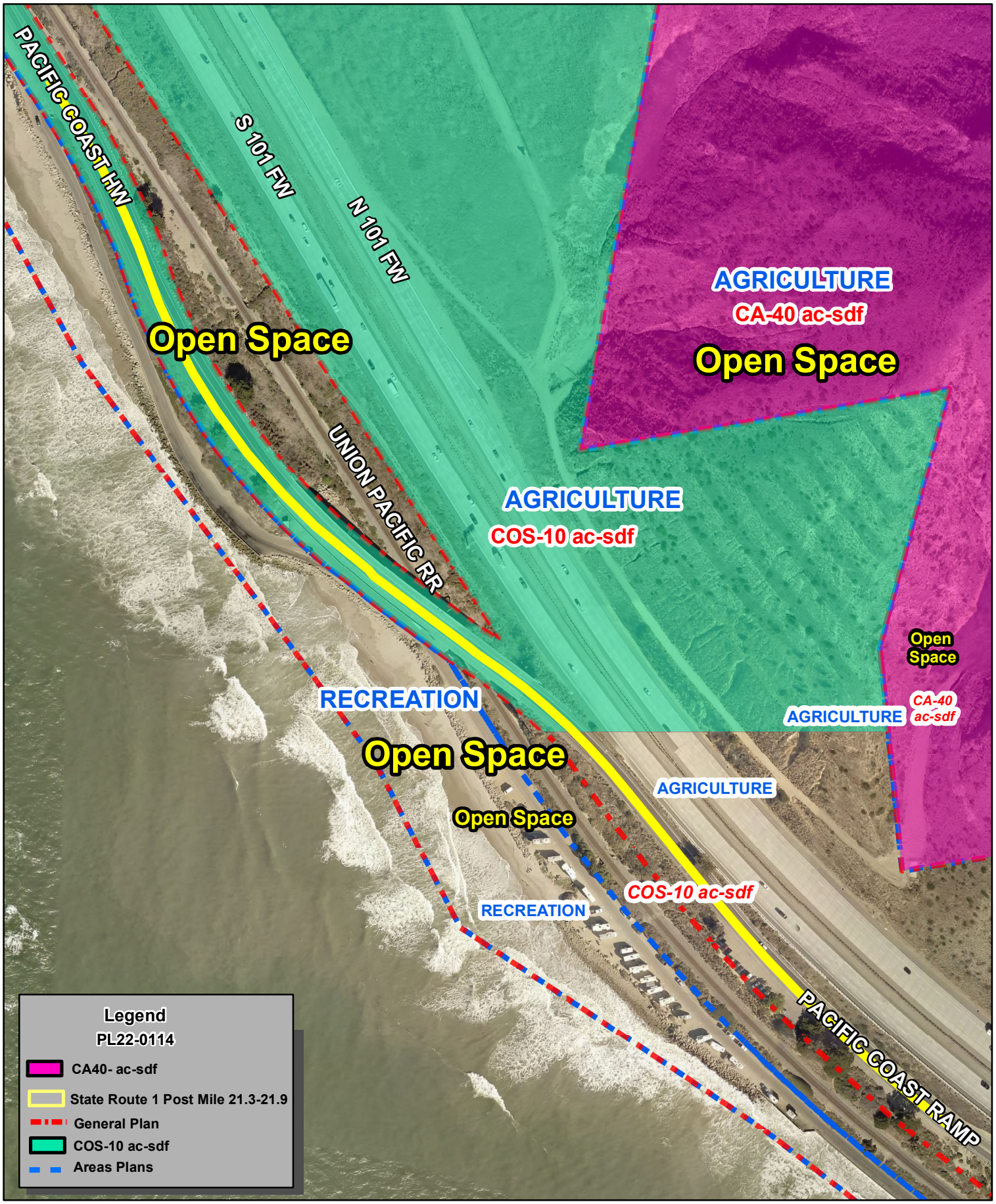
RH



COUNTY of VENTURA

Ventura County,California
Resource Management Agency
GIS Development & Mapping Services
Map Created on 09-21-2023
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RMAgis

County of Ventura
Planning Director Hearing
State Route 1 mile
General Plan & Zoning Map

0 105 210 Feet

Disclaimer: This Map was created by the Ventura County Resource Management Agency, Mapping Services - GIS which is designed and operated solely for the convenience of the County and related public agencies. The County does no twarrant the accuracy of this mapand no decision involving a risk of economic loss or physical injury should be made in reliance thereon.

RH

COUNTY of VENTURA

Ventura County,California
Resource Management Agency
GIS Development & Mapping Services
Map Created on 09-21-2023
Source: Vexcel 2022

RMAgis

County of Ventura
Planning Director Hearing
Aerial Photography
PL22-0114

0 250 500 Feet

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N

RH

VENTURA OH (REPLACEMENT)

07-319604 STATE ROUTE 01, VENTURA COUNTY, CALIFORNIA

ELEVATION VIEW

LOOKING NORTH

Prepared by Structure Design Services - Bridge Architecture and Aesthetics

A.SANCHEZ
DATE: 10-18-2023

County of Ventura
Planning Director Hearing
Case No. PL22-0114
Exhibit 3 - Plans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	1	XX

INDEX OF PLANS

SHEET No.	DESCRIPTION
1	TITLE AND LOCATION MAP
2-7	TYPICAL CROSS SECTIONS
8-10	LAYOUTS
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17-37	CONSTRUCTION DETAILS
38-40	DRAINAGE PLANS
41-43	UTILITY PLANS
44	CONSTRUCTION AREA SIGNS
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64-65	SUMMARY OF QUANTITIES
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STRUCTURE PLANS

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XX-XX	VENTURA PEDESTRIAN BRIDGE No. 52-047Z
XX-XX	VENTURA OH BRIDGE (REPLACEMENT) No. 52-0471
XX-XX	VENTURA OH BRIDGE (REPLACEMENT) Temp BIKE AND POC 52-TEMP

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

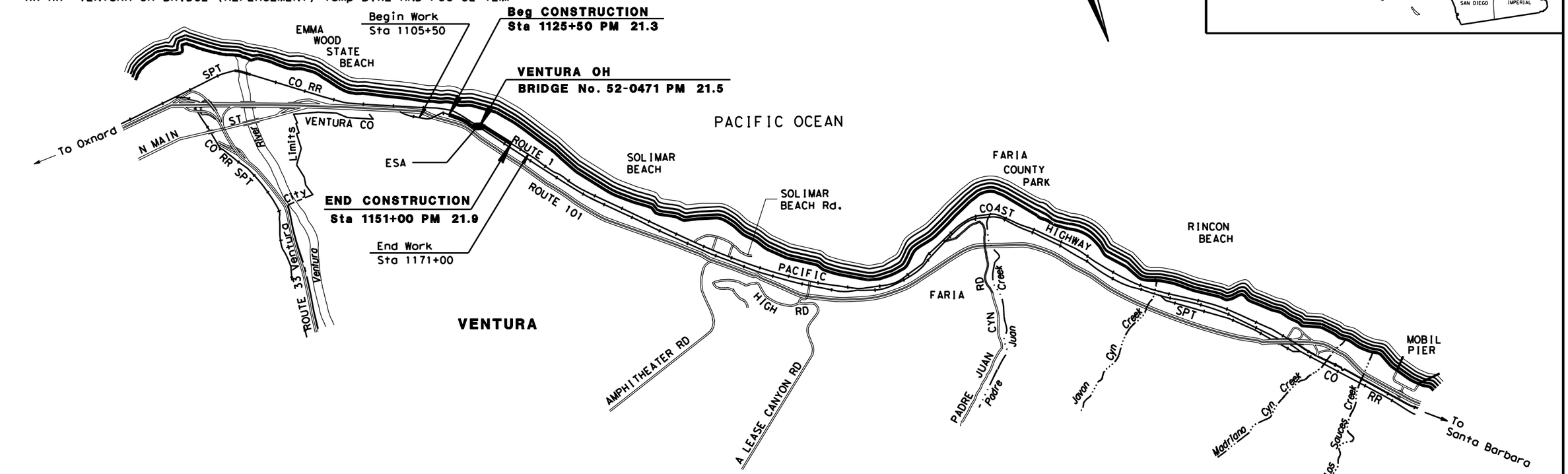
PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

IN VENTURA COUNTY
AT EMMA WOOD STATE BEACH
2.1 MILE NORTH OF ROUTE 33

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2023

LOCATION MAP



H. A. Foong 10-6-23
PROJECT ENGINEER / REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER
H. A. FOONG
No. 50858
Exp. 9-30-25
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	07-319604
PROJECT ID	07160000251

PROJECT MANAGER: DAN TRAN

DESIGN MANAGER: REFUGIO DOMINGUEZ

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
LAST REVISION

BORDER LAST REVISED 8/1/2016 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => $USER DGN FILE => $REQUEST | UNIT | PROJECT NUMBER & PHASE

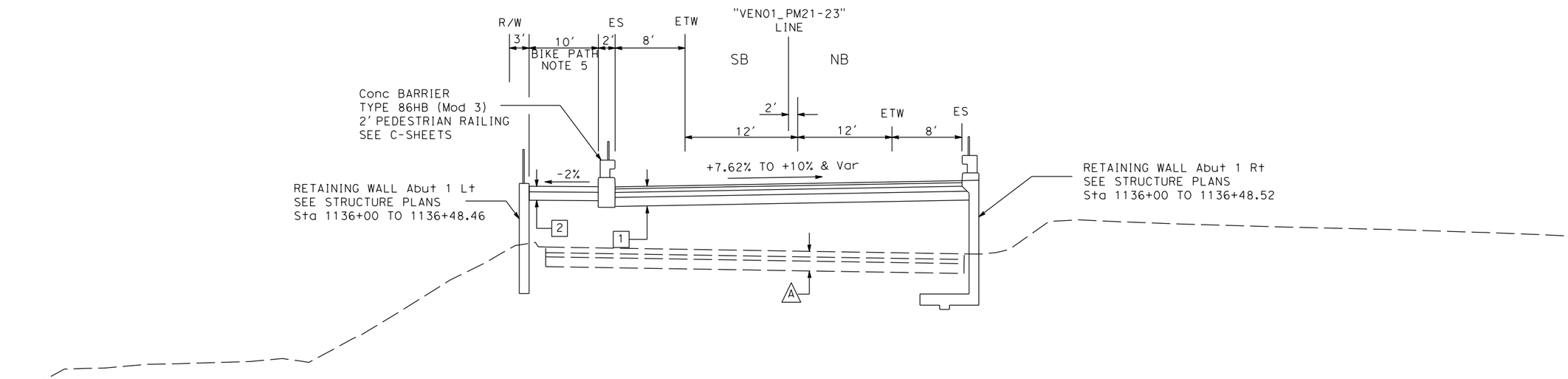
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	5	XX

H. A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9/30/23
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



"VEN01_PM21-23" LINE (ROUTE 1)
Sta 1136+00 TO 1136+17.50

TYPICAL CROSS SECTION

NO SCALE

X-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	Caltrans DESIGN
FUNCTIONAL SUPERVISOR	REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY	AARON FOONG
CHECKED BY	REFUGIO DOMINGUEZ
REVISED BY	
DATE REVISED	

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER, DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

NOTES:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. DIMENSIONS OF THE PAVEMENT STRUCTURES (STRUCTURAL SECTIONS) ARE SUBJECT TO TOLERANCES SPECIFIED IN THE STANDARD SPECIFICATIONS.
3. SEE PAVEMENT DELIENATION PLANS FOR LANE WIDTH TRANSITION.
4. FOR RETAINING WALL PLANS AND DETAILS, SEE STRUCTURE PLANS.
5. BIKE PATH IS BIDIRECTIONAL.
6. FOR LIMIT OF HAND RAILS AND STRUCTURE APPROACH SLABS SEE STRUCTURE PLANS.

PAVEMENT CLIMATE REGION
SOUTH COAST

DESIGN DESIGNATION (ROUTE 1)
YEAR 2019
VEHICLE AADT = 9,900
TRUCT AADT = 645
TRUCT % TOT = 6.52
DHV = 1,550
T = 6.52%
V (DESIGN) = 55 mph
V (POSTED) = 45 mph

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	2	xx

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/23 — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

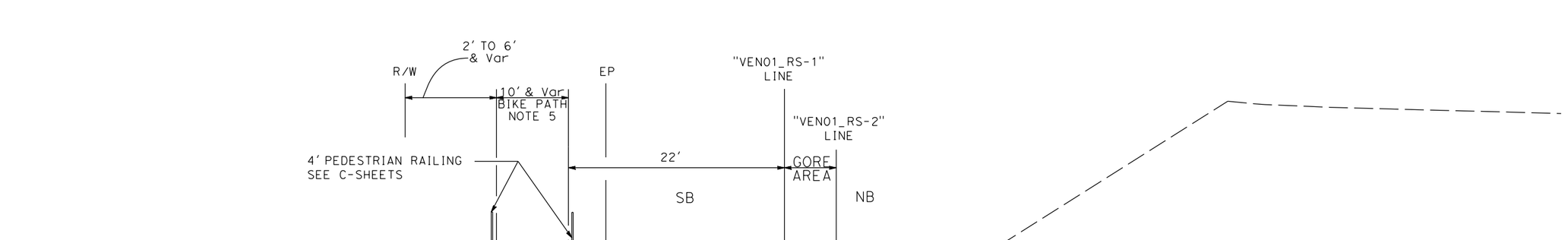
TYPICAL PAVEMENT STRUCTURAL SECTIONS

1
0.20′ RUBBERIZED HOT MIX ASPHALT, GAP GRADE (RHMA-G)
0.35′ HOT MIX ASPHALT, TYPE A (HMA-A)
0.55′ LEAN CONCRETE BASE (LCB)
1.05′ AGGREGATE BASE, CLASS 3 (AB, CL 3)

2
0.75′ JPCP
1.00′ CLASS 3 AGGREGATE BASE (CL3 AB)

3
0.35′ COLD PLANE AC PAVEMENT
0.35′ HOT MIX ASPHALT, TYPE A (HMA-A)

A
Exist
0.55′ AC
0.65′ CEMENT TREATED BASE (CL-A)
1.0′ AGGREGATE BASE, CLASS 3 (AB, CL 3)



"VEN01_RS-1" LINE (ROUTE 1)
Sta 27+87.79 TO 28+32.87 BB

TYPICAL CROSS SECTION
NO SCALE **X-1**

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED
LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	3	xx

H.A. Foong
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9/30/23
STATE OF CALIFORNIA

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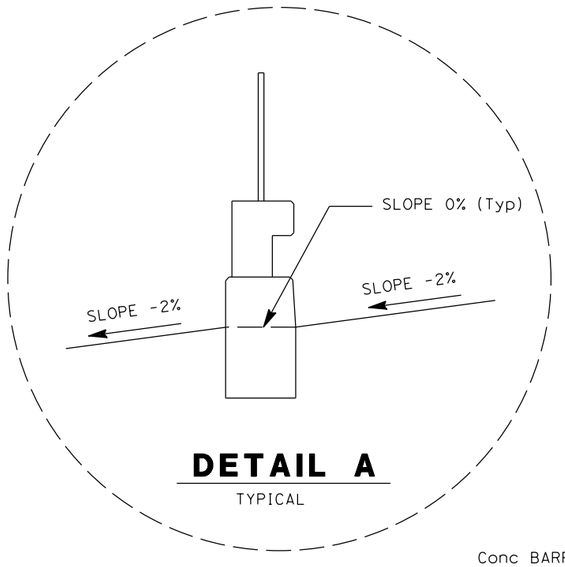
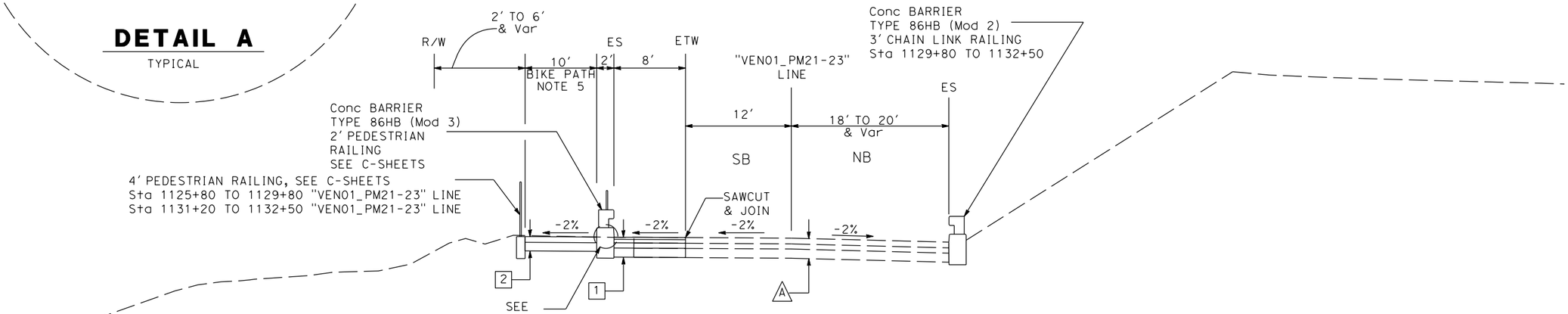
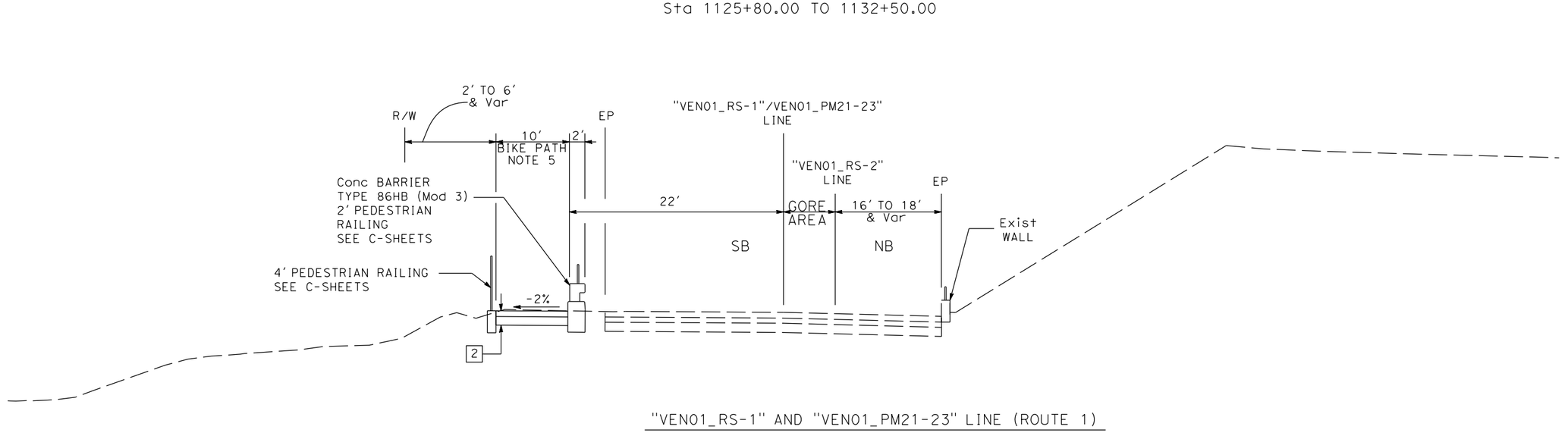


DETAIL A
TYPICAL



"VEN01_PM21-23" LINE (ROUTE 1)
Sta 1125+80.00 TO 1132+50.00



"VEN01_RS-1" AND "VEN01_PM21-23" LINE (ROUTE 1)
Sta 28+82.06 EB TO 29+22.89 "VEN01_RS-1" LINE
Sta 1125+54.36 TO 1125+80.00 "VEN01_PM21-23" LINE

TYPICAL CROSS SECTION

NO SCALE **X-2**

AARON FOONG	CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
REFUGIO DOMINGUEZ	CHECKED BY		
REFUGIO DOMINGUEZ	FUNCTIONAL SUPERVISOR		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN		

LAST REVISION 10-09-12 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

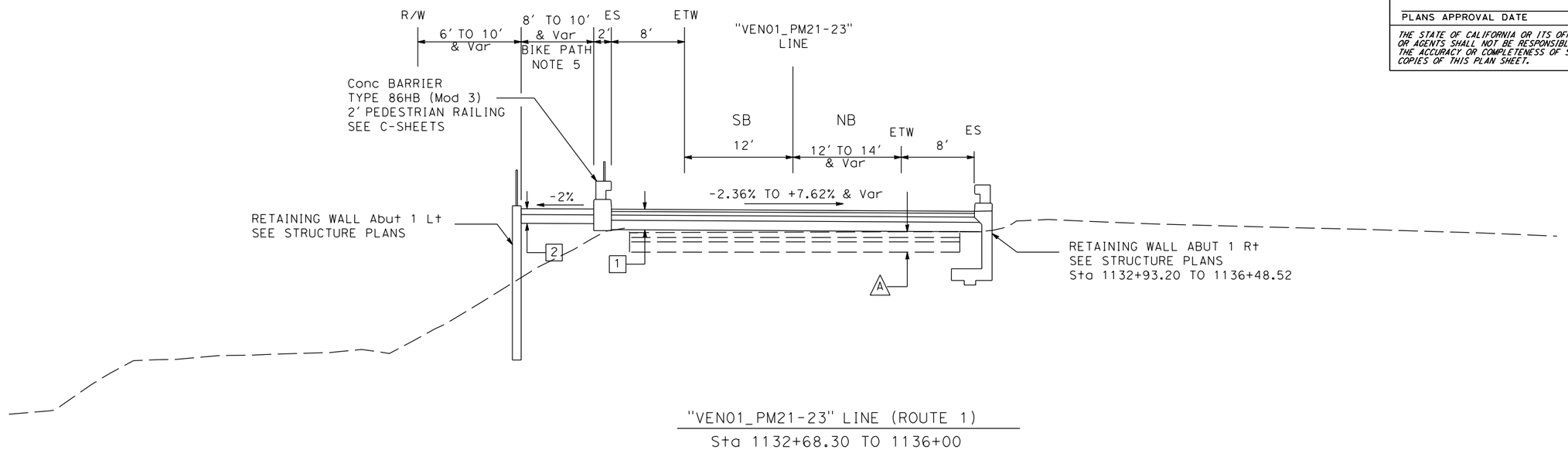
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	4	XX

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

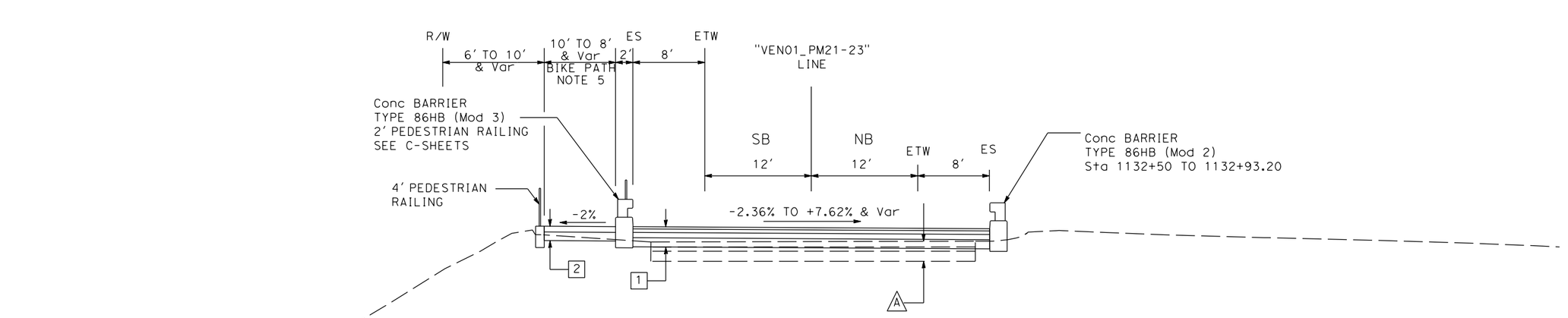
REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/23 — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



"VEN01_PM21-23" LINE (ROUTE 1)
Sta 1132+68.30 TO 1136+00



"VEN01_PM21-23" LINE (ROUTE 1)
Sta 1132+50.00 TO 1132+68.30

TYPICAL CROSS SECTION

NO SCALE

X-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED
LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

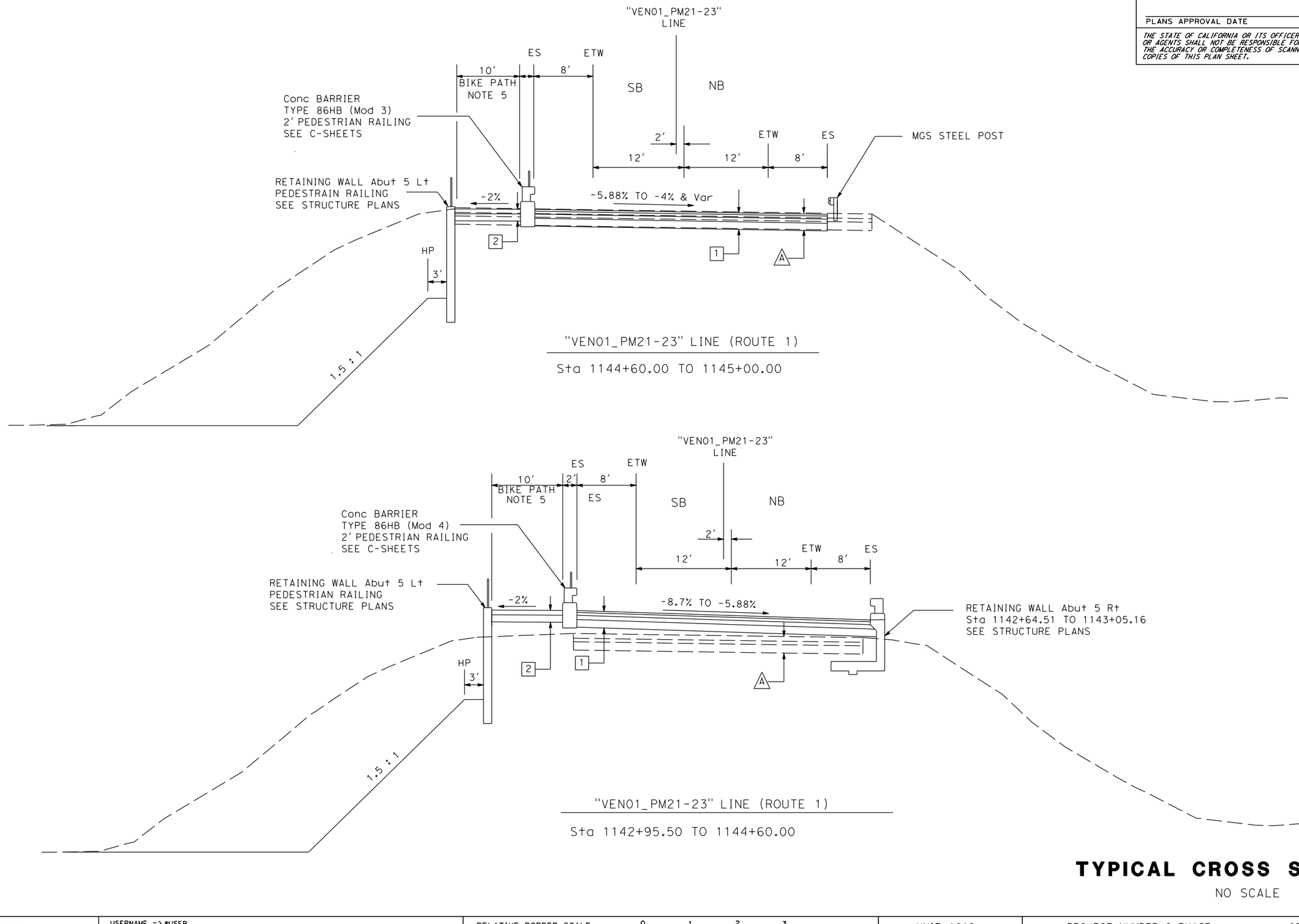
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	6	XX

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/23 — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TYPICAL CROSS SECTION

NO SCALE

X-5

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	7	XX

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/23 — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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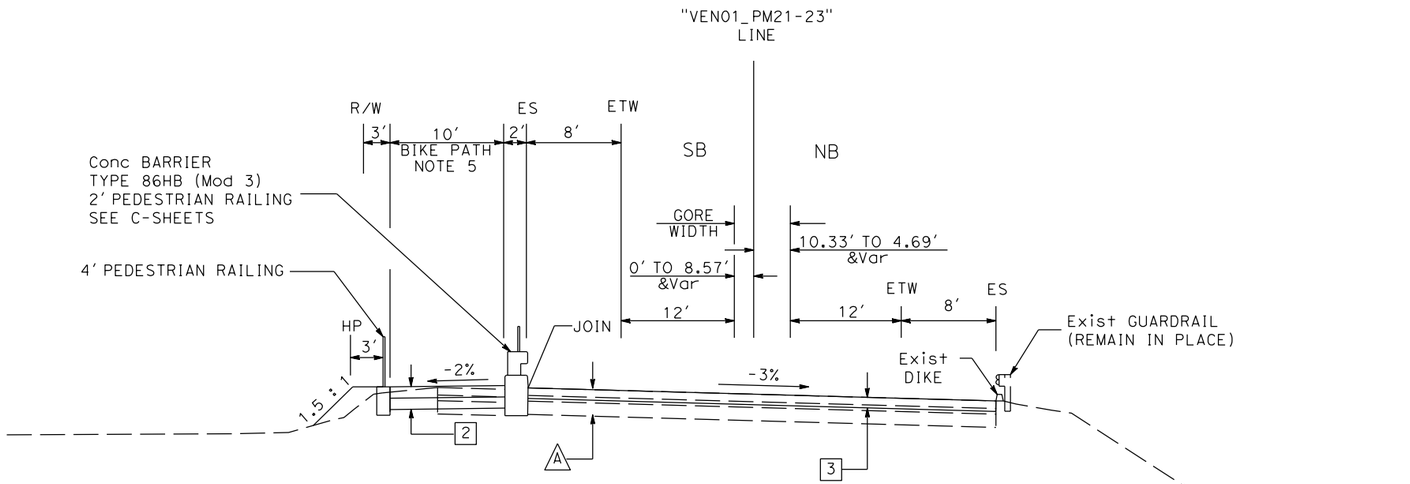
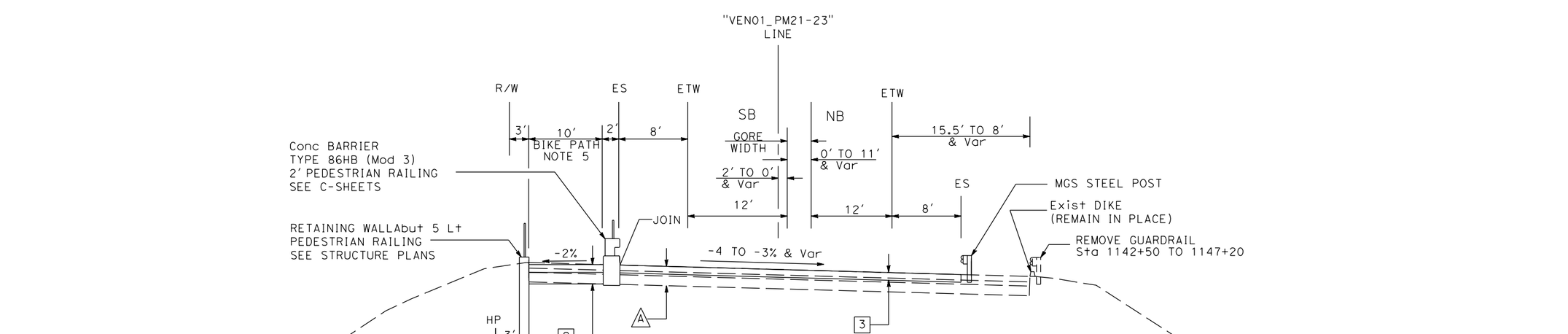


"VEN01_PM21-23" LINE (ROUTE 1)

Sta 1148+03.87 TO 1150+55.00



"VEN01_PM21-23" LINE (ROUTE 1)

Sta 1145+00.00 TO 1148+03.87

TYPICAL CROSS SECTION

NO SCALE

X-6

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

LAST REVISION 10-09-12
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TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
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DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	8	

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

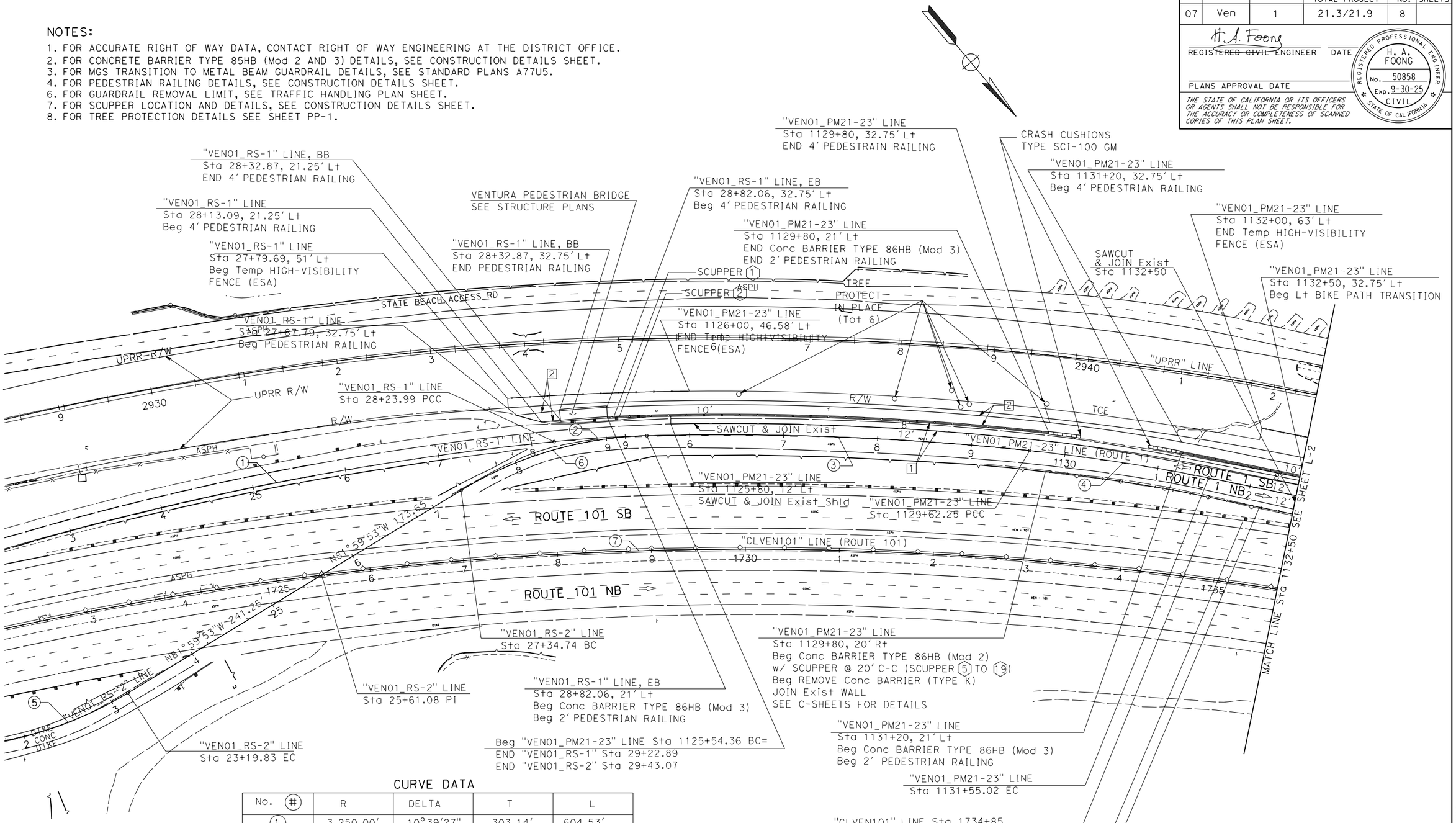
PLANS APPROVAL DATE

H. A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR CONCRETE BARRIER TYPE 85HB (Mod 2 AND 3) DETAILS, SEE CONSTRUCTION DETAILS SHEET.
3. FOR MGS TRANSITION TO METAL BEAM GUARDRAIL DETAILS, SEE STANDARD PLANS A77U5.
4. FOR PEDESTRIAN RAILING DETAILS, SEE CONSTRUCTION DETAILS SHEET.
6. FOR GUARDRAIL REMOVAL LIMIT, SEE TRAFFIC HANDLING PLAN SHEET.
7. FOR SCUPPER LOCATION AND DETAILS, SEE CONSTRUCTION DETAILS SHEET.
8. FOR TREE PROTECTION DETAILS SEE SHEET PP-1.



CURVE DATA

No. (#)	R	DELTA	T	L
(1)	3,250.00'	10°39'27"	303.14'	604.53'
(2)	1,311.29'	04°19'18"	49.48'	98.91'
(3)	3,168.00'	07°22'38"	204.23'	407.89'
(4)	2,000.00'	05°31'20"	96.46'	192.76'
(5)	400.00'	21°38'03"	76.43'	151.03'
(6)	400.00'	29°50'27"	106.58'	208.33'
(7)	3,738.00'	35°01'49"	1,179.67'	2,285.38'

LAYOUT

SCALE: 1" = 50'

L-1

REVISED BY | DATE REVISED
AARON FOONG | REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans®
DESIGN

LAST REVISION | DATE PLOTTED => 10/4/2023
TIME PLOTTED => 2:06:02 PM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	9	XX

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

H. A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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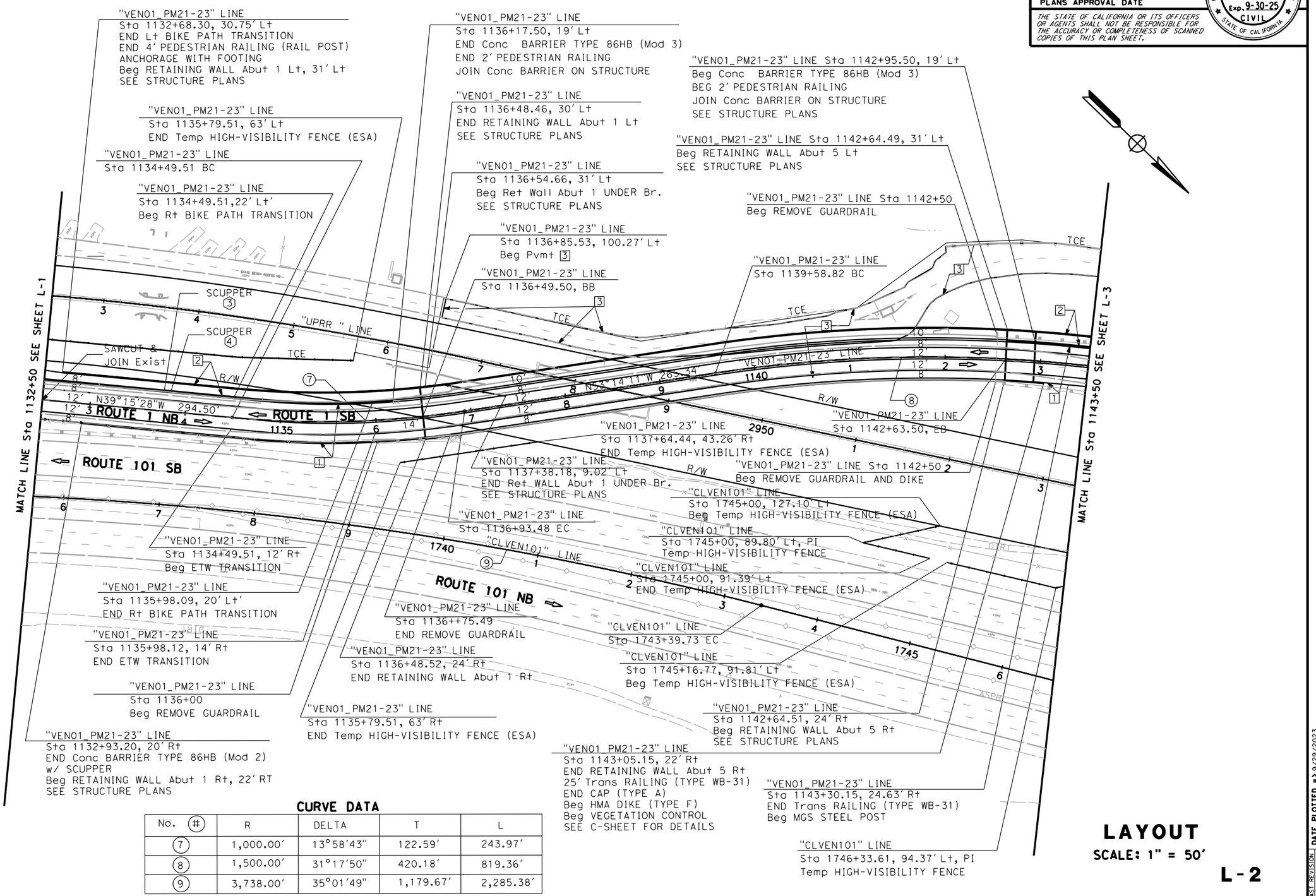
NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. (#)	R	DELTA	T	L
(7)	1,000.00'	13°58'43"	122.59'	243.97'
(8)	1,500.00'	31°17'50"	420.18'	819.36'
(9)	3,738.00'	35°01'49"	1,179.67'	2,285.38'

LAYOUT
SCALE: 1" = 50'

L-2

LAST REVISION — DATE PLOTTED => 9/29/2023 TIME PLOTTED => 1:53:57 PM

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\Work-Div\0731960ea002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	10	XX

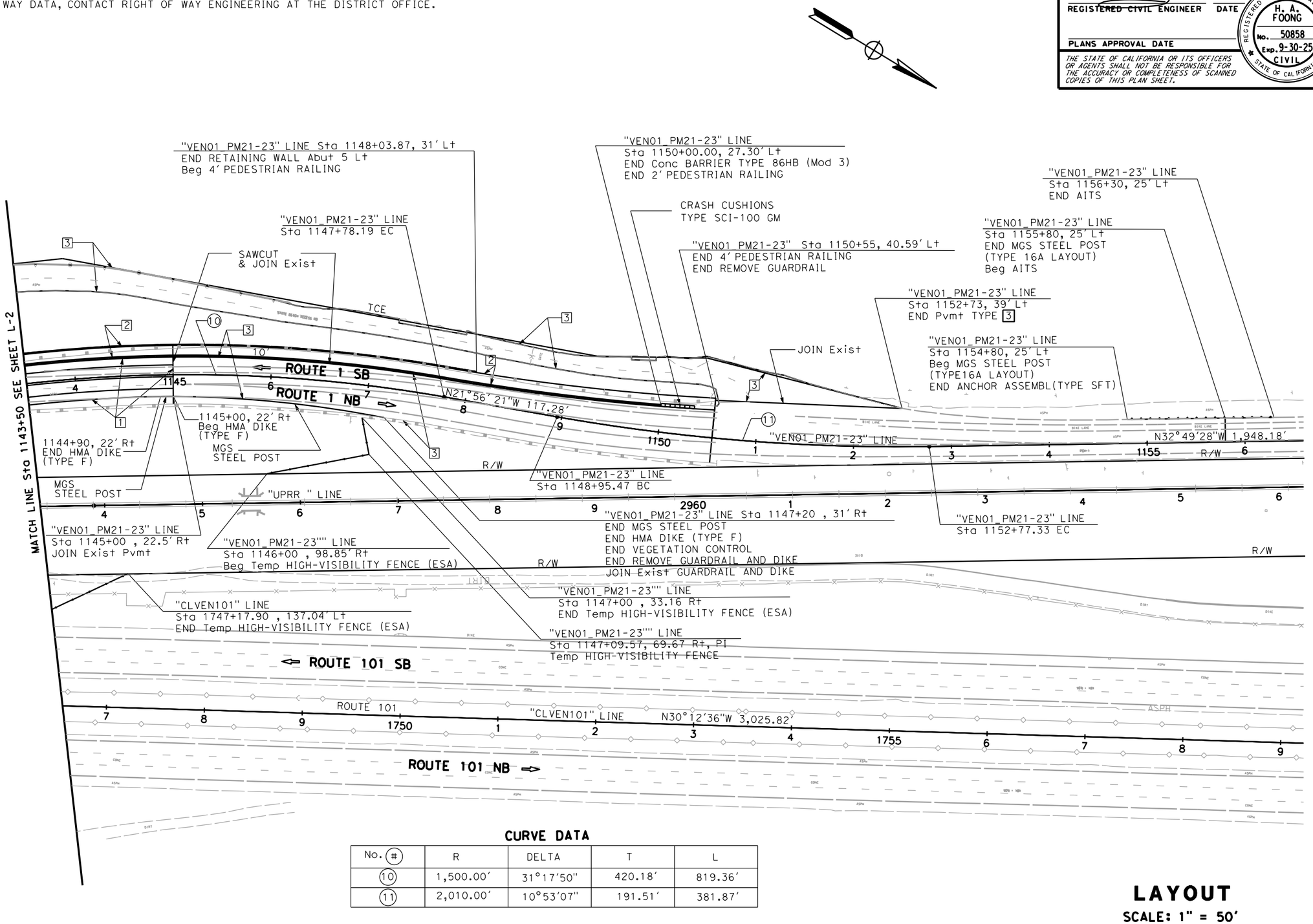
H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — H. A. FOONG — No. 50858 — Exp. 9-30-25 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. (#)	R	DELTA	T	L
(10)	1,500.00'	31°17'50"	420.18'	819.36'
(11)	2,010.00'	10°53'07"	191.51'	381.87'

LAYOUT

SCALE: 1" = 50'

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 9/29/2023
TIME PLOTTED => 1:58:33 PM

BORDER LAST REVISED 8/5/2020
USERNAME =>
DGN FILE => ...\Work-Div\0731960ea003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	11	XX

H. A. Foong
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

H. A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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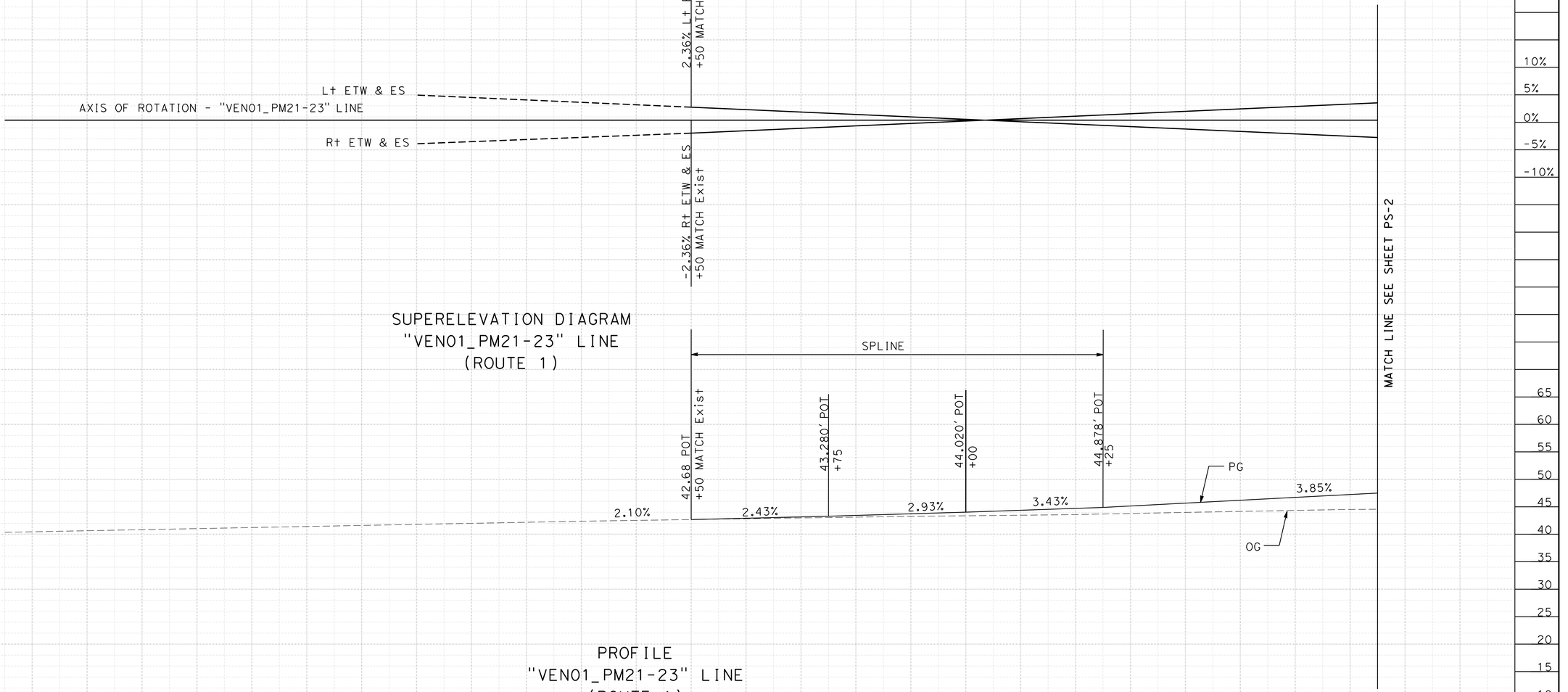


PROFILE & SUPERELEVATION DIAGRAM

SCALE: 1" = 50'

PS-1

STATION	1131+50	1132+00	1132+50	1133+00	1133+50	TOTAL
CY Exc						
CY Emb						

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY / DATE REVISED

LAST REVISION — DATE PLOTTED => 9/28/2023 TIME PLOTTED => 10:21:44 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => DGN FILE => ...\Work-Dlv\0731960fb001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

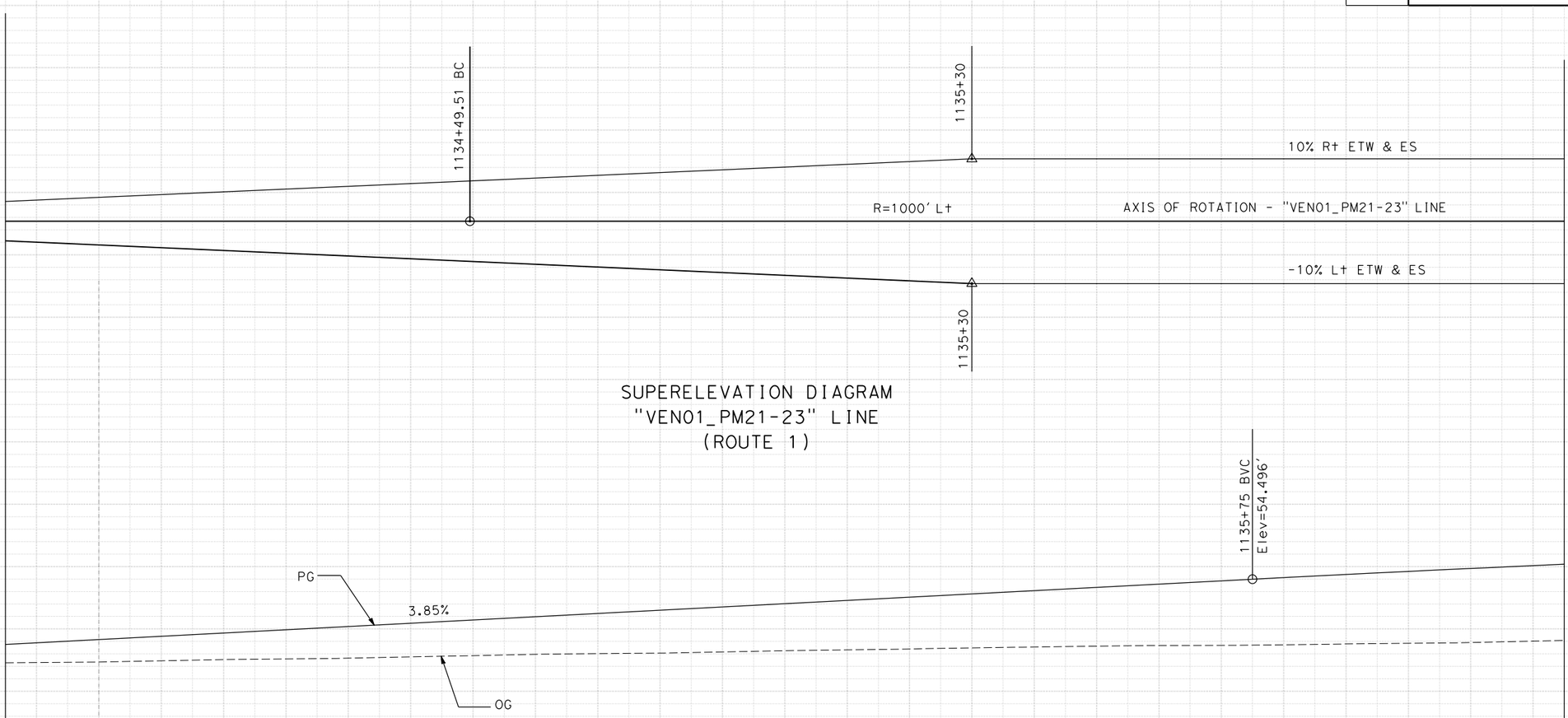
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	12	XX

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — H. A. FOONG — No. 50858 — Exp. 9-30-25 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SUPERELEVATION DIAGRAM
"VEN01_PM21-23" LINE
(ROUTE 1)

PROFILE
"VEN01_PM21-23" LINE
(ROUTE 1)

10% 5% 0% -5% -10%

65 60 55 50 45 40 35 30 25 20 15 10

STATION	1134+00	1134+50	1135+00	1135+50	1136+00	TOTAL
CY Exc						
CY Emb						

PROFILE & SUPERELEVATION DIAGRAM

SCALE: 1" = 50'

PS-2

REVISED BY | DATE REVISED
AARON FOONG | REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

LAST REVISION | DATE PLOTTED => 9/28/2023 | TIME PLOTTED => 10:05:26 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\Work-Dir\0731960fb002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

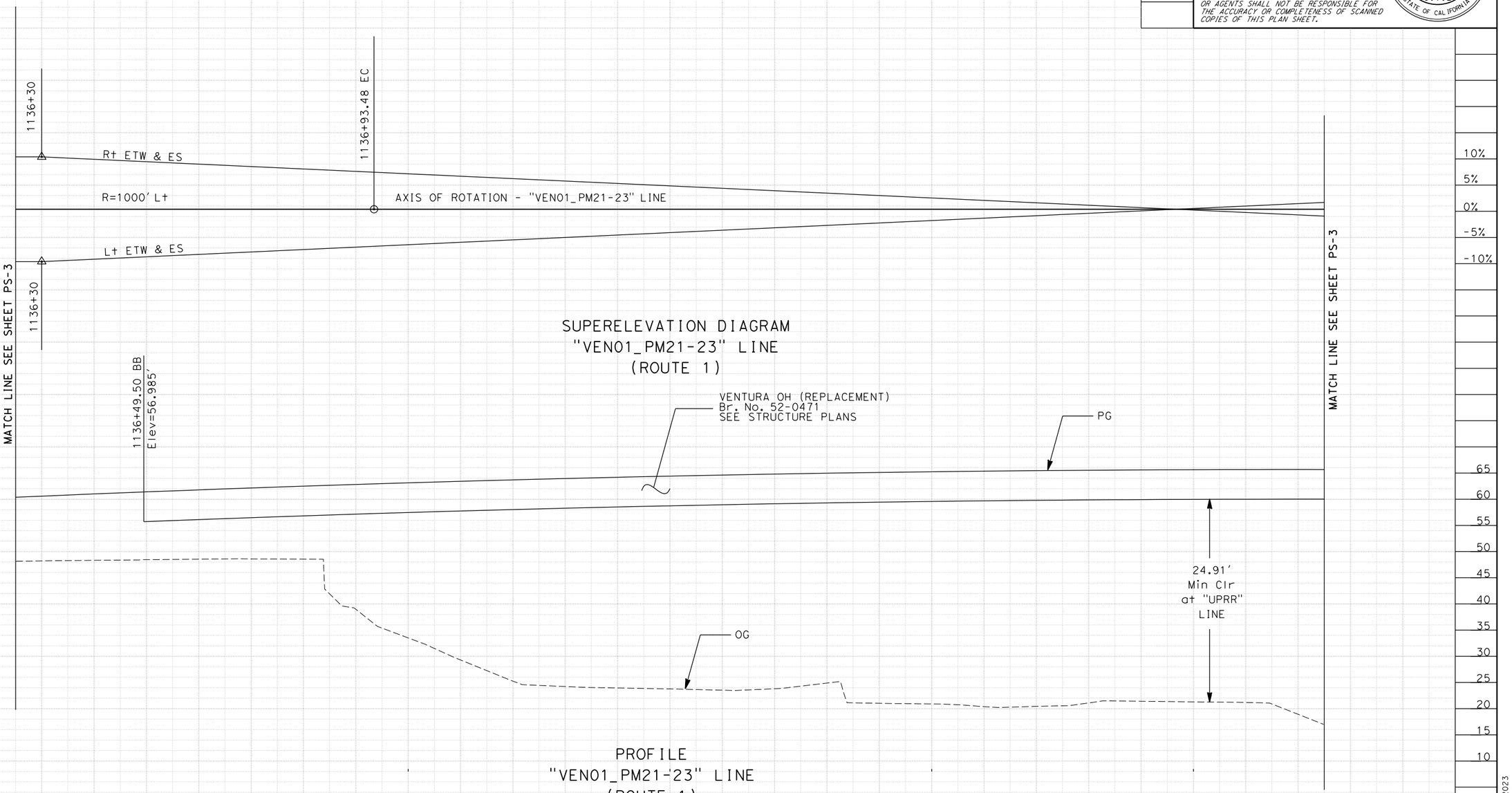
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	13	XX

H. A. Foong
REGISTERED ~~CIVIL ENGINEER~~ DATE

H. A. FOONG
No. 50858
Exp. 9-30-25
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SUPERELEVATION DIAGRAM
"VEN01_PM21-23" LINE
(ROUTE 1)

PROFILE
"VEN01_PM21-23" LINE
(ROUTE 1)

PROFILE & SUPERELEVATION DIAGRAM

SCALE: 1" = 50'

PS-3

STATION	1136+50	1137+00	1137+50	1138+00	1138+50	TOTAL
CY Exc						
CY Emb						

REVISED BY | DATE REVISED
AARON FOONG | REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

LAST REVISION | DATE PLOTTED => 9/28/2023
TIME PLOTTED => 10:07:30 AM

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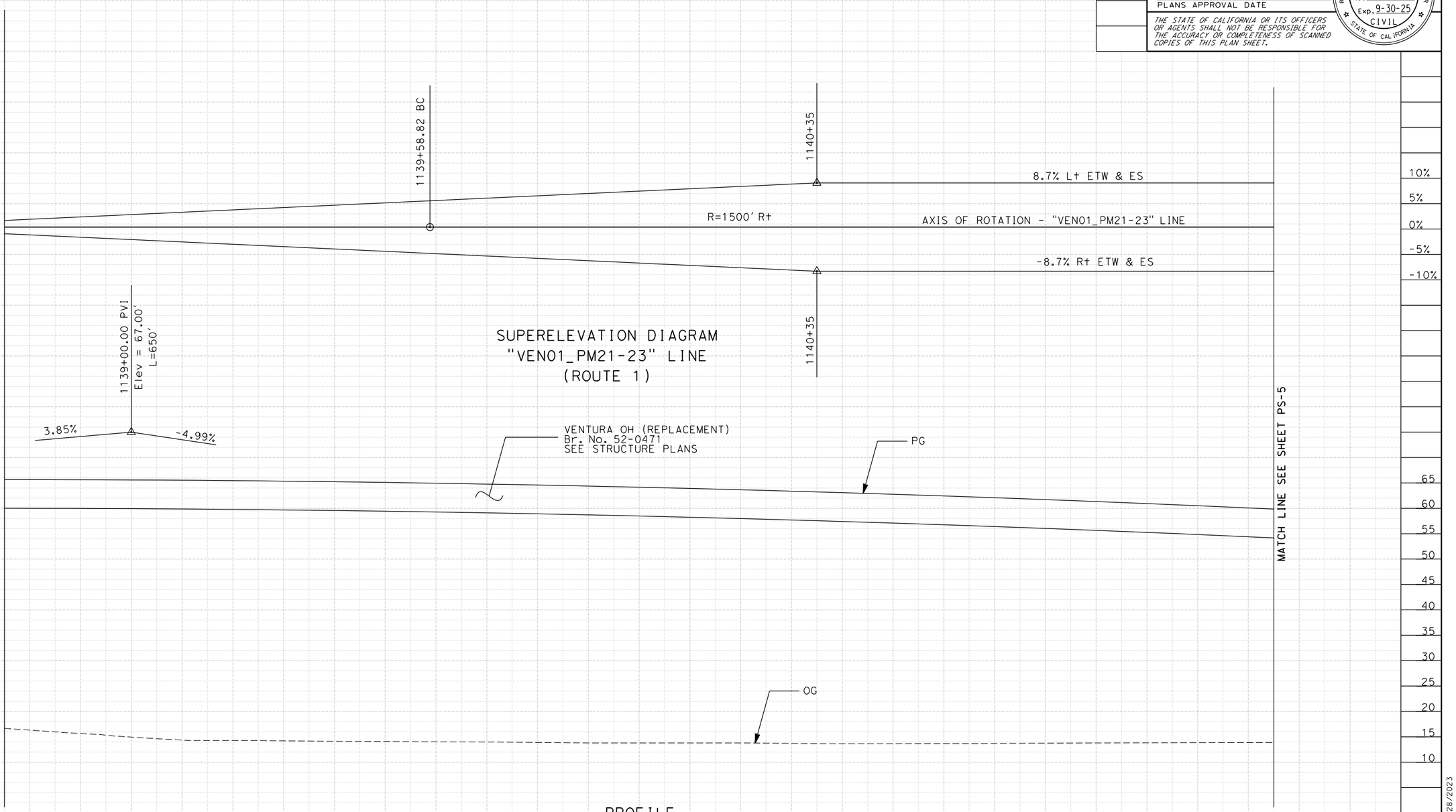
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	14	XX

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

H. A. FOONG
No. 50858
Exp. 9-30-25
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SUPERELEVATION DIAGRAM
"VEN01_PM21-23" LINE
(ROUTE 1)

PROFILE
"VEN01_PM21-23" LINE
(ROUTE 1)

PROFILE & SUPERELEVATION DIAGRAM

SCALE: 1" = 50'

PS-4

STATION	1139+00	1139+50	1140+00	1140+50	1141+00	TOTAL
CY Exc						
CY Emb						

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED

LAST REVISION | DATE PLOTTED => 9/28/2023
TIME PLOTTED => 10:09:39 AM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	15	XX

H. A. Foong
REGISTERED ~~CIVIL ENGINEER~~ DATE

H. A. FOONG
No. 50858
Exp. 9-30-25
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

8.7% L† ETW & ES

R=1500′ R† AXIS OF ROTATION - VEN01_PM21-23" LINE

-8.7% R† ETW & ES

10% 5% 0% -5% -10%

SUPERELEVATION DIAGRAM
"VEN01_PM21-23" LINE
(ROUTE 1)

MATCH LINE SEE SHEET PS-4

MATCH LINE SEE SHEET PS-6

VENTURA OH (REPLACEMENT)
Br. No. 52-0471
SEE STRUCTURE PLANS

1142+25 EVC
Elev=50.768′

1142+63.50 EB
Elev=48.845′

OG

OG

-4.99%

65 60 55 50 45 40 35 30 25 20 15 10

PROFILE
"VEN01_PM21-23" LINE
(ROUTE 1)

PROFILE & SUPERELEVATION DIAGRAM

SCALE: 1" = 50′

PS-5

STATION	1141+50	1142+00	1142+50	1143+00	1143+50	TOTAL
CY Exc						
CY Emb						

LAST REVISION
DATE PLOTTED => 9/28/2023
TIME PLOTTED => 10:15:09 AM

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	16	XX

H. A. Foong
REGISTERED ~~CIVIL~~ ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
H. A. FOONG
No. 50858
Exp. 9-30-25
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

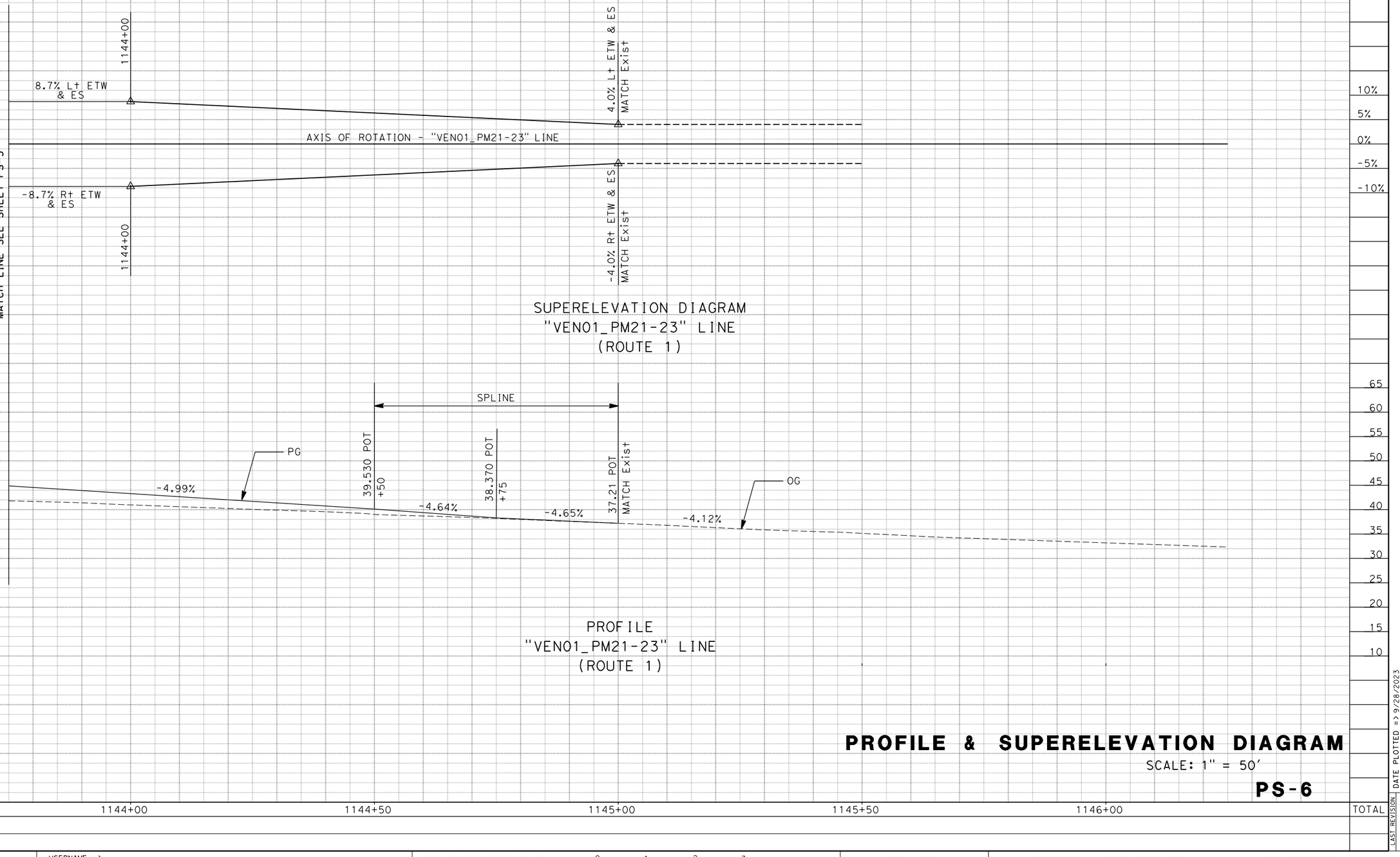
REVISED BY | DATE REVISED

AARON FOONG | REFUGIO DOMINGUEZ

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN



SUPERELEVATION DIAGRAM
"VEN01_PM21-23" LINE
(ROUTE 1)

PROFILE
"VEN01_PM21-23" LINE
(ROUTE 1)

STATION	1144+00	1144+50	1145+00	1145+50	1146+00	TOTAL
CY Exc						
CY Emb						

PROFILE & SUPERELEVATION DIAGRAM

SCALE: 1" = 50'

PS-6

LAST REVISION | DATE PLOTTED => 9/28/2023
TIME PLOTTED => 10:17:37 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\Work-Div\0731960fb006.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	18	xx

REGISTERED CIVIL ENGINEER — DATE

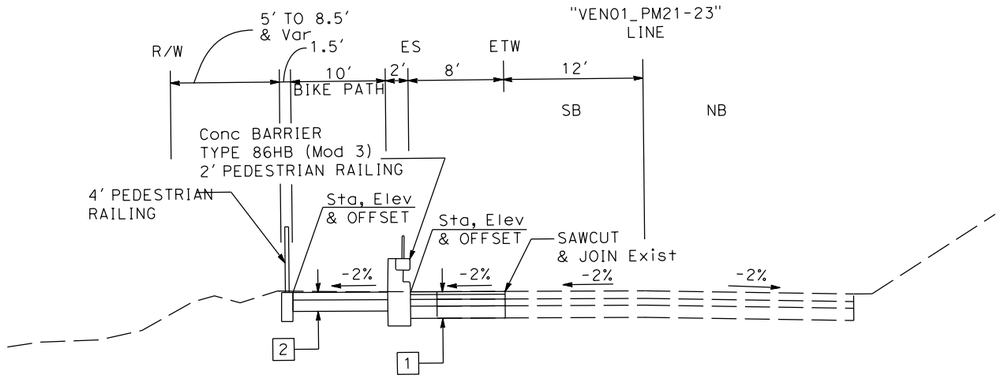
PLANS APPROVAL DATE

H.A. FOONG No. 50858 Exp. 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

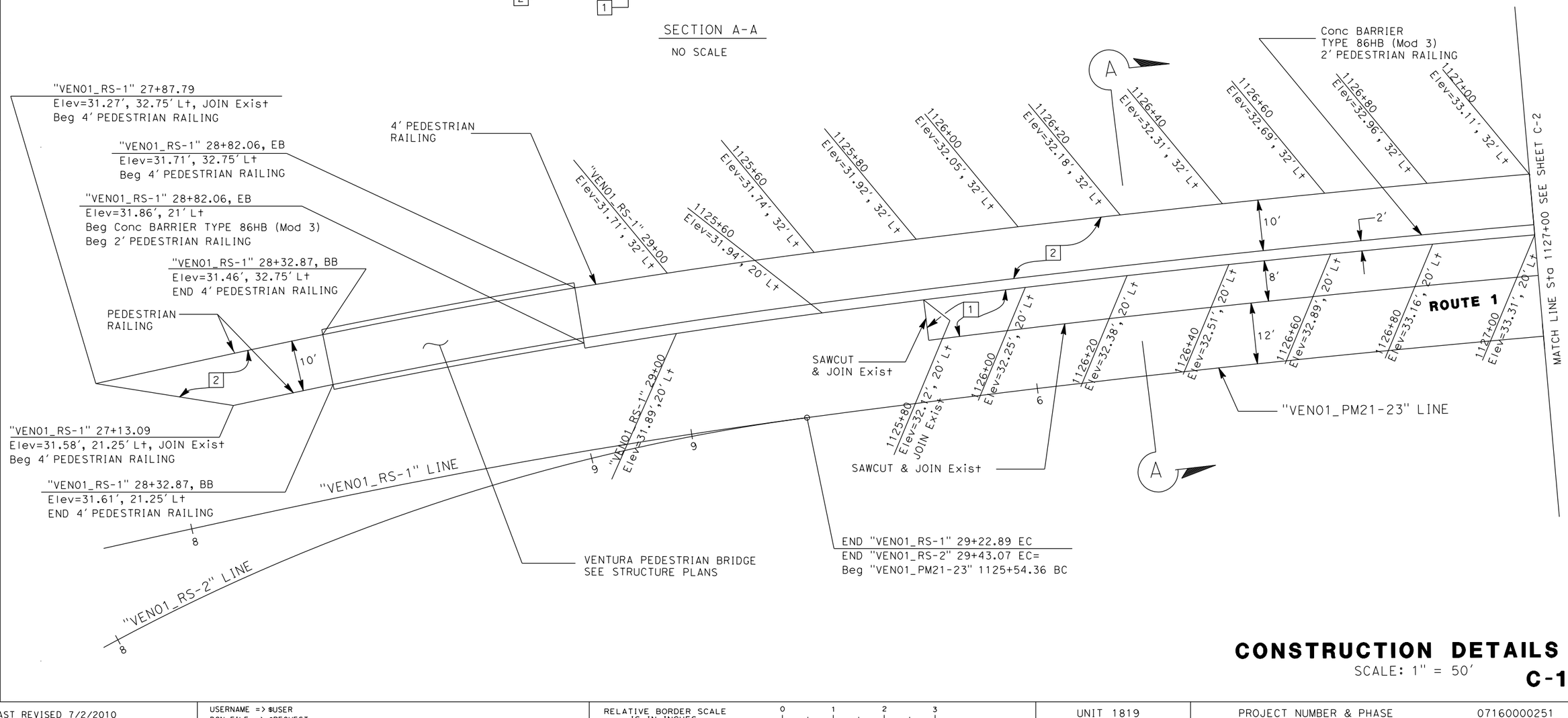
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR STRUCTURAL SECTION SEE TYPICAL SECTION SHEET.
3. FOR CONCRTE BARRIER TYPE 86HB (Mod 3) AND PEDESTRIAN RAILING DETAILS, SEE SHEET C-9 AND C-17.



SECTION A-A

NO SCALE



CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-1

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMIMGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMIMGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	19	xx

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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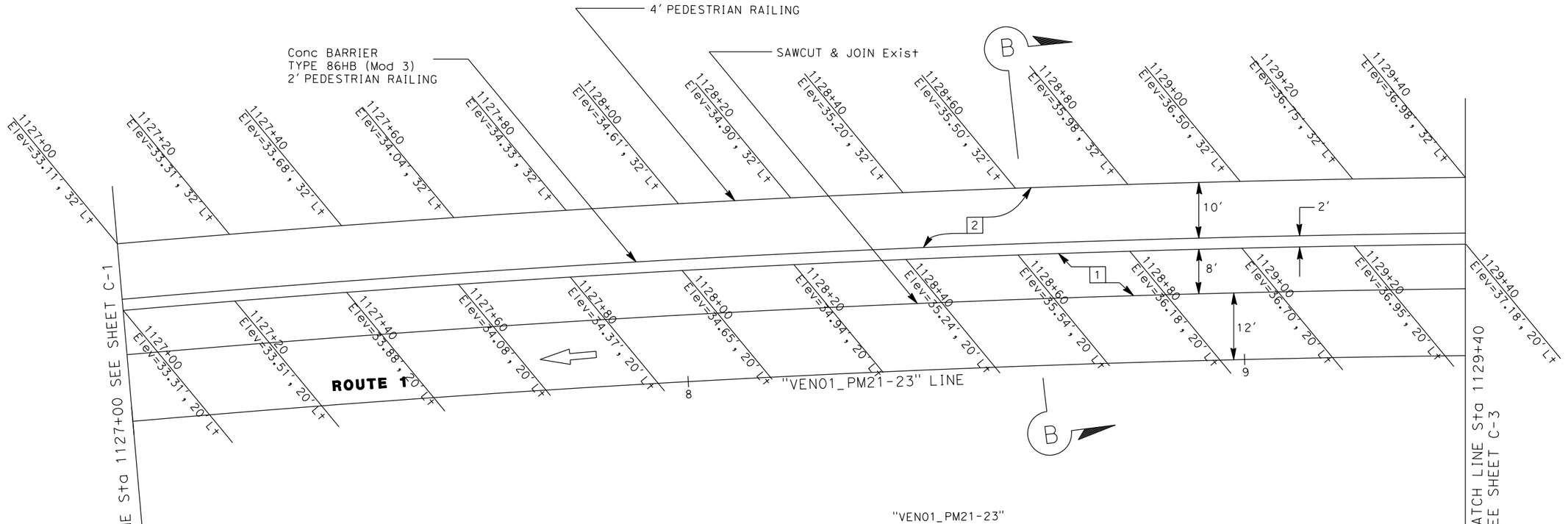
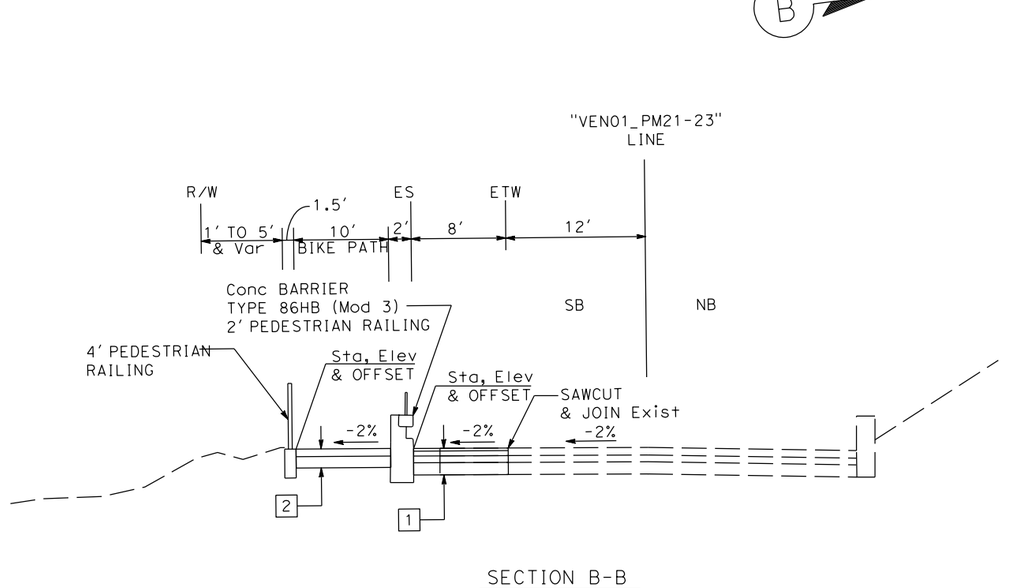
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.





SECTION B-B

NO SCALE

CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

FUNCTIONAL SUPERVISOR: REFUGIO DOMIMGUEZ

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMIMGUEZ

REVISED BY | DATE REVISED

LAST REVISION: 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010

USERNAME => $USER
DGN FILE => $REQUEST

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1819

PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	20	xx

H.A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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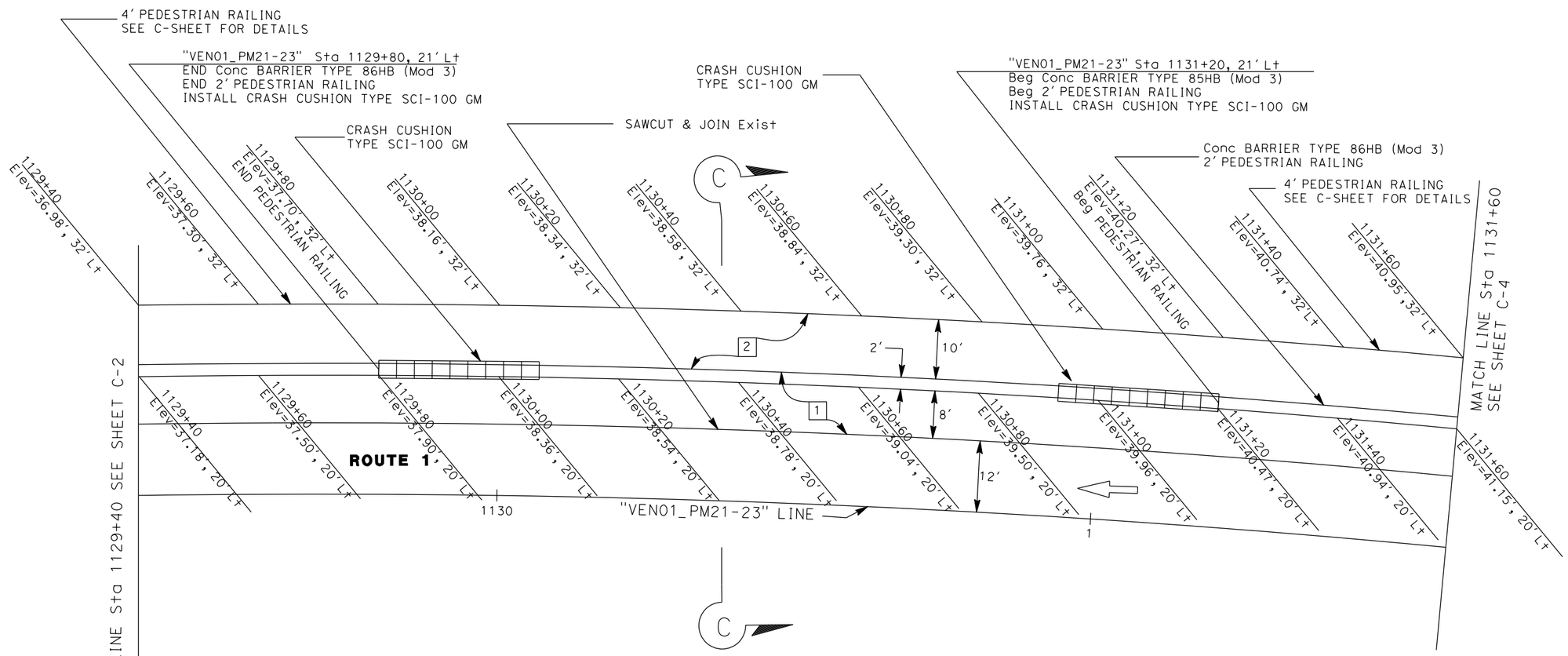
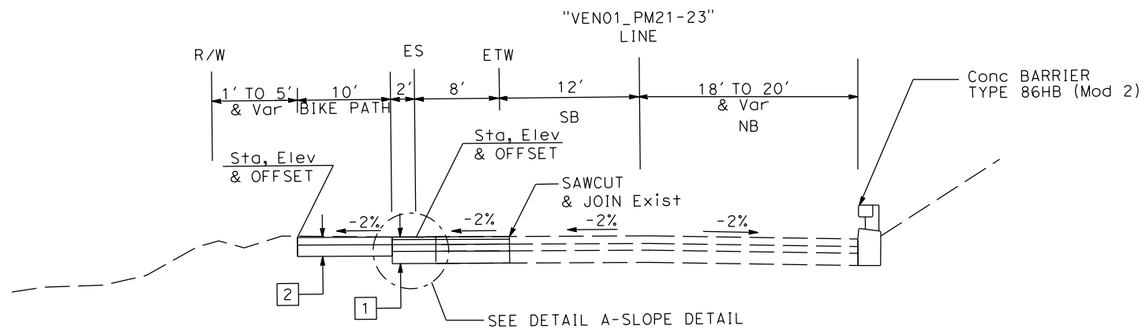
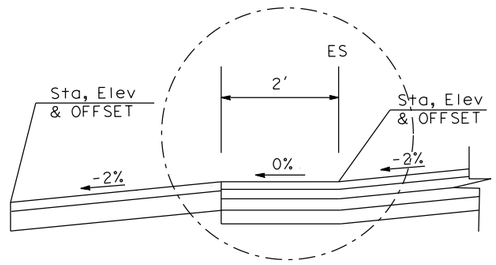
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.





SECTION C-C
NO SCALE



DETAIL A - SLOPE DETAIL
NO SCALE

CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: REFUGIO DOMIMGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMIMGUEZ
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	21	xx

H. A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9/30/23
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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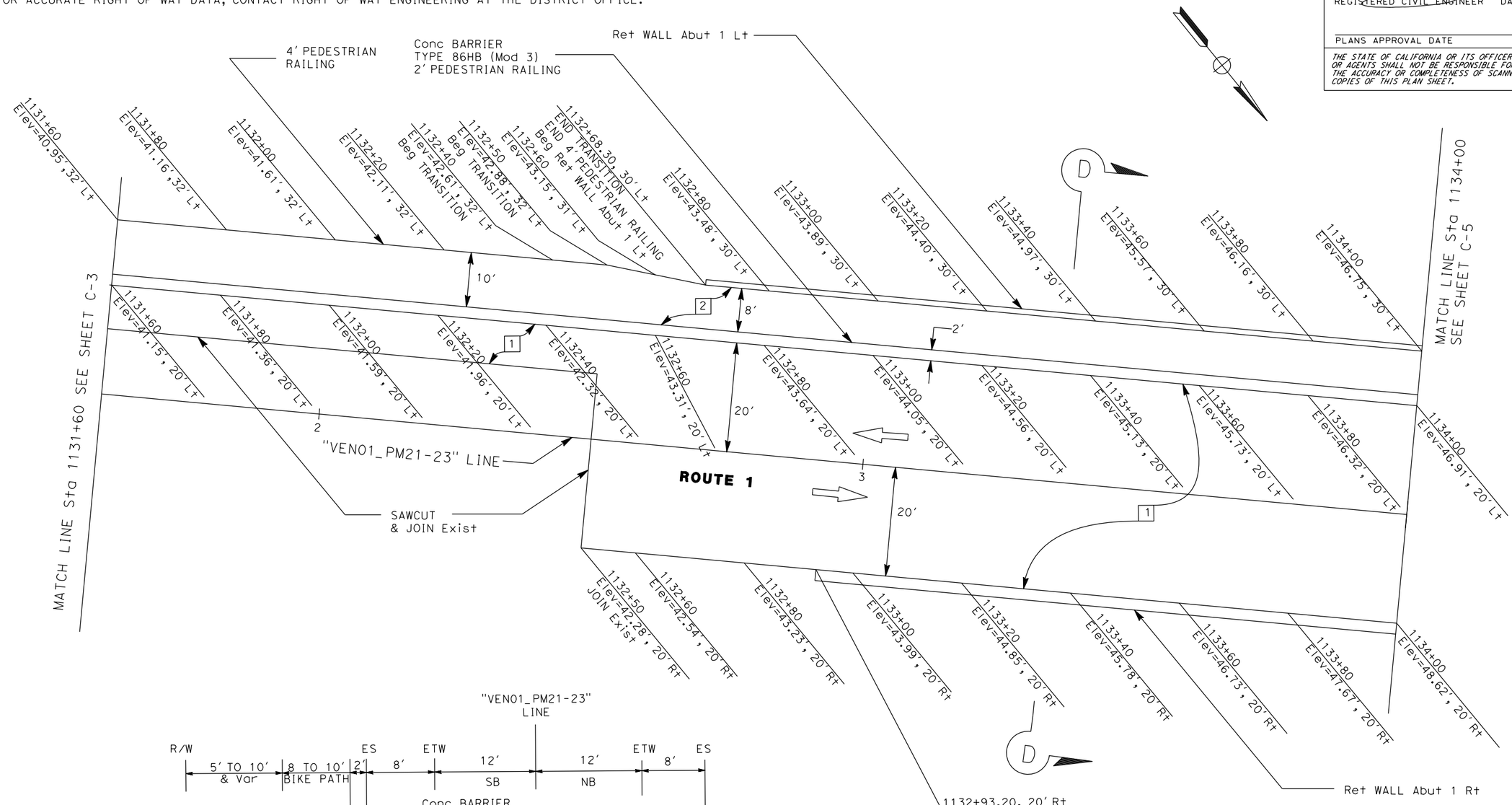
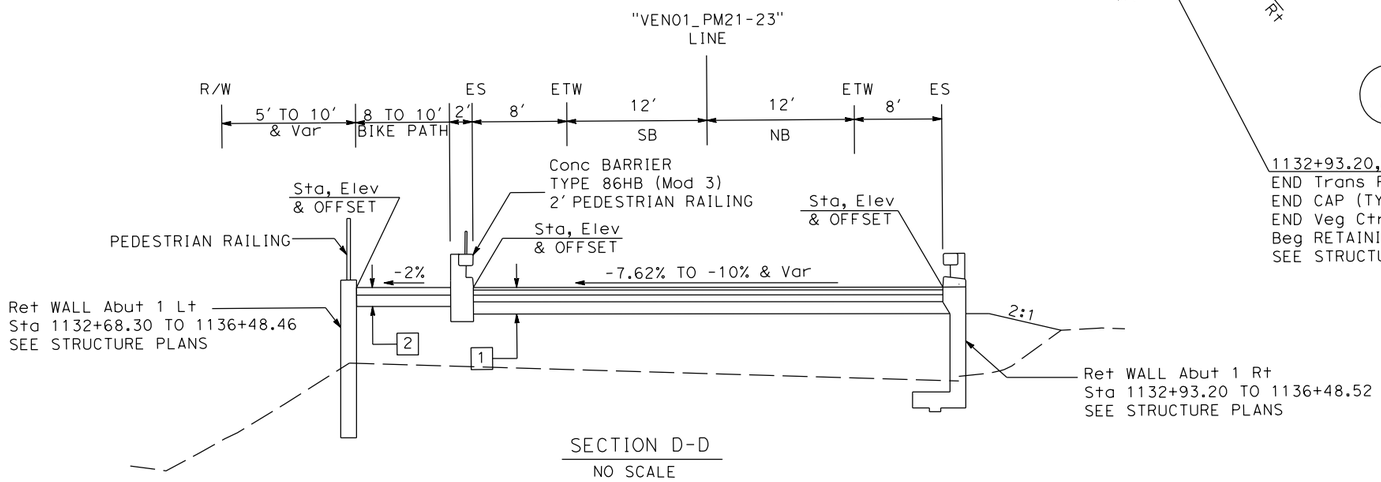
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.





SECTION D-D
NO SCALE

CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-4

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

FUNCTIONAL SUPERVISOR: REFUGIO DOMIMGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMIMGUEZ
REVISED BY
DATE REVISED

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	22	xx

H.A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9/30/25
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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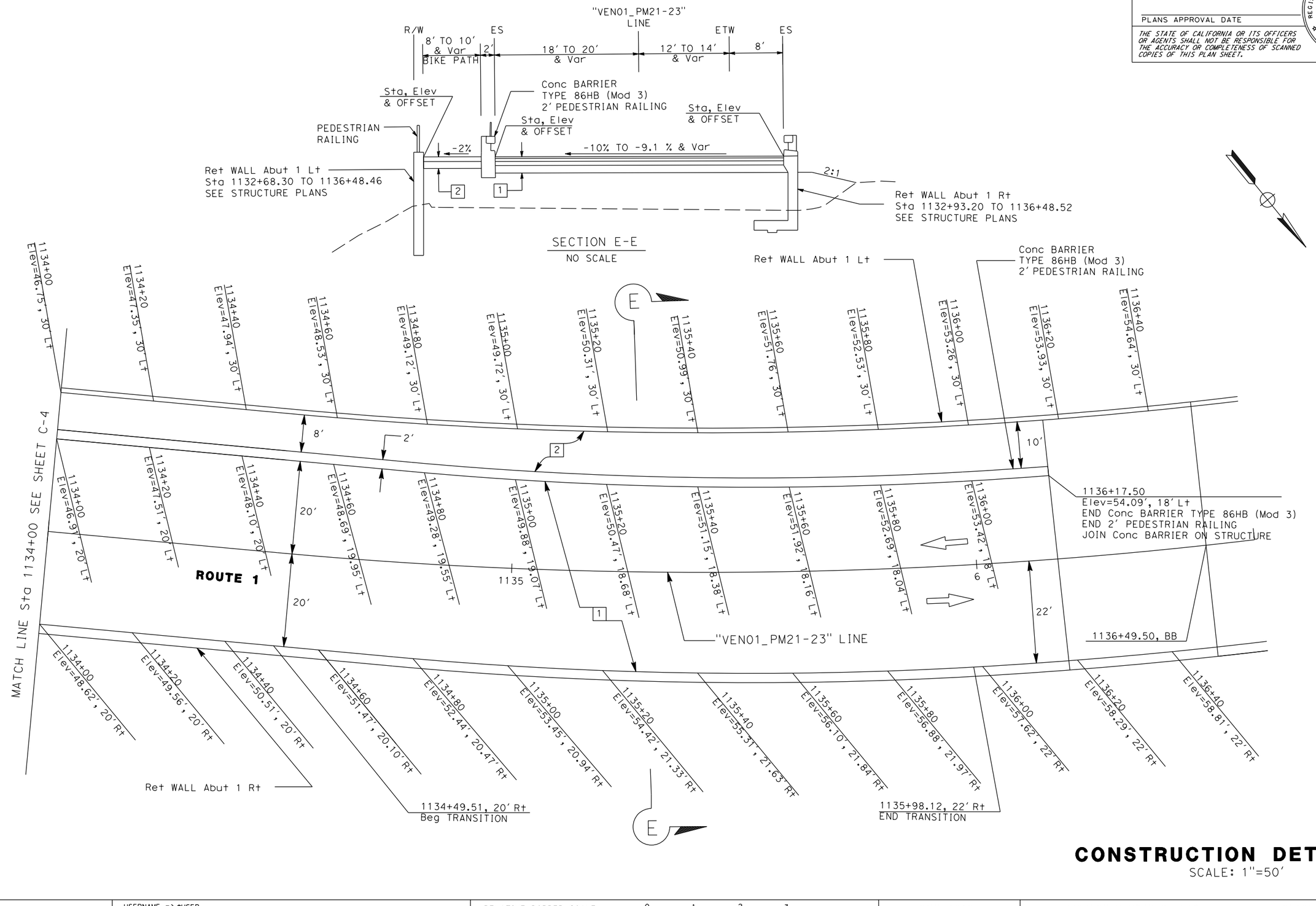
NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CONSTRUCTION DETAILS

SCALE: 1"=50'

C-5

REVISED BY	DATE REVISED
AARON FOONG	REFUGIO DOMIMGUEZ
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	REFUGIO DOMIMGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER, DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	23	xx

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

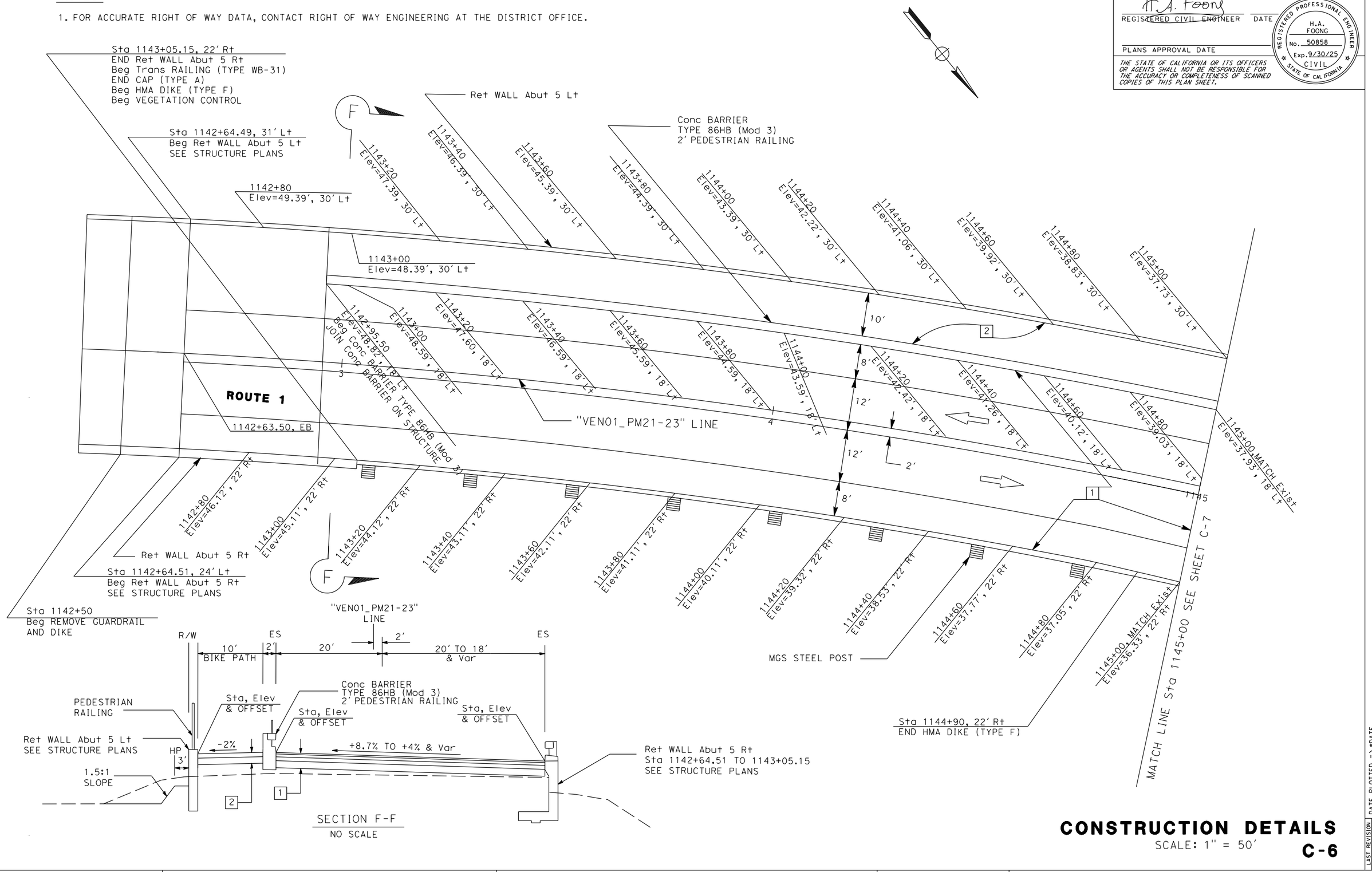
REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-6

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans

FUNCTIONAL SUPERVISOR: REFUGIO DOMIMGUEZ

CALCULATED-DESIGNED BY: AARON FOONG

CHECKED BY: REFUGIO DOMIMGUEZ

REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

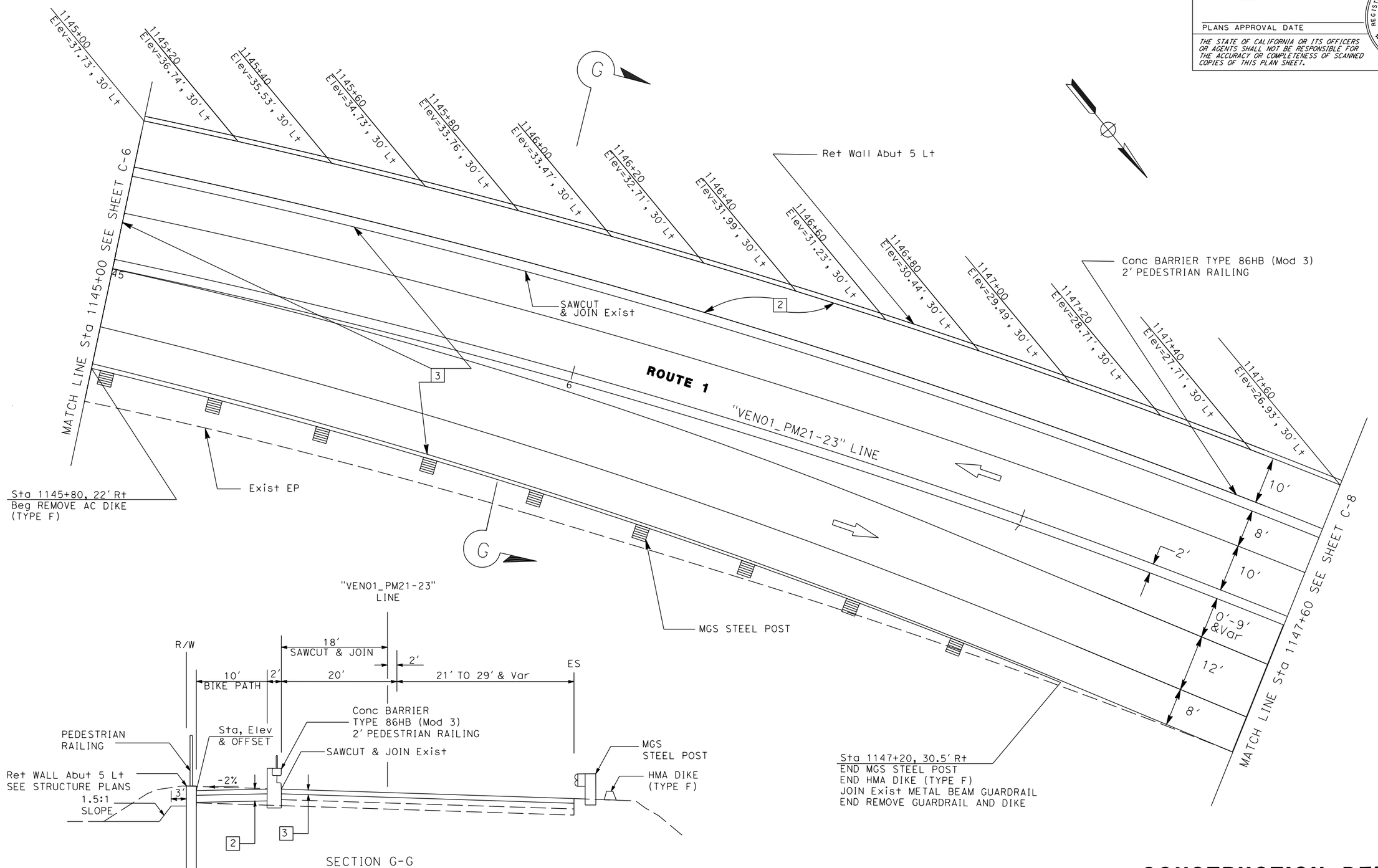
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	24	xx

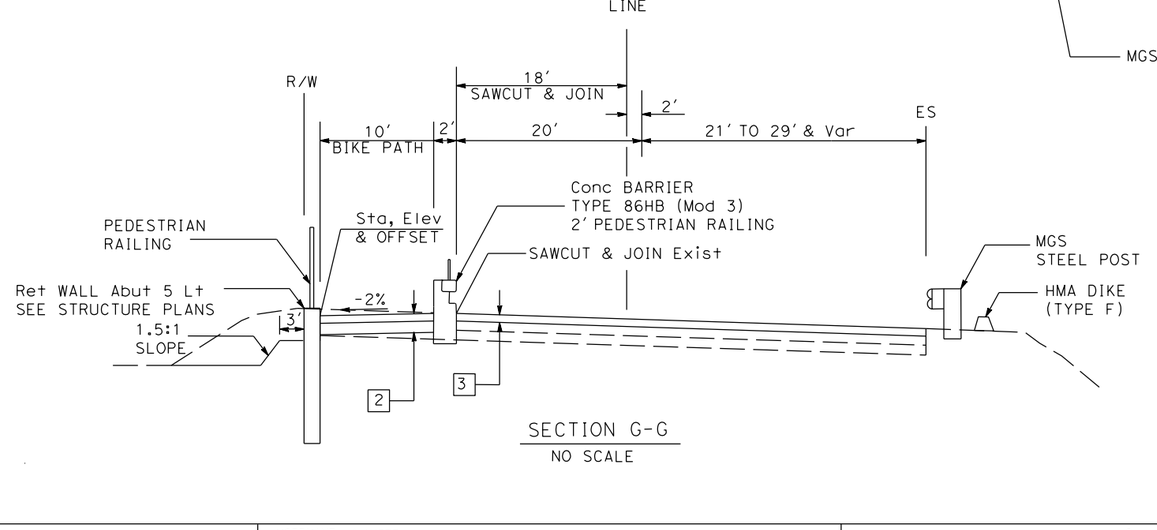
H. A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9/30/23
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.





SECTION G-G
NO SCALE

CONSTRUCTION DETAILS

SCALE: 1"=50'

C-7

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
Caltrans

CALCULATED-DESIGNED BY	AARON FOONG	REVISED BY	
CHECKED BY	REFUGIO DOMIMGUEZ	DATE REVISED	
FUNCTIONAL SUPERVISOR	REFUGIO DOMIMGUEZ		

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	25	xx

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

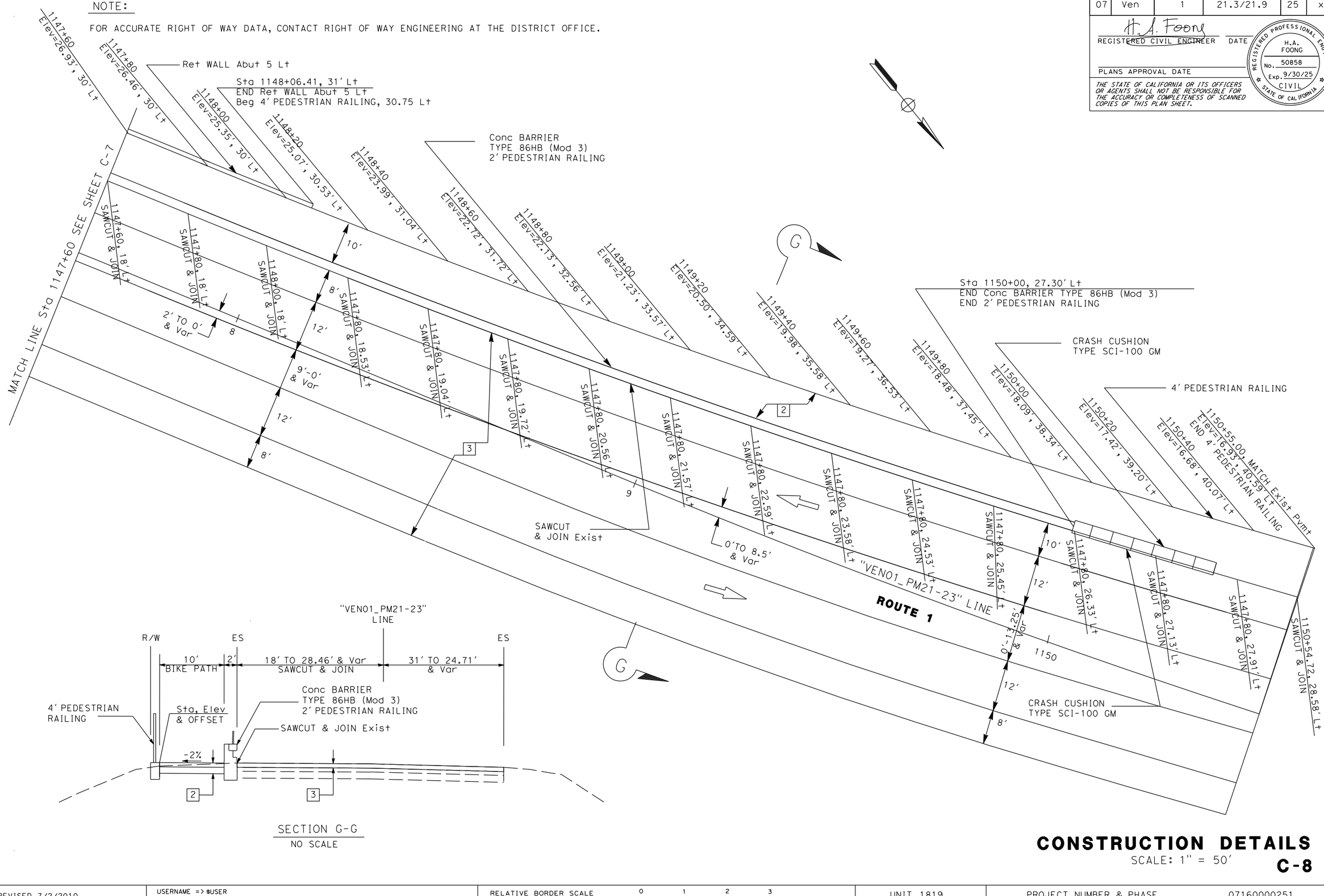
REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



SECTION G-G
NO SCALE

CONSTRUCTION DETAILS

SCALE: 1" = 50'

C-8

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — Caltrans

	REVISED BY	DATE REVISED
CALCULATED-DESIGNED BY	AARON FOONG	
CHECKED BY	REFUGIO DOMIMGUEZ	
FUNCTIONAL SUPERVISOR	REFUGIO DOMIMGUEZ	

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	26	xx

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

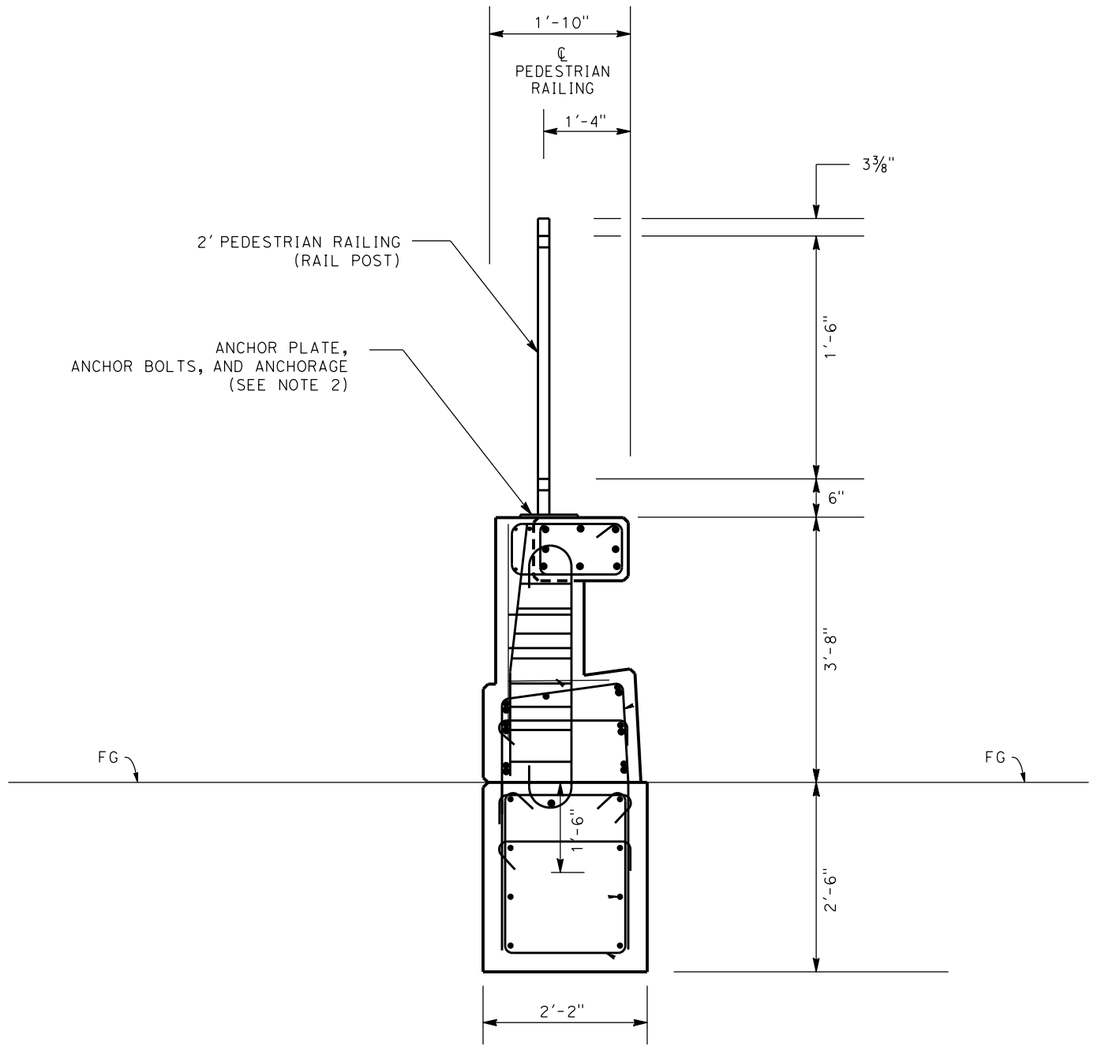
REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR CONCRETE BARRIER DIMENSION AND REBAR REINFORCEMENT DETAILS NOT SHOWN, SEE CONCRETE BARRIER TYPE 86HB (Mod 1) DETAILS IN STRUCTURE PLANS.
2. FOR ANCHOR PLATE, ANCHOR BOLT, AND ANCHORAGE DETAILS, SEE STRUCTURE PLANS.
3. FOR PEDESTRIAN RAILING DETAILS, SEE C-12 TO C-16 SHEETS.
4. ALL REBAR REINFORCEMENT SHALL BE PRE-FABRICATED EPOXY COATED REBAR.



CONCRETE BARRIER TYPE 86HB (Mod 3) WITH 2' PEDESTRIAN RAILING

NO SCALE

CONSTRUCTION DETAILS
C-9

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
OFFICE OF DESIGN C
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY / DATE REVISED

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	27	xx

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

xx
PLANS APPROVAL DATE

H.A. FOONG No. 50858 Exp. 9/30/25 — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

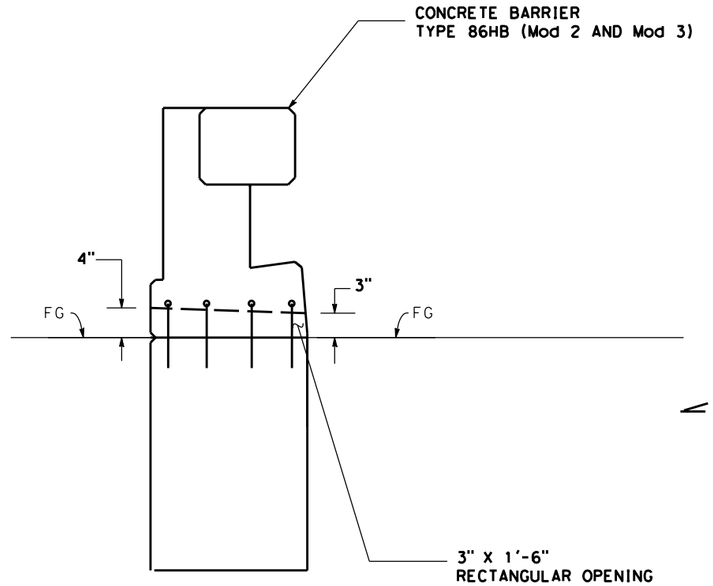
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

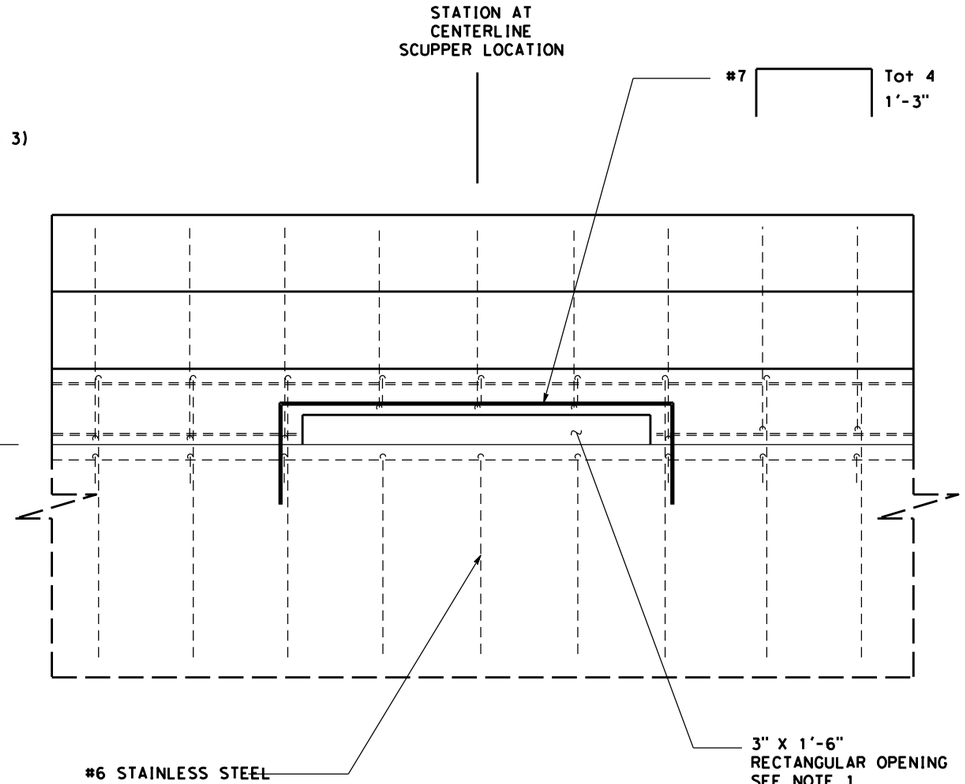
NOTES:

1. FOR DETAILS NOT SHOWN, SEE CONCRETE BARRIER TYPE 86HB (Mod 2 AND Mod 3).
2. SCUPPERS SHALL BE ADJUSTED TO FIT BETWEEN CONCRETE BARRIER TYPE 86HB LOCATION AT 10'-0" MAX CENTERS.
3. #6 STAINLESS DOWELS AS SHOWN ON CONCRETE BARRIER TYPE 86HB WHICH ARE REMOVED FROM SCUPPERS SHALL BE BUNDLED OUTSIDE OF SCUPPER OPENING.
4. THE NUMBER OF #6 STAINLESS STEEL DOWELS BETWEEN BARRIER POSTS MUCH MATCH THE DETAILS FOR CONCRETE BARRIER TYPE 86HB (Mod 1) DETAILS No. 1 AND 3 SHEETS IN STRUCTURE PLANS.
5. ALL REBAR REINFORCEMENT SHALL BE PRE-FABRICATED EPOXY COATED REBAR.
6. ONLY ONE SCUPPER OPENING IS ALLOW BETWEEN CONCRETE BARRIER TYPE 86B POSTS.

SCUPPER STATION/LOCATION AT Conc BARRIER TYPE 86HB (Mod 2 AND Mod 3)

SCUPPER NO.	LINE	DIRECTION	STATION/ LOCATION
1	VEN01_RS-1	SB	28+89.37
2	VEN01_RS-1	SB	28+95.87
3	VEN01_PM21-23	SB	1133+76.30
4	VEN01_PM21-23	SB	1133+82.80
5	VEN01_PM21-23	NB	1130+00
6	VEN01_PM21-23	NB	1130+20
7	VEN01_PM21-23	NB	1130+40
8	VEN01_PM21-23	NB	1130+60
9	VEN01_PM21-23	NB	1130+80
10	VEN01_PM21-23	NB	1131+00
11	VEN01_PM21-23	NB	1131+20
12	VEN01_PM21-23	NB	1131+40
13	VEN01_PM21-23	NB	1131+60
14	VEN01_PM21-23	NB	1131+80
15	VEN01_PM21-23	NB	1132+00
16	VEN01_PM21-23	NB	1132+20
17	VEN01_PM21-23	NB	1132+40
18	VEN01_PM21-23	NB	1132+60
19	VEN01_PM21-23	NB	1132+80





SCUPPER DETAILS

NO SCALE

CONSTRUCTION DETAILS
C-10

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
OFFICE OF DESIGN C
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED

LAST REVISION 10-09-12 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	28	xx

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

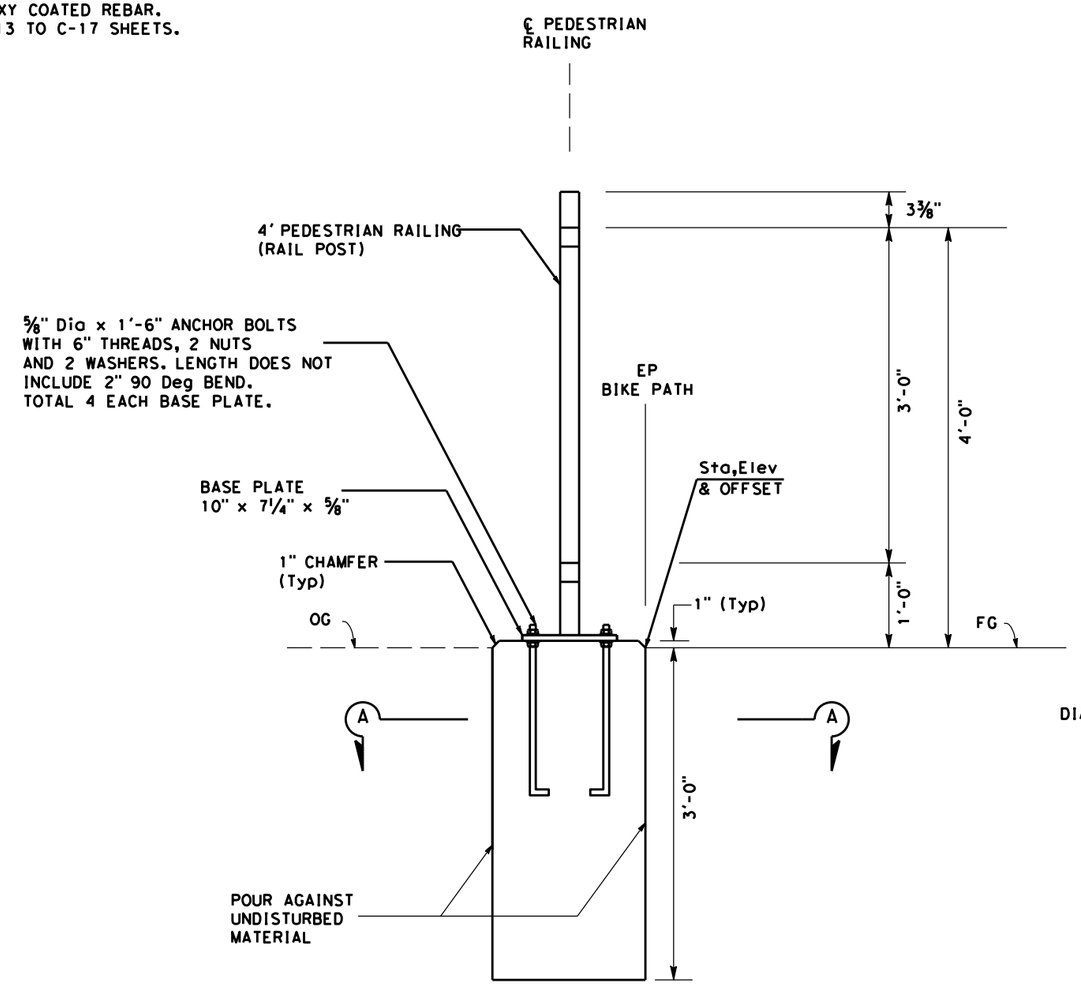
H.A. FOONG No. 50858 Exp 9/30/25 — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

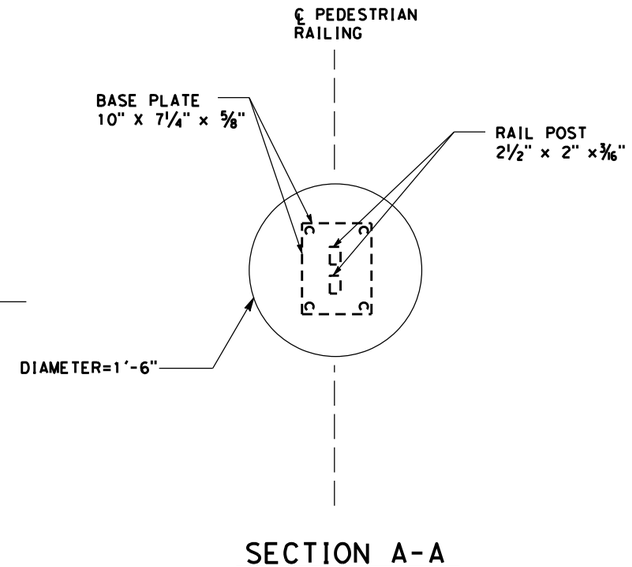
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

1. ALL REBAR SHALL BE PRE-FABRICATED EPOXY COATED REBAR.
2. FOR PEDESTRIAN RAILING DETAILS, SEE C-13 TO C-17 SHEETS.





SECTION A-A

4' PEDESTRIAN RAILING CONCRETE CIDH FOOTING, BASE PLATE, AND RAIL POST ANCHORAGE

CONSTRUCTION DETAILS

NO SCALE **C-11**

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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LAST REVISION: DATE PLOTTED => $DATE; TIME PLOTTED => $TIME
10-09-12

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER; DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	xx	xx

H.A. Foong — 3/31/23
REGISTERED Civil ENGINEER — DATE

6/30/21
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp 9/30/23 — STATE OF CALIFORNIA

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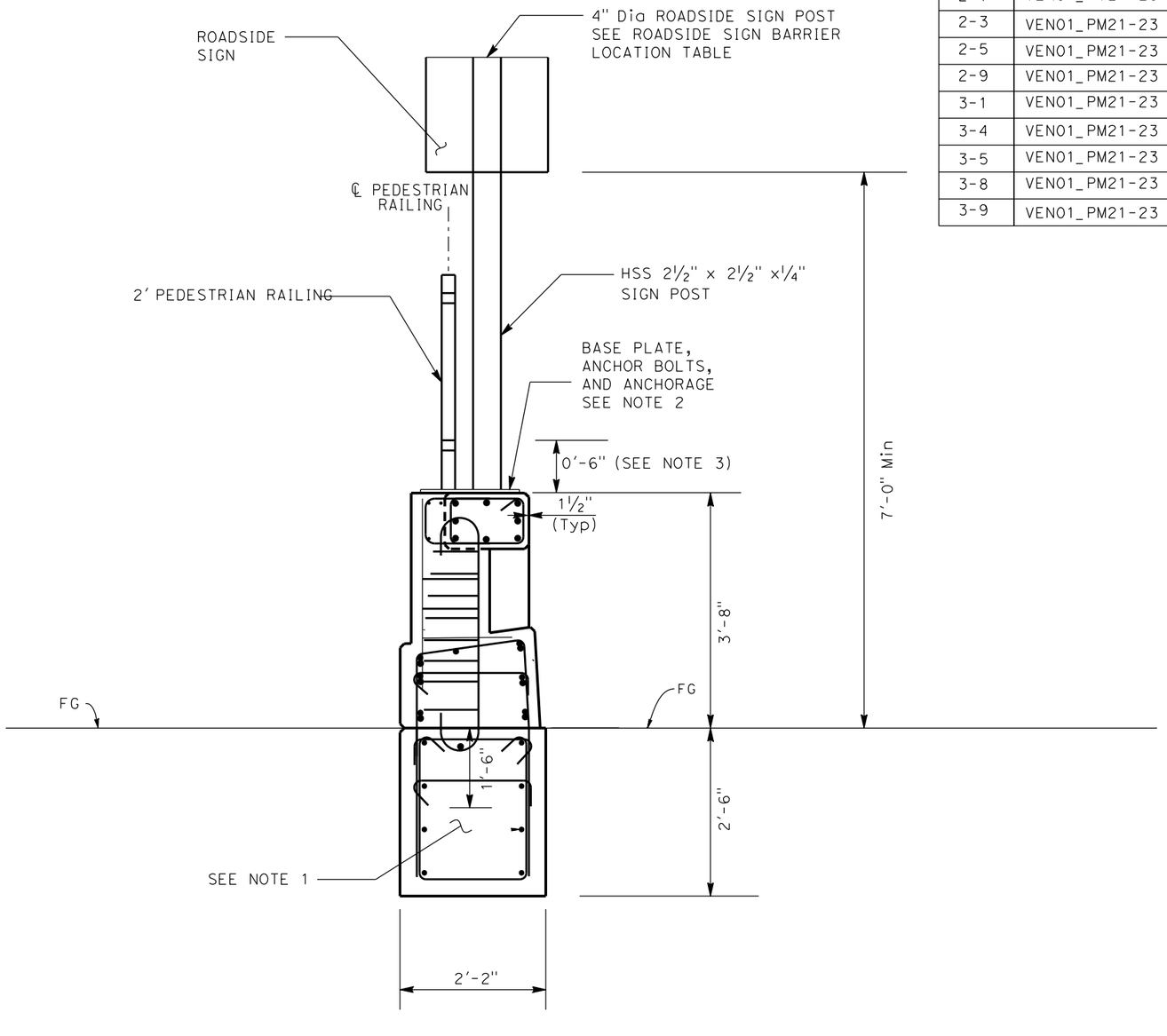
NOTES:

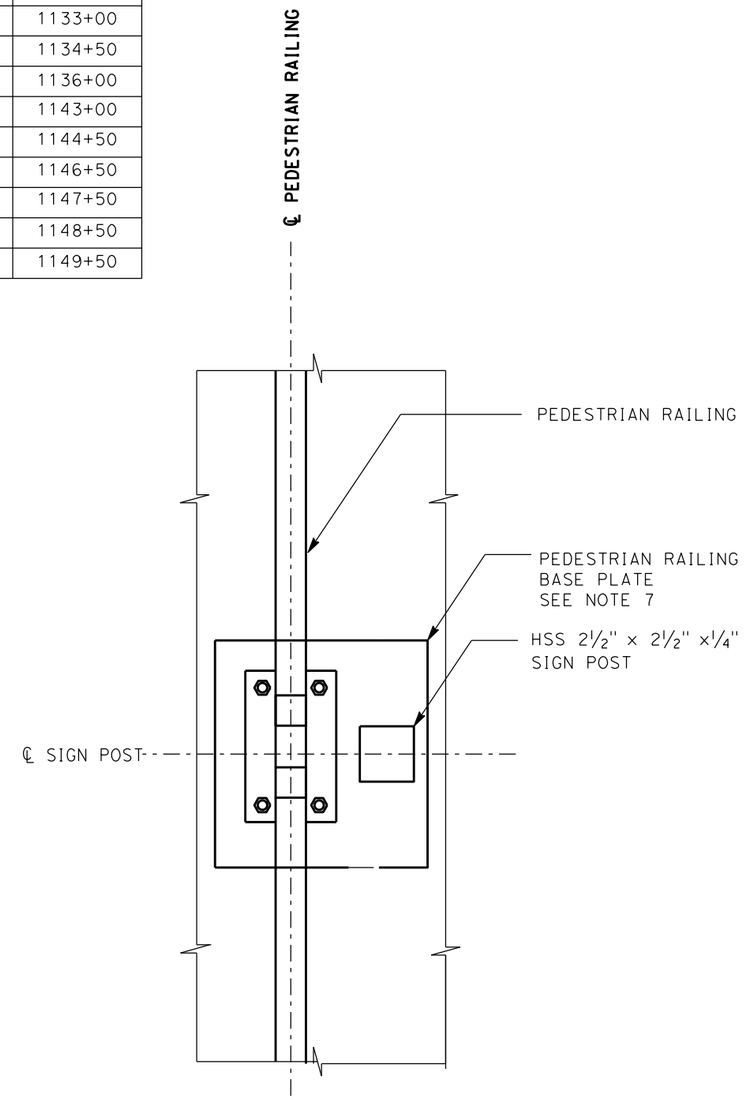
1. FOR DETAILS NOT SHWON, SEE CONCRETE BARRIER TYPE 86HB (Mod 3 AND Mod 4) ON SHEET C-9.
2. FOR CONNECTION DETAILS OF SIGN POSTS, SEE "SECTION W-W" ON "BRIDGE RAILING DETAILS No. 9" SHEET IN STRUCTURE PLANS.
3. FOR PEDESTRIAN RAILING DETAILS, SEE C-13 TO C-17 SHEETS.
4. ALL REBAR SHALL BE PRE-FABRICATED EPOXY COATED REBAR.
5. LOCATION OF ROADSIDE SIGN POST BASE PLATE IS CENTERED ON CONCRETE BARRIER TYPE 86HB (Mod) POSTS. SEE ROADSIDE SIGN BARRIER LOCATION TABLE.
6. FOR SIGN DETAILS SEE PAVEMENT DELIENATION AND SIGN PLANS.
7. FOR BASE PLATE, ANCHOR BOLTS, LEVELING NUTS, AND MORTAR PAD DETAILS, SEE STRUCTURE PLANS.

ROADSIDE SIGN BARRIER LOCATION TABLE

SIGN No.	LINE	STATION
1-5	VEN01_RS-1	29+00
1-7	VEN01_PM21-23	1127+00
1-10	VEN01_PM21-23	1129+00
1-16	VEN01_PM21-23	1131+50
2-1	VEN01_PM21-23	1133+00
2-3	VEN01_PM21-23	1134+50
2-5	VEN01_PM21-23	1136+00
2-9	VEN01_PM21-23	1143+00
3-1	VEN01_PM21-23	1144+50
3-4	VEN01_PM21-23	1146+50
3-5	VEN01_PM21-23	1147+50
3-8	VEN01_PM21-23	1148+50
3-9	VEN01_PM21-23	1149+50



ROADSIDE SIGN POST ON CONCRETE BARRIER TYPE 86HB (Mod 3) AT ROADSIDE SIGN



BASE PLATE DETAIL

CONSTRUCTION DETAILS

NO SCALE

C-12

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — OFFICE OF DESIGN C

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
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DATE REVISED

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	30	xx

H.A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG No. 50858 Exp. 9/30/25 — STATE OF CALIFORNIA

PLANS APPROVAL DATE

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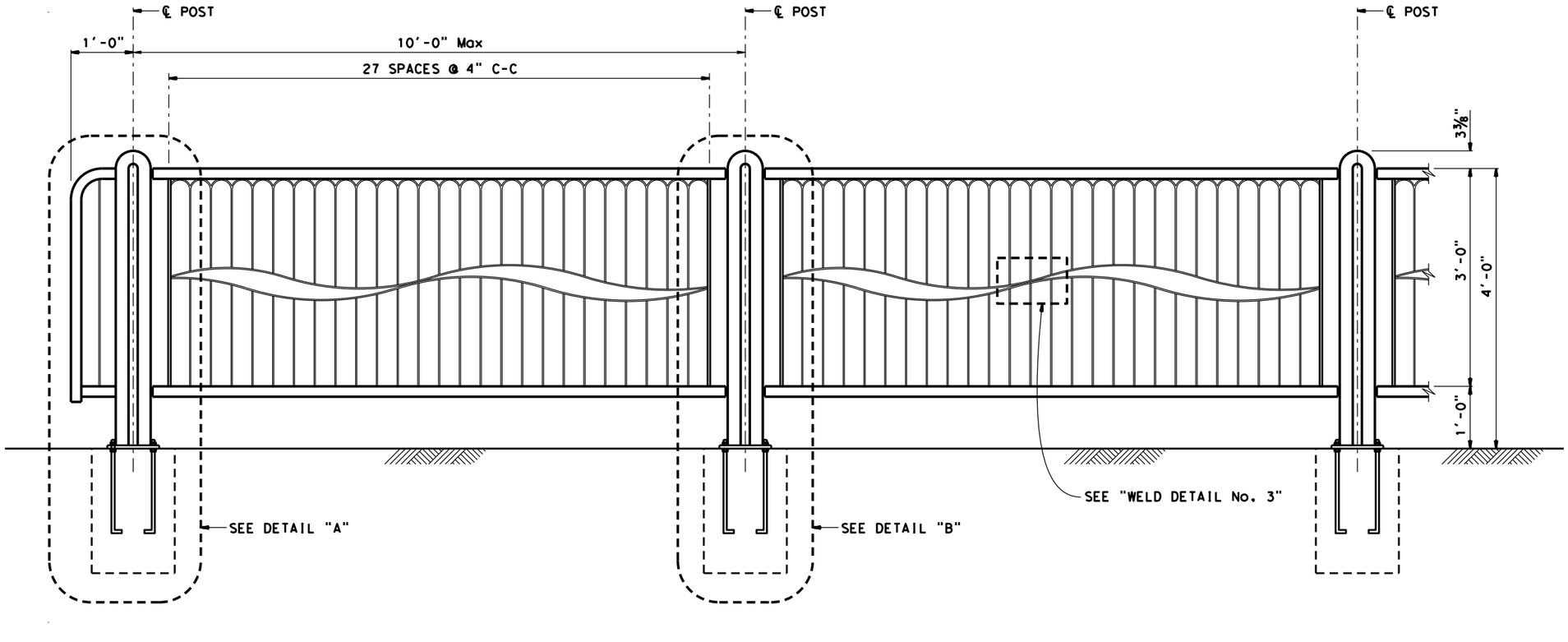
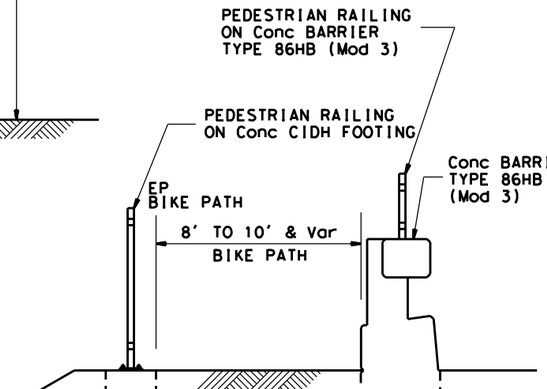
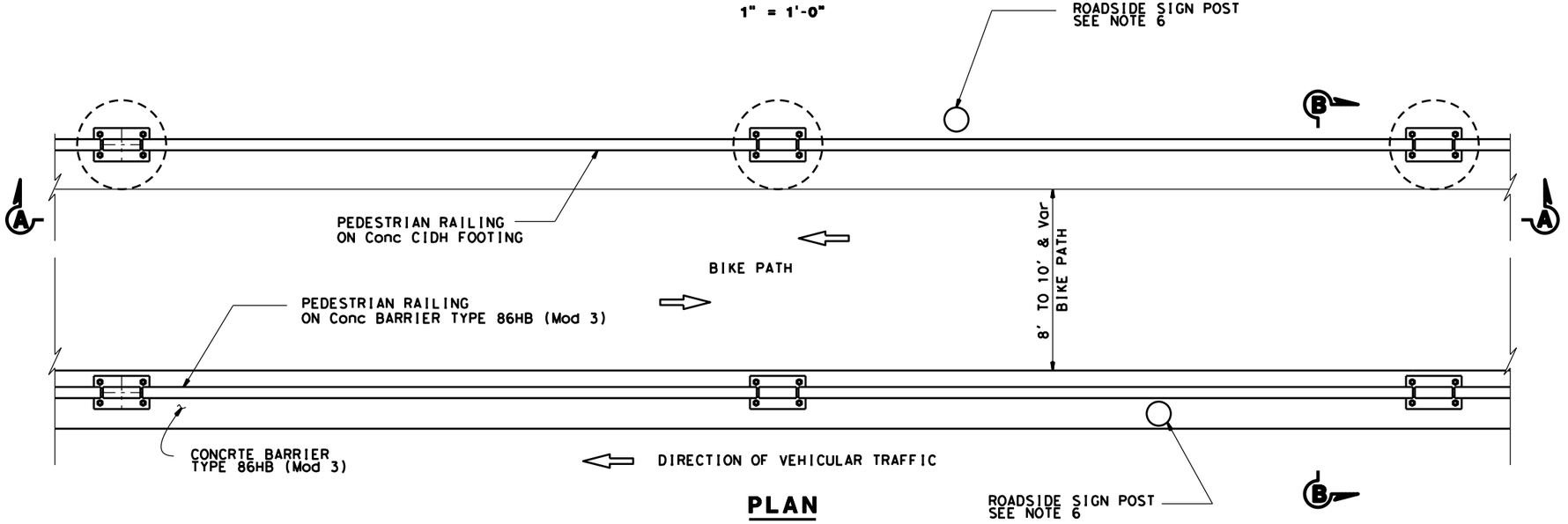


ELEVATION A-A
1" = 1'-0"



SECTION B-B
NO SCALE



PLAN
1" = 1'-0"

NOTES:

1. GALVANIZE RAIL ASSEMBLY AND ALL COMPONENTS AFTER FABRICATION.
2. POSTS SHALL BE NORMAL TO RAILING.
3. ALL BOLTS SHALL BE A307 WITH THREAD LOCKING SYSTEM.
4. SEE "LAYOUT" FOR LAYOUT AND LIMITS OF PEDESTRIAN RAILING.
5. FOR "DETAIL A", "DETAIL B", AND "WELD DETAIL No. 3" SEE SHEET C-14.
6. SEE "PD" SHEETS FOR ROADSIDE SIGN POST LOCATION.

PEDESTRIAN RAILING ON CONCRETE FOOTING

CONSTRUCTION DETAILS
C-13

REVISED BY	DATE REVISED
AARON FOONG	REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY	CHECKED BY
FUNCTIONAL SUPERVISOR	REFUGIO DOMINGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN C

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
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RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	31	xx

H.A. Foong 3/31/23
REGISTERED CIVIL ENGINEER DATE

6/30/21
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — STATE OF CALIFORNIA

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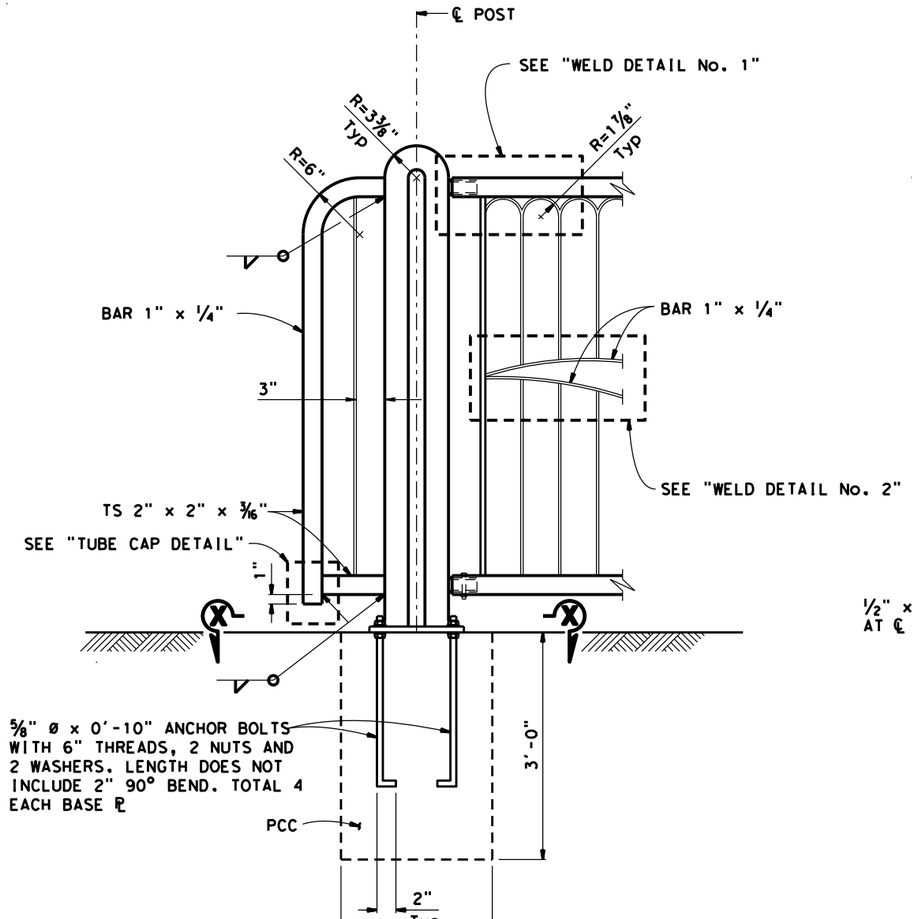
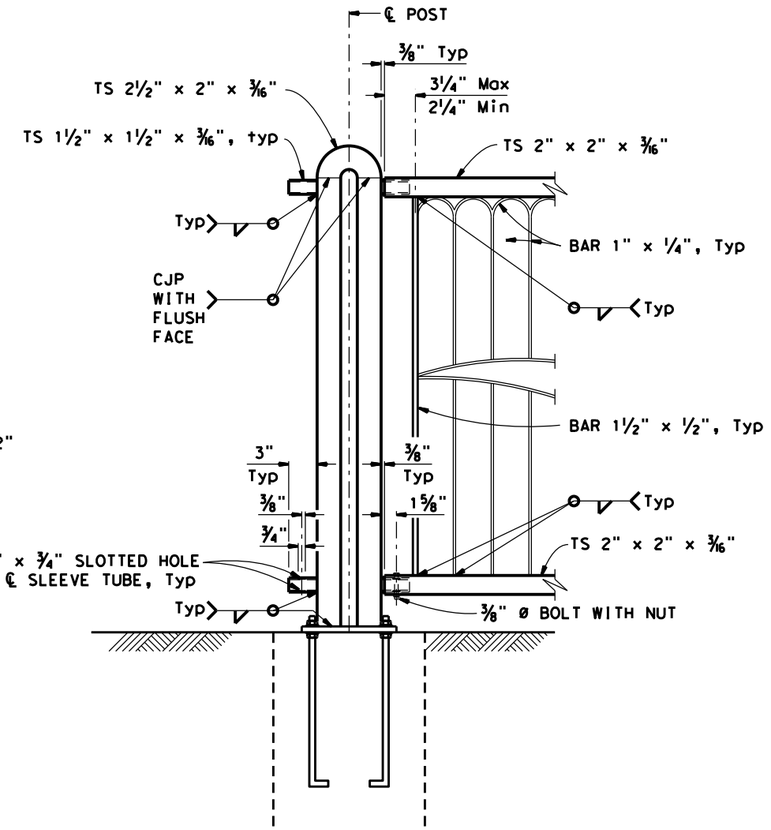
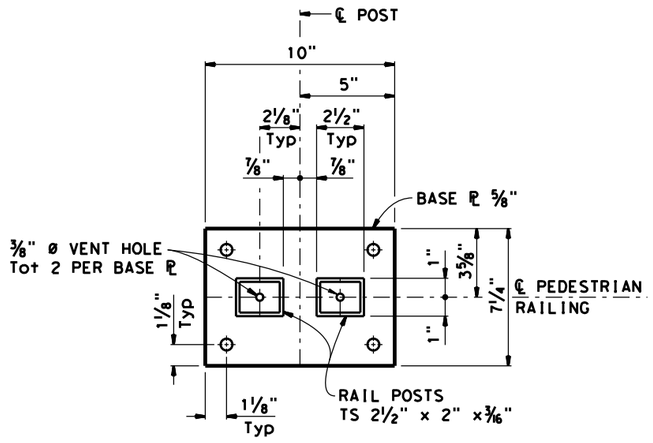


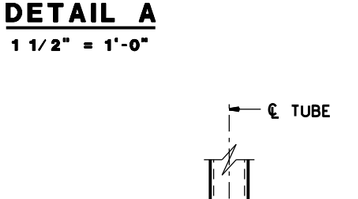
DETAIL A
1 1/2" = 1'-0"



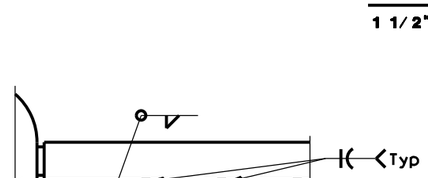
DETAIL B
1 1/2" = 1'-0"



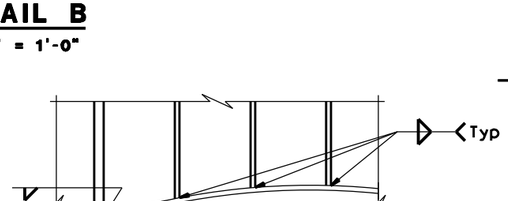
SECTION X-X
3" = 1'-0"



TUBE CAP DETAIL
3" = 1'-0"



WELD DETAILS NO. 1
3" = 1'-0"



WELD DETAILS NO. 2
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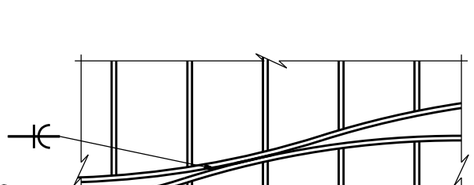


WELD DETAILS NO. 3
3" = 1'-0"

CONSTRUCTION DETAILS
C-14

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans OFFICE OF DESIGN C

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
AARON FOONG	REFUGIO DOMINGUEZ	REFUGIO DOMINGUEZ		

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

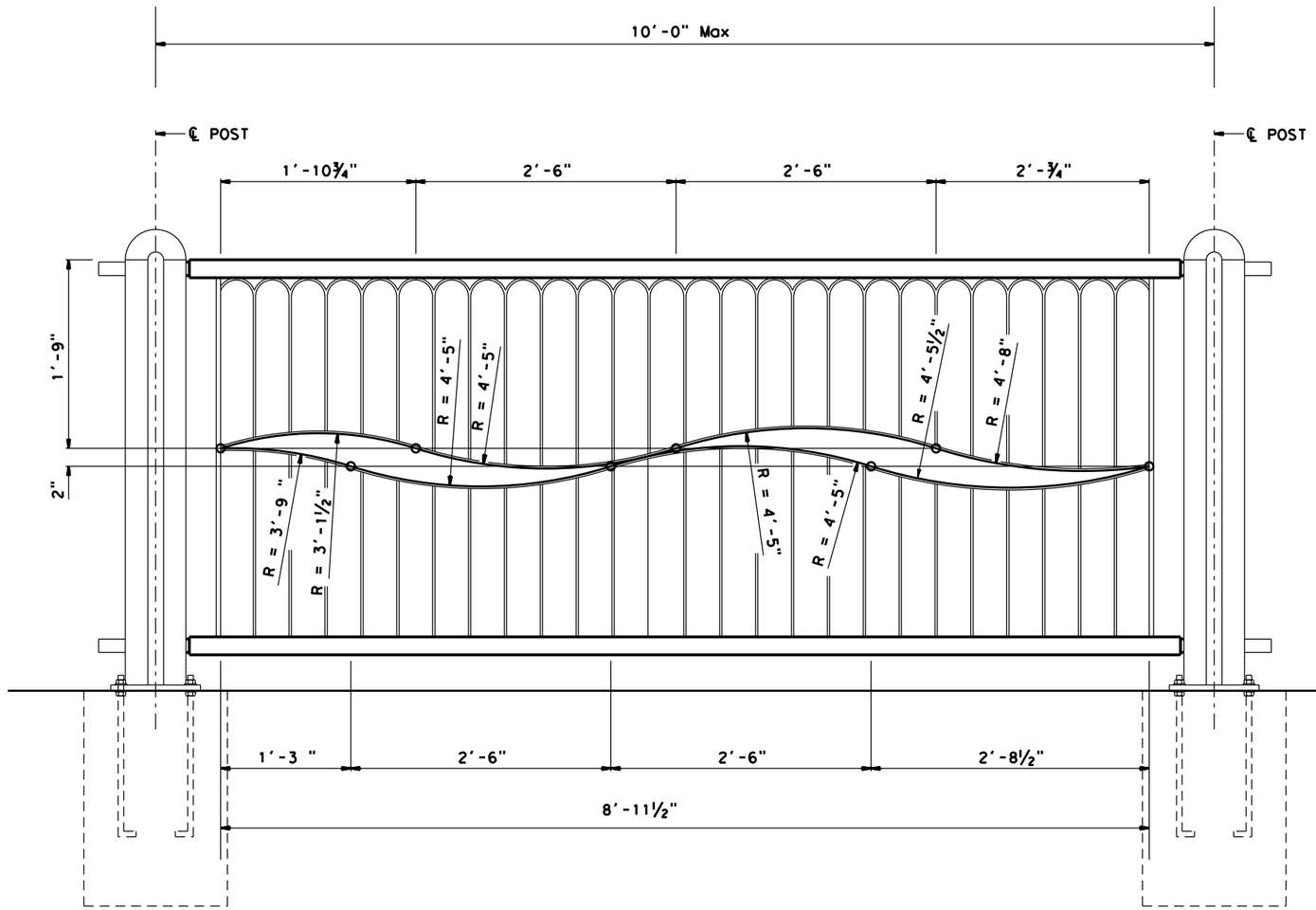
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	32	xx

H.A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9/30/25
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



ELEVATION
1 1/2" = 1'-0"

CONSTRUCTION DETAILS
C-15

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN C
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

NOTES

1. SEE DRAINAGE PLANS FOR SCUPPER LOCATION.
2. SEE SHEET C-11 FOR PEDESTRIAN RAILING CONCRETE CIDH FOOTING DETAILS.
3. SEE STRUTURE PLANS FOR PEDESTRIAN RAILING BASE PLATE WITH SIGN POST DETAILS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	33	xx

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

H.A. FOONG No. 50858 Exp 9/30/25 REGISTERED PROFESSIONAL ENGINEER STATE OF CALIFORNIA

PLANS APPROVAL DATE

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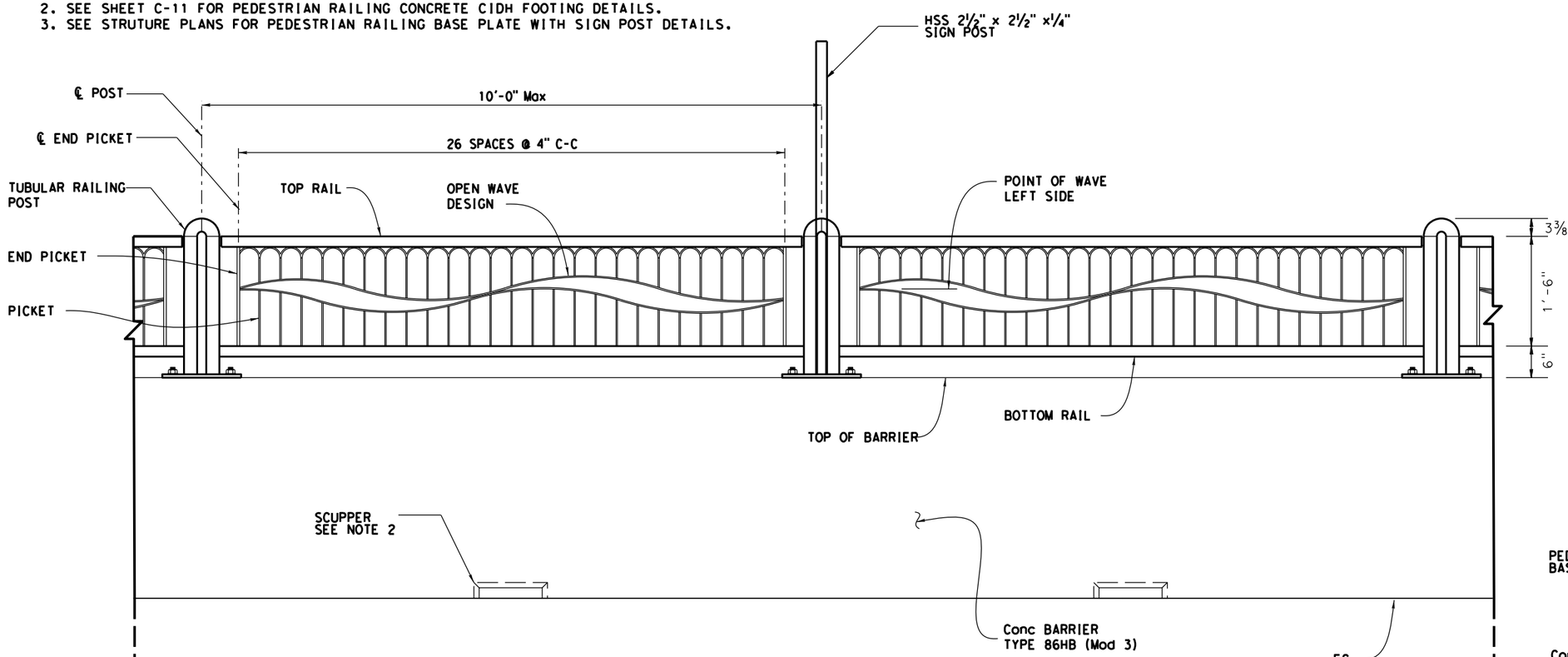
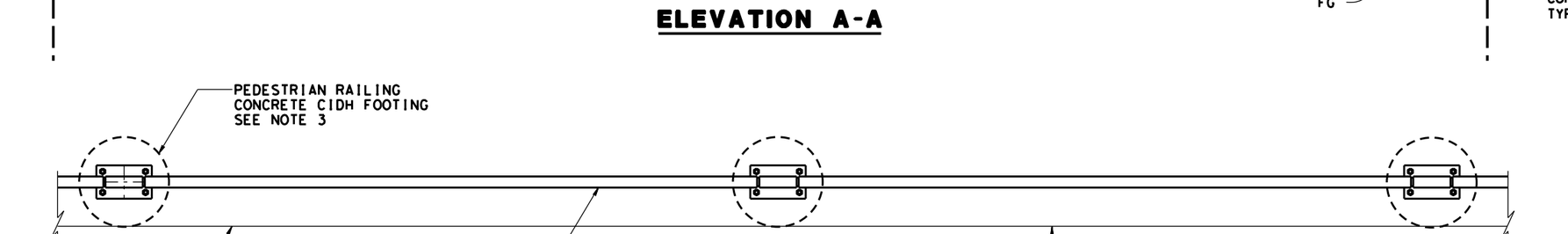
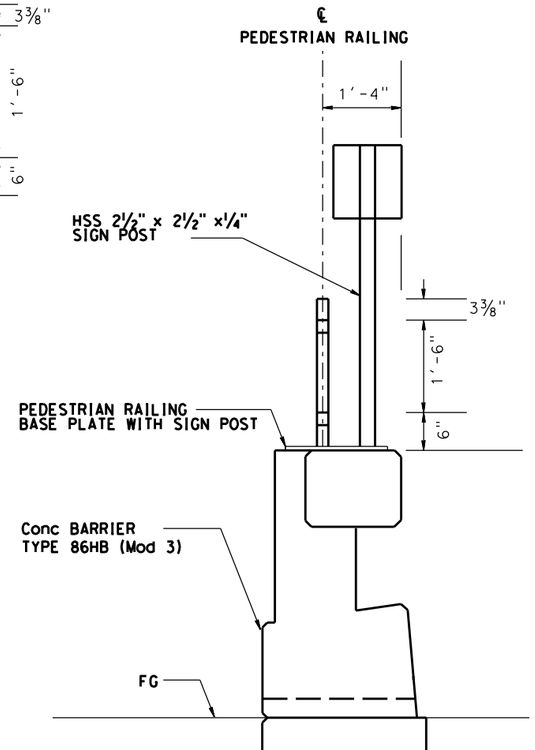


ELEVATION A-A



PLAN
1" = 1'-0"



SECTION B-B
1" = 1'-0"

PEDESTRIAN RAILING ON CONCRETE BARRIER TYPE86HB (Mod 3)
1" = 1'-0"

CONSTRUCTION DETAILS
C-16

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
OFFICE OF DESIGN C
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY / DATE REVISED

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	34	xx

H.A. Foong
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9/30/25
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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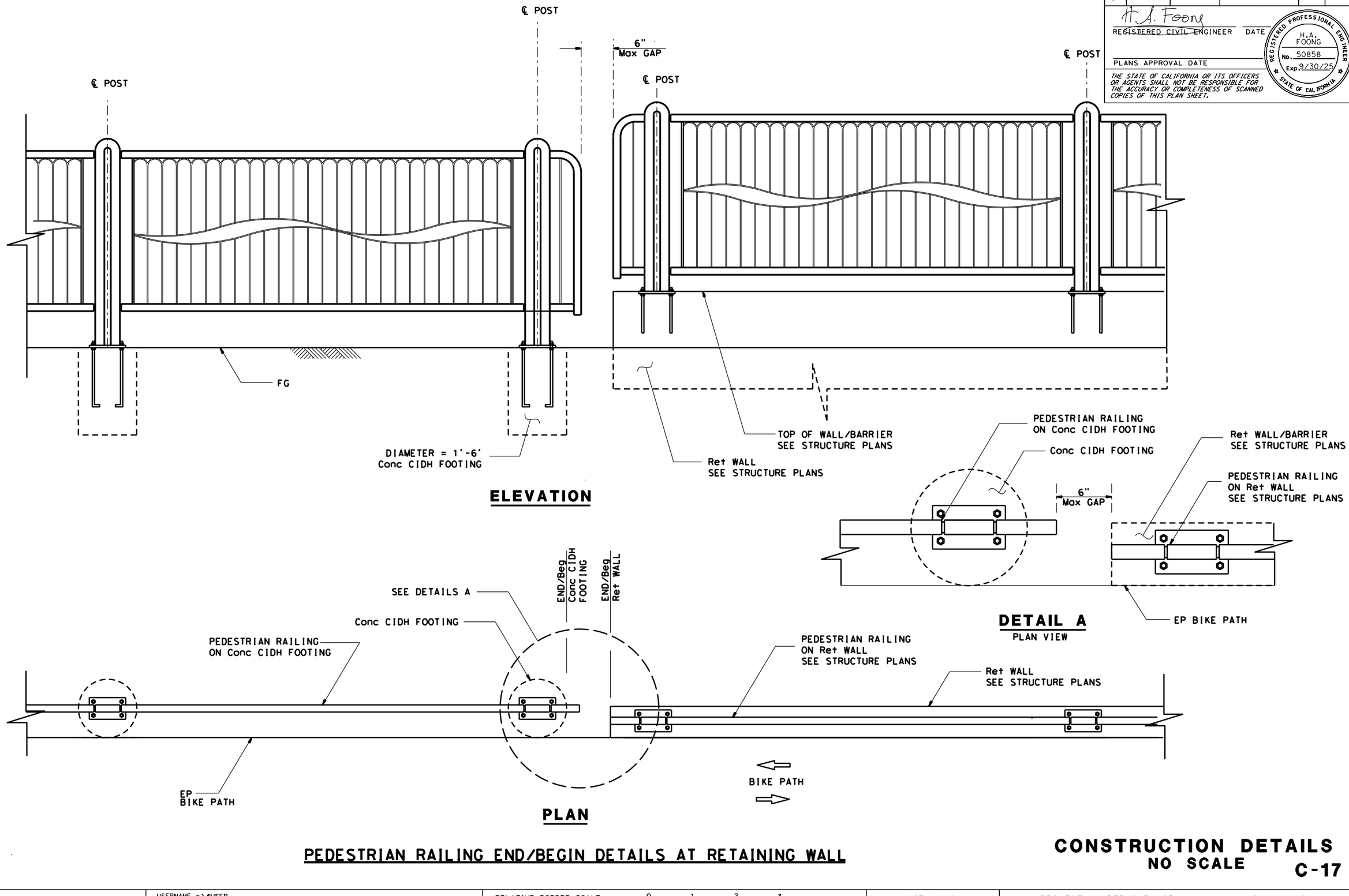

ELEVATION

DETAIL A
PLAN VIEW

PLAN

PEDESTRIAN RAILING END/BEGIN DETAILS AT RETAINING WALL

CONSTRUCTION DETAILS
NO SCALE

C-17

REVISED BY	DATE REVISED

AARON FOONG — CALCULATED-DESIGNED BY
REFUGIO DOMINGUEZ — CHECKED BY
REFUGIO DOMINGUEZ — FUNCTIONAL SUPERVISOR

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® OFFICE OF DESIGN C

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	35	xx

H.A. Foong
REGISTERED CIVIL ENGINEER DATE

H.A. FOONG No. 50858 Exp 9/30/25 REGISTERED PROFESSIONAL ENGINEER

PLANS APPROVAL DATE

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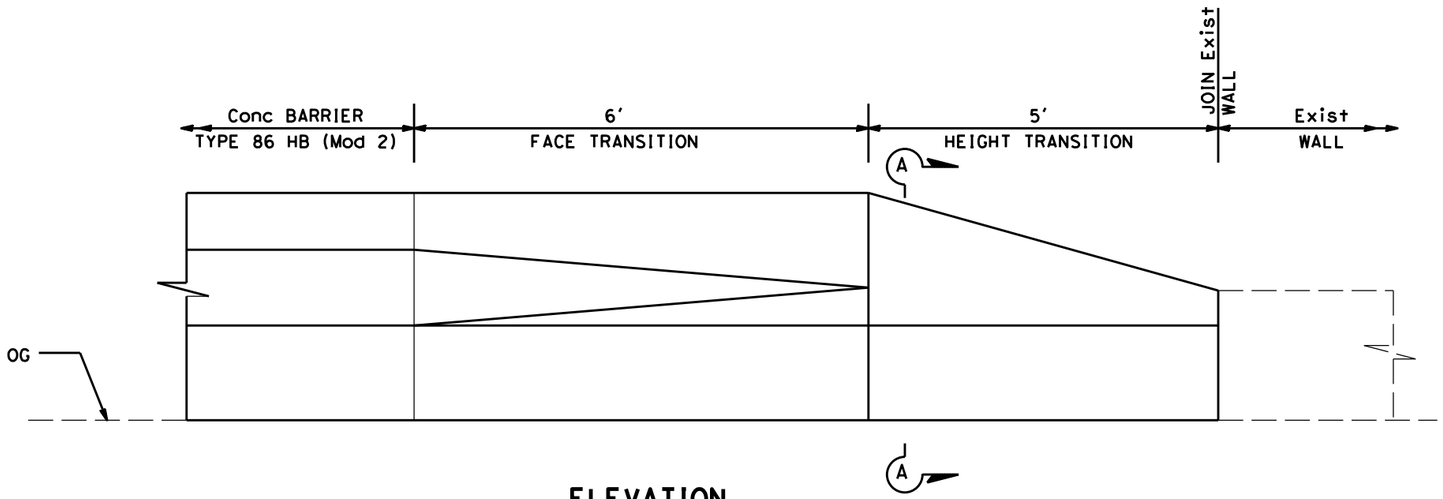
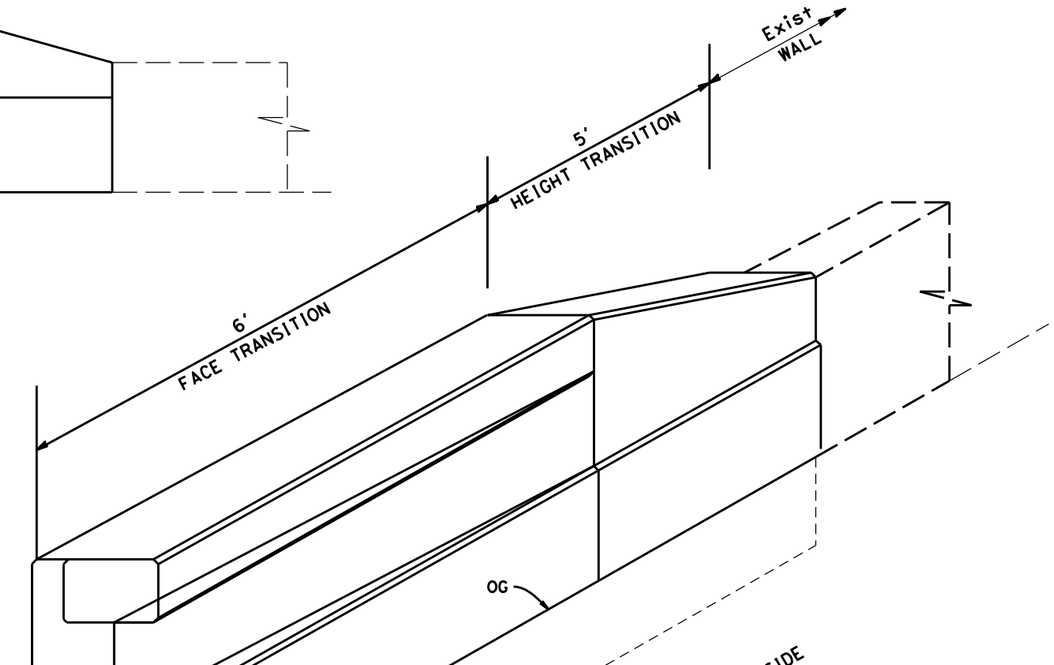
NOTES:

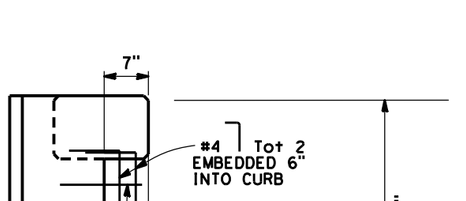
1. FOR DIMENSION AND REBAR REINFORCEMENT NOT SHOWN, SEE CONCRETE BARRIER TYPE 86HB (Mod 2) DETAILS ON SHEET C-9.
2. ALL REBARS SHALL BE PREFABRICATED EPOXY COATED.



ELEVATION



ISOMETRIC



SECTION A-A

Conc BARRIER TYPE 86HB (Mod 2) TRANSITION TO Exist WALL

CONSTRUCTION DETAILS
NO SCALE
C-18

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
OFFICE OF DESIGN C
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY / DATE REVISED

LAST REVISION 10-09-12
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	36	XX

H. A. Foong
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

H. A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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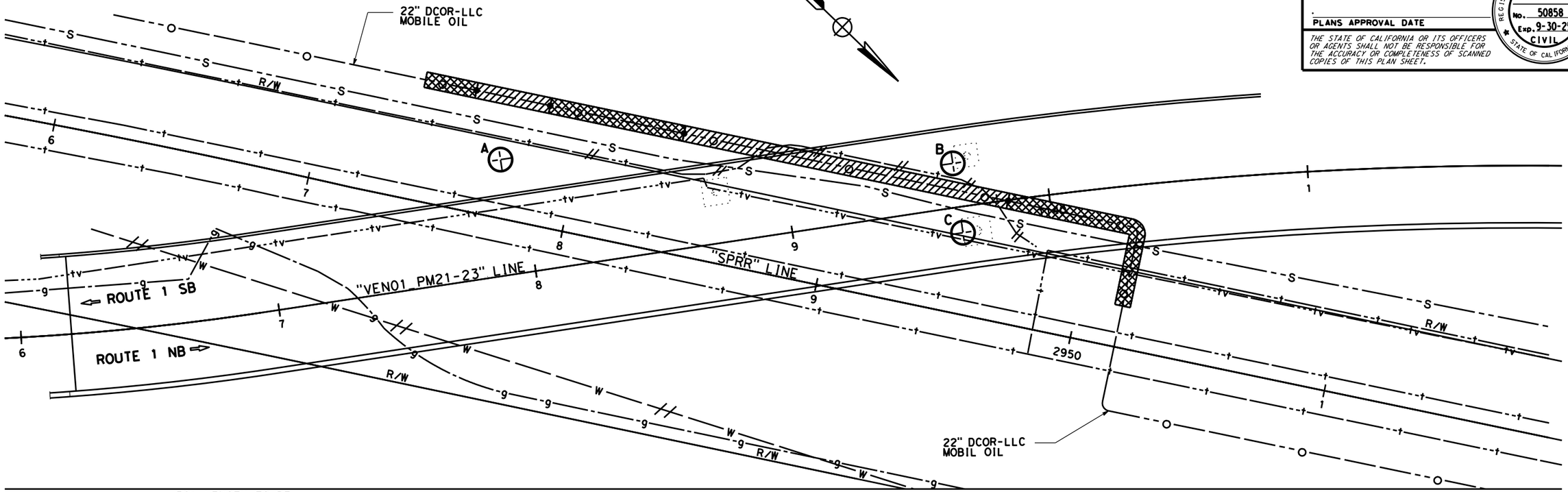
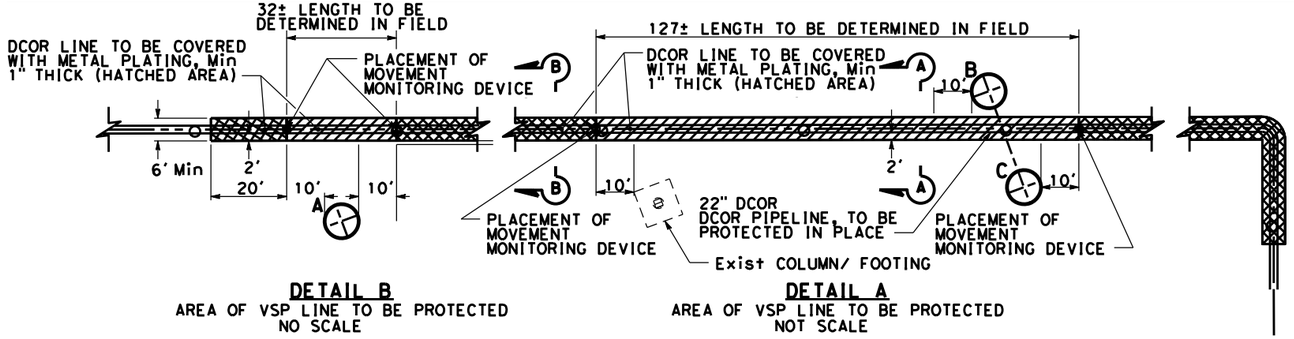


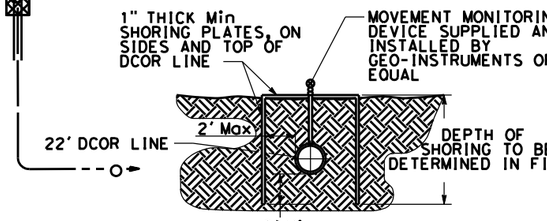


DETAIL B
AREA OF VSP LINE TO BE PROTECTED
NO SCALE

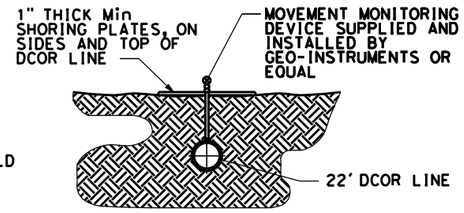
DETAIL A
AREA OF VSP LINE TO BE PROTECTED
NOT SCALE

LIMITS OF TRENCH SHORING PROTECTION:

1. 2' OFFSET REQUIRED FROM O.D. OF PIPELINE, LATERAL SIDES MINIMUM OF 2' BELOW O.D. OF PIPE.
2. 10' OFFSET FROM EXTERIOR OF COLUMNS TO BE CONSTRUCTEFD WITH CIDH.



SECTION A1-A1
TOP AND SIDE PROTECTION
NO SCALE



SECTION B1-B1
TOP PROTECTION
NO SCALE

GENERAL NOTE:

1. MOVEMENT MONITORING DEVICE BY GEO-INSTRUMENTS OR EQUAL TO BE PLACED ON TOP OF DCOR LINE DURING ENTIRE CONSTRUCTION OPERATION AND MONITORED 24/7 UNTIL PROJECT IS COMPLETED.
2. ALL SHORING BY TRENCH SHORING, INC OR EQUAL TO BE PLACED AND/OR INSTALLED PRIOR TO ANY CONSTRUCTION TRAFFIC, DEMOLITION OR CONSRTRUCTION BEGINS.
3. SOILS ENGINEER TO BE PRESENT DURRING DEMOLITION AND CONSTRUCTION TO MONITOR SLUMPING OR GROUND WATER THAT MAY UNDERMINE SOIL INTEGRITY AROUND VPS PIPELINE.
4. ANY MOVEMENT TO THE VPS LINE MUST BE LESS THAN 1/2" VERTICALLY AND HORIZONTALLY.
5. DCOR PERSONNEL TO BE ALLOWED ON-SITE DURING ALL CONSTRUCTION PHASE AND INSPECTIONS.
6. ENSURE NOTIFICATION VIA DIG ALERT PRIOR TO ANY DEMOLITION OR CONSTRUCITON ACTIVITY

LEGEND:

- SHORING - TOP AND SIDES
- SHORING - TOP ONLY
- PLACEMENT OF MOVEMENT MONITORING DEVICE
- EXISTING BRIDGE COLUMN/FOOTING
- NEW BRIDGE COLUMN/FOOTING

CONSTRUCTION DETAILS

SCALE: 1" = 20'

C-19

REVISED BY | DATE REVISED
AARON FOONG | REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN
Caltrans

LAST REVISION | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 8/5/2020 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT . 1819 | PROJECT NUMBER & PHASE .07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	38	

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

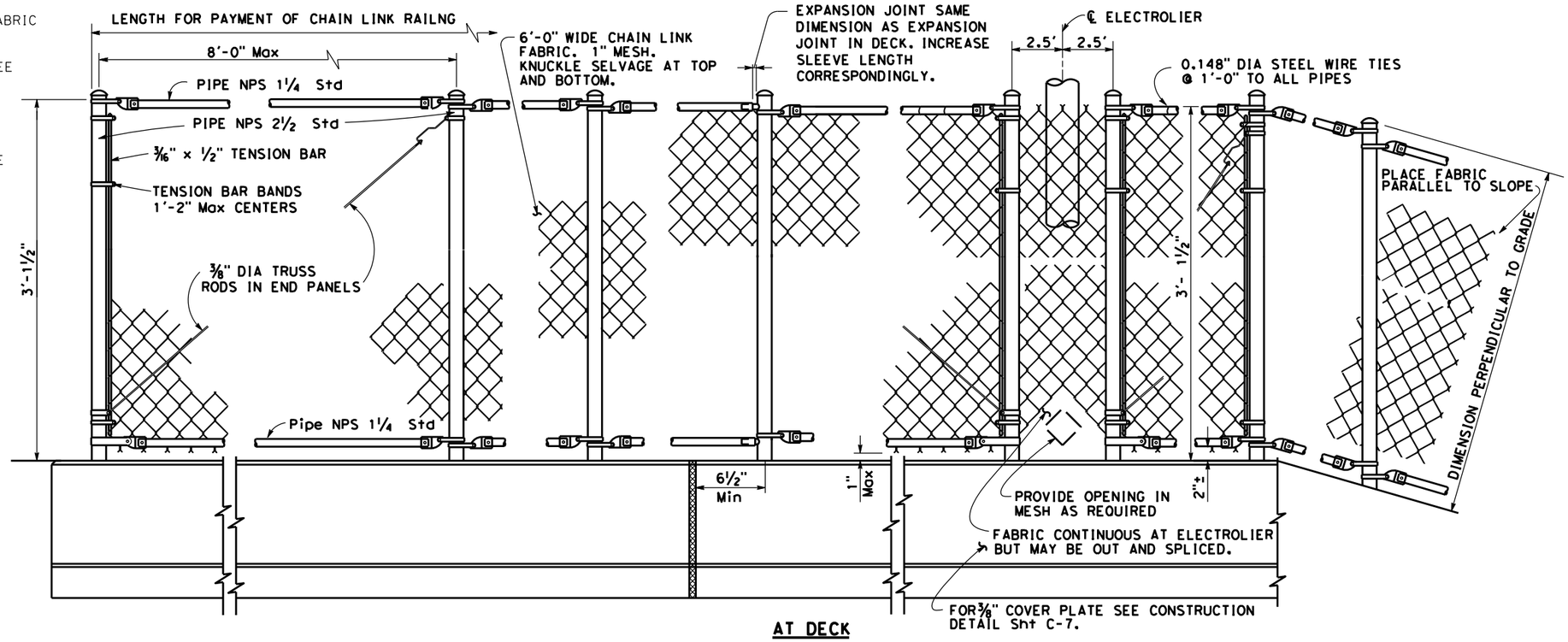
PLANS APPROVAL DATE

H.A. FOONG No. 50858 Exp 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

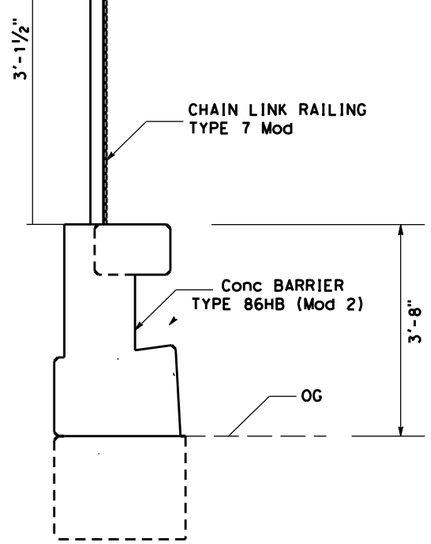
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

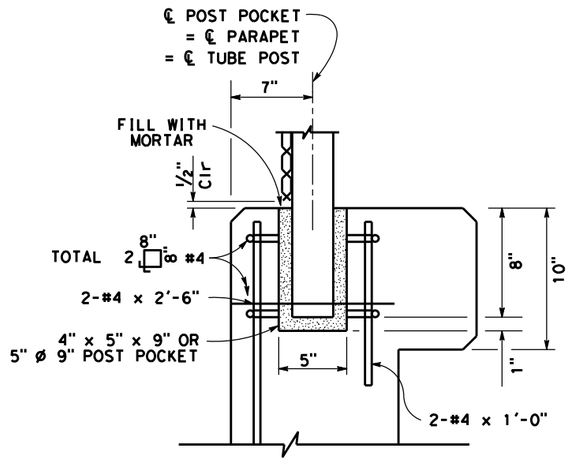
1. RAILING ASSEMBLY EXCEPT CHAIN LINK FABRIC MUST BE GALVANIZED AFTER FABRICATION.
2. PEEN BOLT THREADS.
3. RAILING SHALL CONFORM TO HORIZONTAL AND VERTICAL ALIGNMENT. POSTS SHALL BE VERTICAL. TOP AND BOTTOM PIPES SHALL BE BENT IF RADIUS IS 148'-0" OR LESS; MAY BE ON 8-0" CHORDS IF RADIUS IS OVER 148'-0".
4. WHEN RAILING IS ON SLOPE, 6'-0" CHAIN LINK FABRIC SHALL BE PLACED PARALLEL TO SLOPE.
5. FOR DETAILS AND REINFORCEMENTS NOT SHOWN SEE STANDARD PLANS A76B, B11-56 AND B11-57.
6. SEE PLANS FOR LIMITS OF CHAIN LINK RAILING.
7. FOR DETAILS AND REINFORCEMENT NOT SHOWN SEE STANDARD PLANS A76B, B11-56 AND B11-57.
8. FOR Conc DETAILS TYPE H6HB (Mod 2)DETAILS AND REINFORCEMENT, SEE STRUCTURE PLANS.



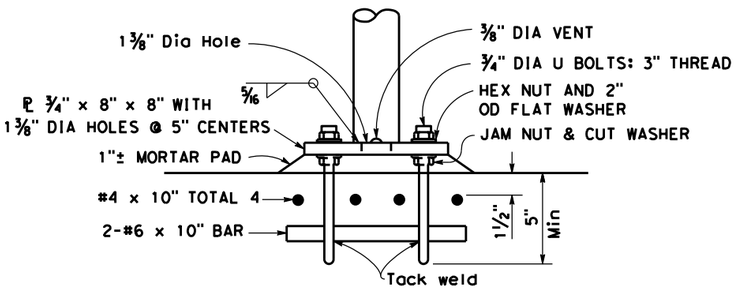
END POST — INTERMEDIATE POSTS — AT DECK EXPANSION JOINTS — AT ELECTROLIER — ON SLOPES



TYPICAL SECTION

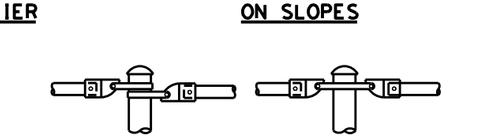


Typ POST ANCHORAGE DETAIL



ALTERNATIVE ANCHORAGE DETAIL

ALTERNATIVE DETAILS



TYPICAL CONNECTION DETAILS

CONSTRUCTION DETAILS

NO SCALE

C-20

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — DESIGN
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY / DATE REVISED

LAST REVISION 00-00-00 — DATE PLOTTED => $DATE — TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 — USERNAME => $USER — DGN FILE => $REQUEST — RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 — UNIT 1819 — PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	38	

Fusung Chang 03-20-23
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

FUSUNG CHANG No. 54884 Exp. 6-30-24 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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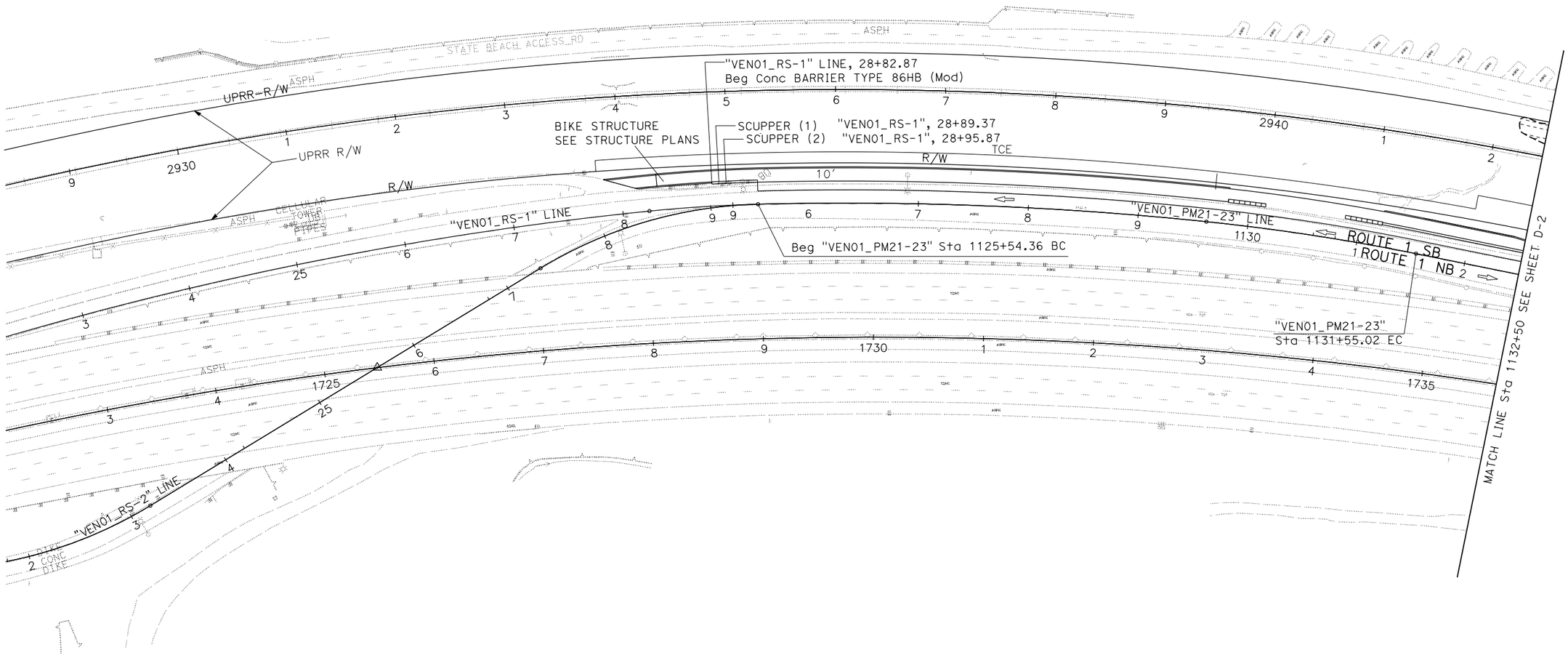
NOTE:
1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SCUPPER DETAIL SEE ROADWAY PLAN.



DRAINAGE PLAN

SCALE: 1" = 50'

D-1

APPROVED FOR DRAINAGE WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
HYDRAULICS
FUNCTIONAL SUPERVISOR: WING Y. LEE
CALCULATED-DESIGNED BY: FUSUNG CHANG
CHECKED BY: ASHRAFUL ALLAN
REVISED BY
DATE REVISED
LAST REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	39	

Fusung Chang 03-20-23
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
FUSUNG CHANG
No. 54884
Exp. 6-30-24
CIVIL
STATE OF CALIFORNIA

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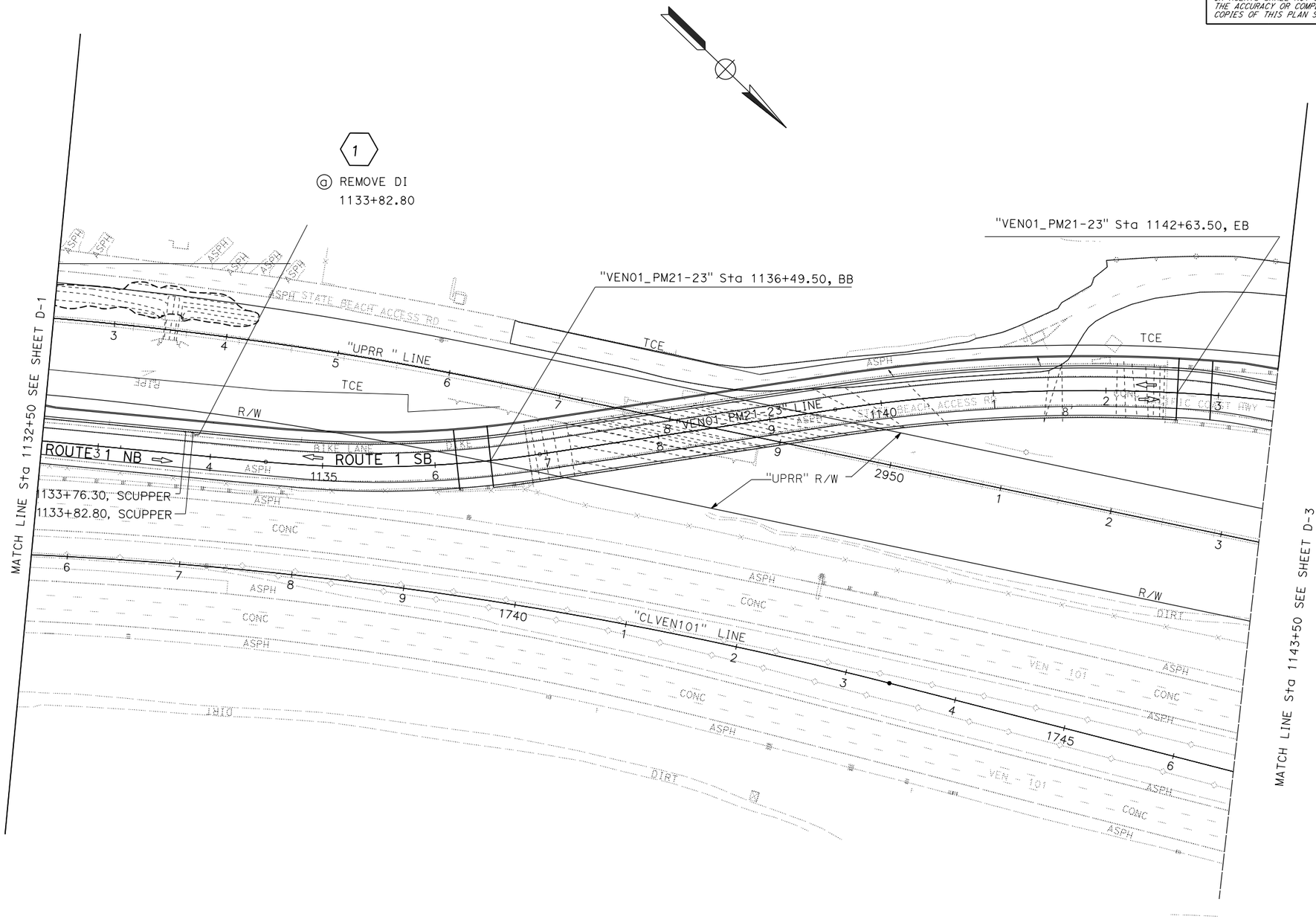

APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN

SCALE: 1" = 50'

D-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
HYDRAULICS

FUNCTIONAL SUPERVISOR: WING Y. LEE
CALCULATED-DESIGNED BY: FUSUNG CHANG
CHECKED BY: ALLAN ASHRAFUL
REVISED BY
DATE REVISED

LAST REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	40	

REGISTERED CIVIL ENGINEER — 03-20-23 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — FUSUNG CHANG No. 54884 Exp. 6-30-24 CIVIL — STATE OF CALIFORNIA

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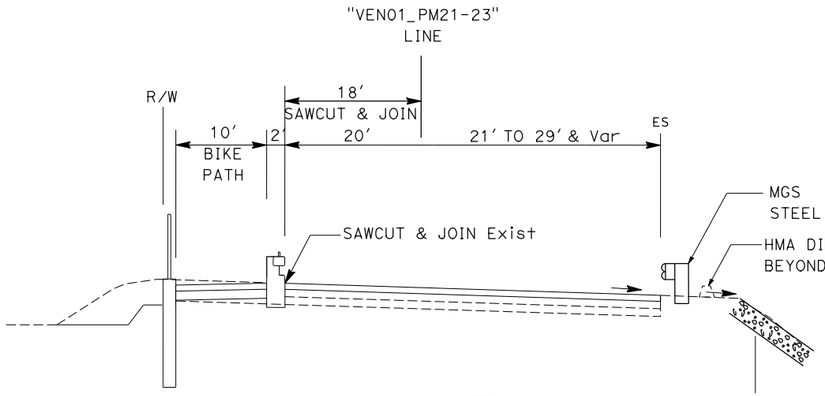
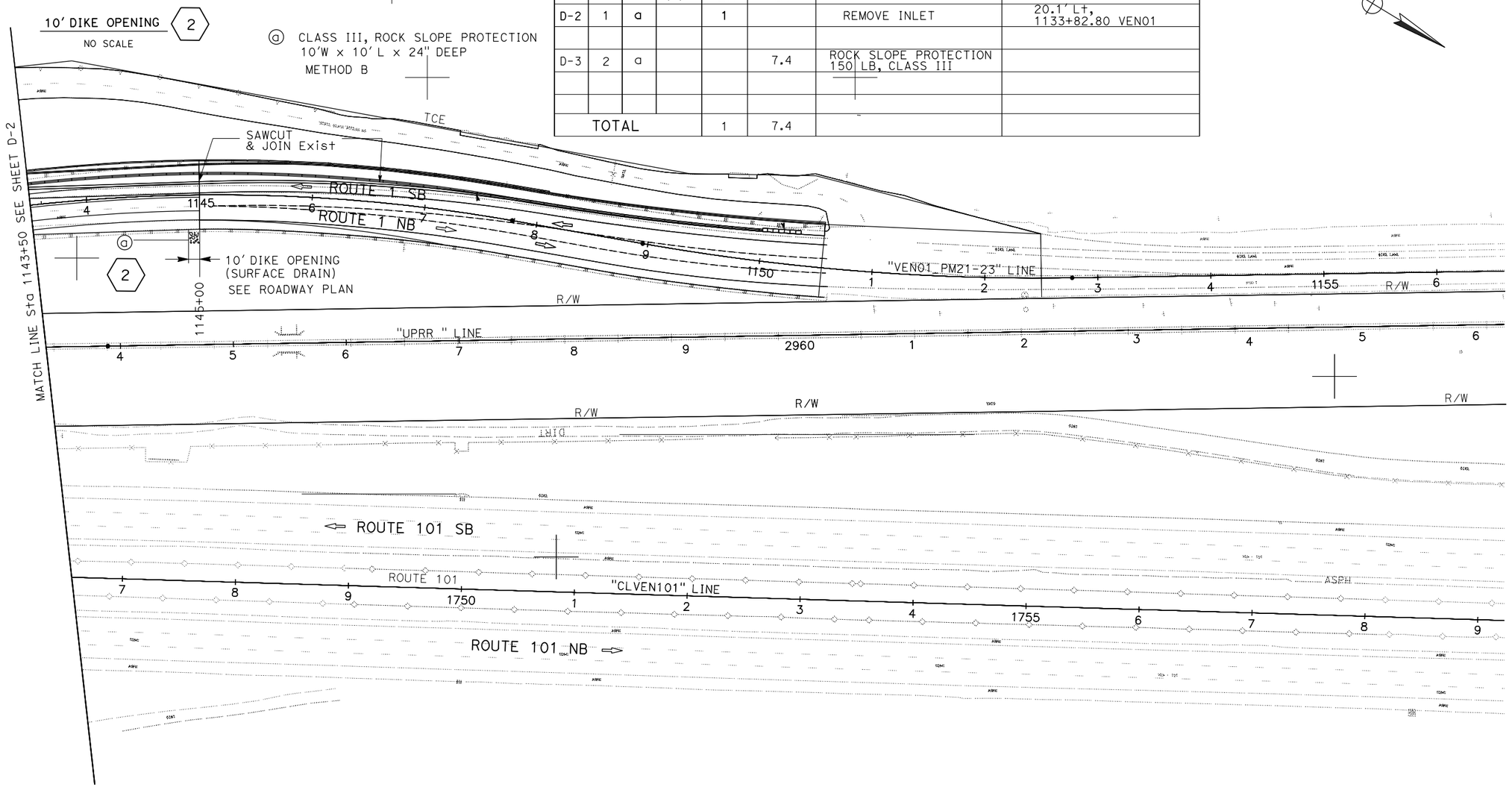


10' DIKE OPENING (2)
NO SCALE

ⓐ CLASS III, ROCK SLOPE PROTECTION
10'W x 10' L x 24" DEEP
METHOD B

DRAINAGE QUANTITIES

DRAINAGE SHEET No.	DRAINAGE SYSTEM No. (⬡)	DRAINAGE UNIT (○)	HEIGHT OF INLET H OR V (N)	REMOVE INLET	ROCK SLOPE PROTECTION (150 LB, CLASS III) METHOD B	DESCRIPTION	STATION
			FT	EA	CY		
D-2	1	a		1		REMOVE INLET	20.1' Lt, 1133+82.80 VEN01
D-3	2	a			7.4	ROCK SLOPE PROTECTION 150 LB, CLASS III	
TOTAL				1	7.4		



NOTE:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR SCUPPER SEE ROADWAY PLAN.

APPROVED FOR DRAINAGE WORK ONLY

DRAINAGE PLAN
SCALE: 1" = 50'
D-3

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: FUSUNG CHANG
CHECKED BY: ALLAN ASHRAFUL
FUNCTIONAL SUPERVISOR: WING Y. LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
HYDRAULICS

LAST REVISION

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	41	

H. A. Foong
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

H. A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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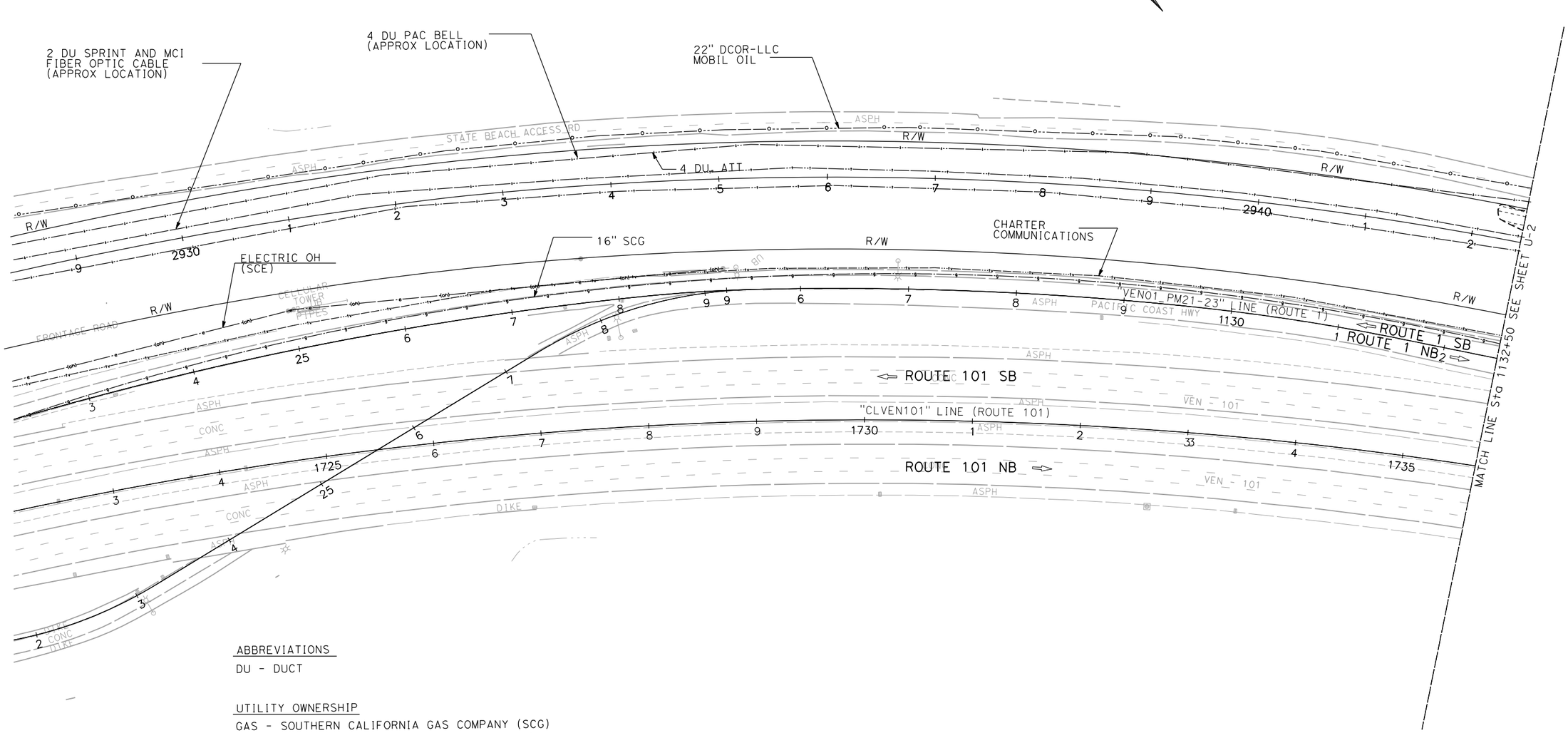

ABBREVIATIONS

DU - DUCT

UTILITY OWNERSHIP

GAS - SOUTHERN CALIFORNIA GAS COMPANY (SCG)
ELECTRICAL - SOUTHERN CALIFORNIA EDISON (SCE)
OIL - DCOR LLC MOBIL OIL
COMMUNICATIONS
- MCI
- CHARTER COMMUNICATIONS
- PACIFIC BELL (PAC BELL)
- AMEICAN TELEPHONE & TELEGRAPH (AT&T)

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50'

U-1

REVISED BY | DATE REVISED
AARON FOONG | DON LUU
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: RICKY LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® UTILITY ENGINEERING

LAST REVISION | DATE PLOTTED => 9/25/2023 TIME PLOTTED => 12:09:49 PM

BORDER LAST REVISED 8/5/2020 | USERNAME => DGN FILE => ...\Div-V10\0731960ka001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	42	

H. A. Foong
REGISTERED ~~CIVIL~~ ENGINEER — DATE

H. A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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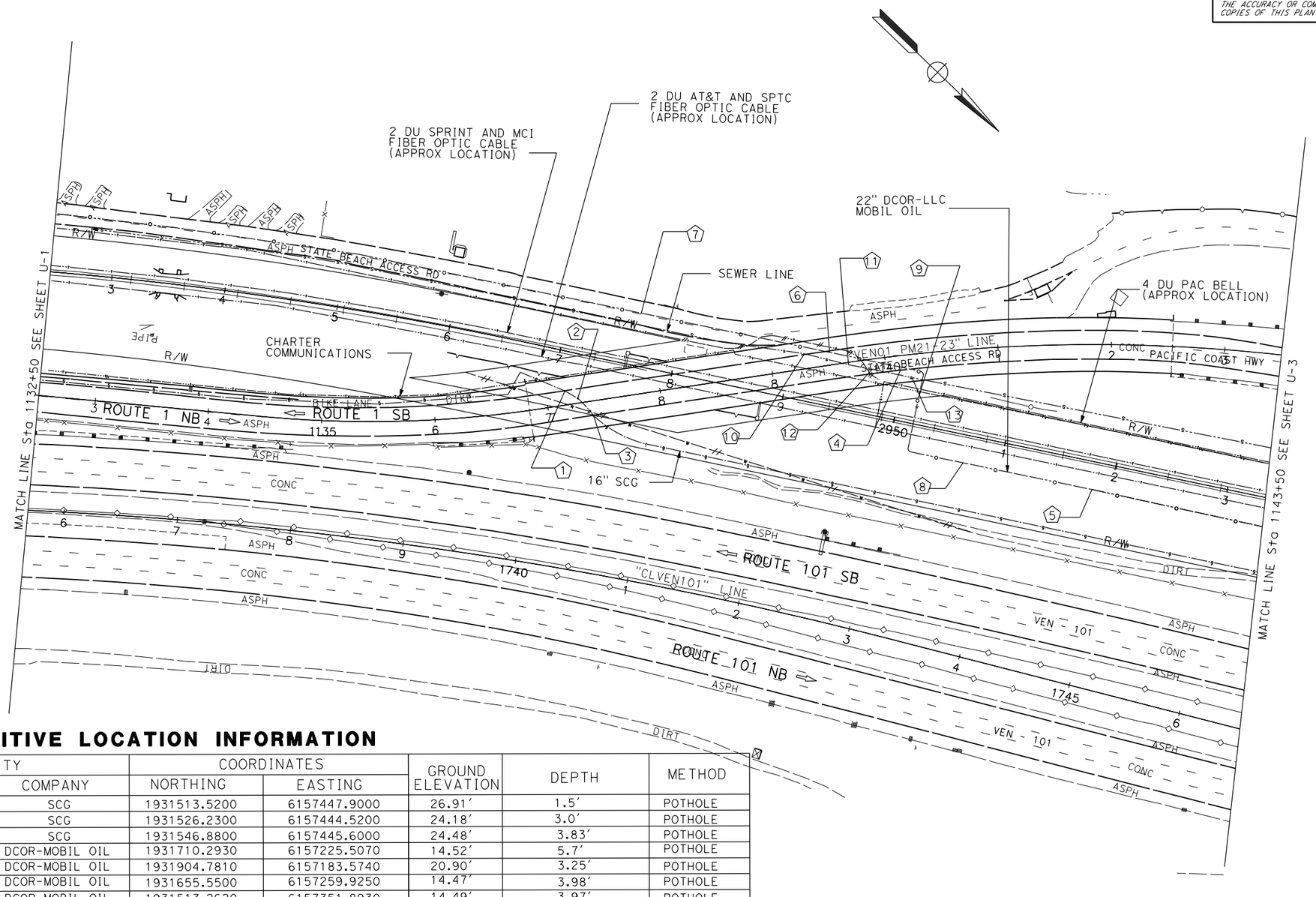


POSITIVE LOCATION INFORMATION

No. ⬠	UTILITY		COORDINATES		GROUND ELEVATION	DEPTH	METHOD
	FACILITY	COMPANY	NORTHING	EASTING			
1	16" GAS LINE	SCG	1931513.5200	6157447.9000	26.91′	1.5′	POTHOLE
2	16" GAS LINE	SCG	1931526.2300	6157444.5200	24.18′	3.0′	POTHOLE
3	16" GAS LINE	SCG	1931546.8800	6157445.6000	24.48′	3.83′	POTHOLE
4	22" OIL LINE	DCOR-MOBIL OIL	1931710.2930	6157225.5070	14.52′	5.7′	POTHOLE
5	22" OIL LINE	DCOR-MOBIL OIL	1931904.7810	6157183.5740	20.90′	3.25′	POTHOLE
6	22" OIL LINE	DCOR-MOBIL OIL	1931655.5500	6157259.9250	14.47′	3.98′	POTHOLE
7	22" OIL LINE	DCOR-MOBIL OIL	1931513.2620	6157351.8930	14.49′	3.97′	POTHOLE
8	22" OIL LINE	DCOR-MOBIL OIL	1931807.5480	6157246.5980	20.92′	7.08′	POTHOLE
9	22" OIL LINE	DCOR-MOBIL OIL	1931738.2370	6157231.4840	15.56′	6.75′	POTHOLE
10	8" SEWER LINE	VENTURA COUNTY	1931640.6100	6157276.3400	14.38′	HIT Conc AT 1.32′	POTHOLE
11	8" SEWER LINE	VENTURA COUNTY	1931675.0700	6157255.9800	14.31′	2.06′	POTHOLE
12	8" SEWER LINE	VENTURA COUNTY	1931692.7600	6157244.0800	14.42′	2.42′	POTHOLE
13	8" SEWER LINE	VENTURA COUNTY	1931722.9100	6157224.7500	14.38′	2.88′	POTHOLE

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

UTILITY PLAN

SCALE: 1" = 50′

U-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® UTILITY ENGINEERING
FUNCTIONAL SUPERVISOR: RICKEY LEE
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: DON LUU
REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 9/25/2023 | TIME PLOTTED => 12:13:39 PM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\Div-V10\0731960ka002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	43	

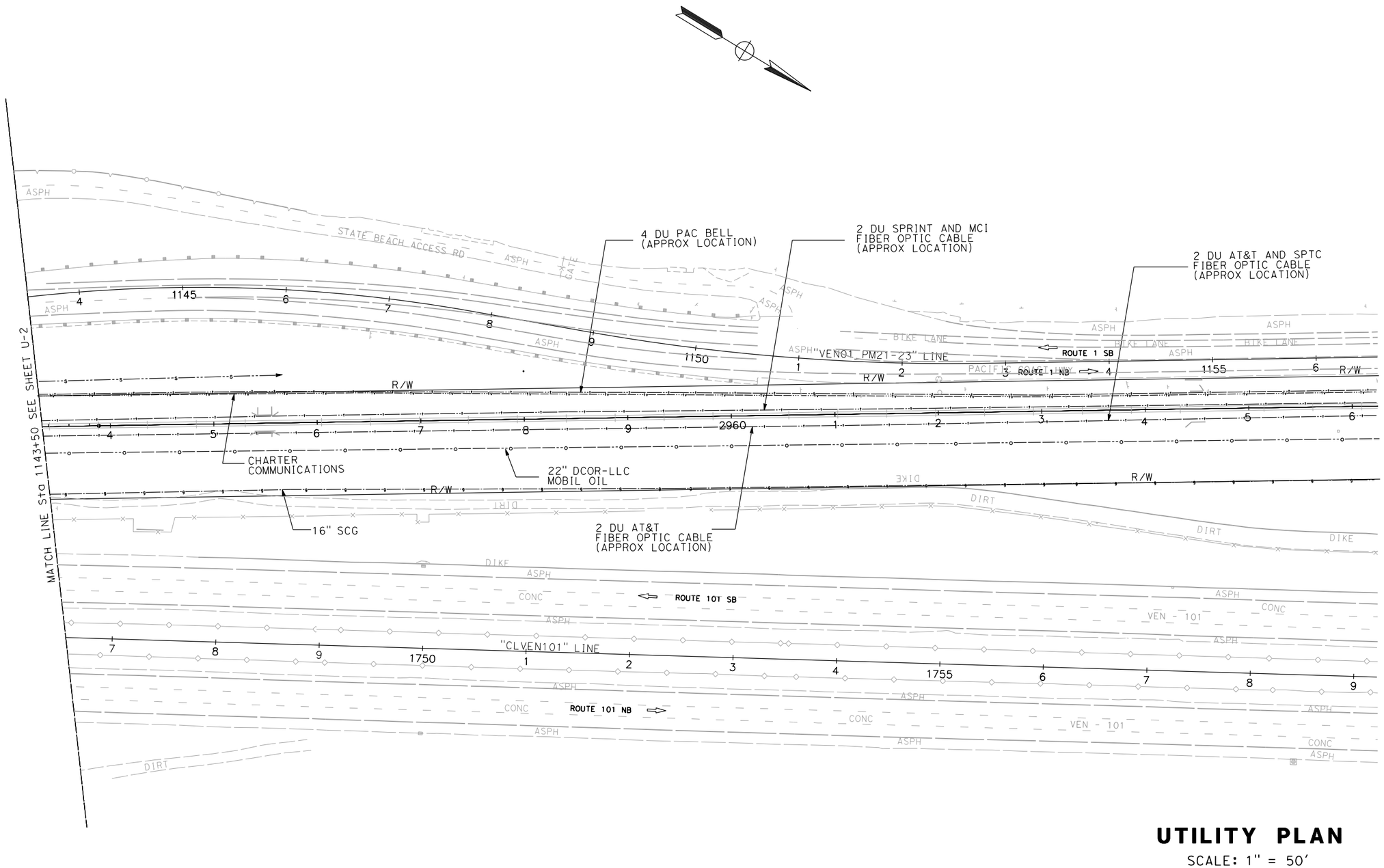
H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — H. A. FOONG — No. 50858 — Exp. 9-30-25 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



UTILITY PLAN

SCALE: 1" = 50'

U-3

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED
LAST REVISION
DATE PLOTTED => 9/25/2023
TIME PLOTTED => 12:16:18 PM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\Div-V10\0731960ka003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	44	.

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

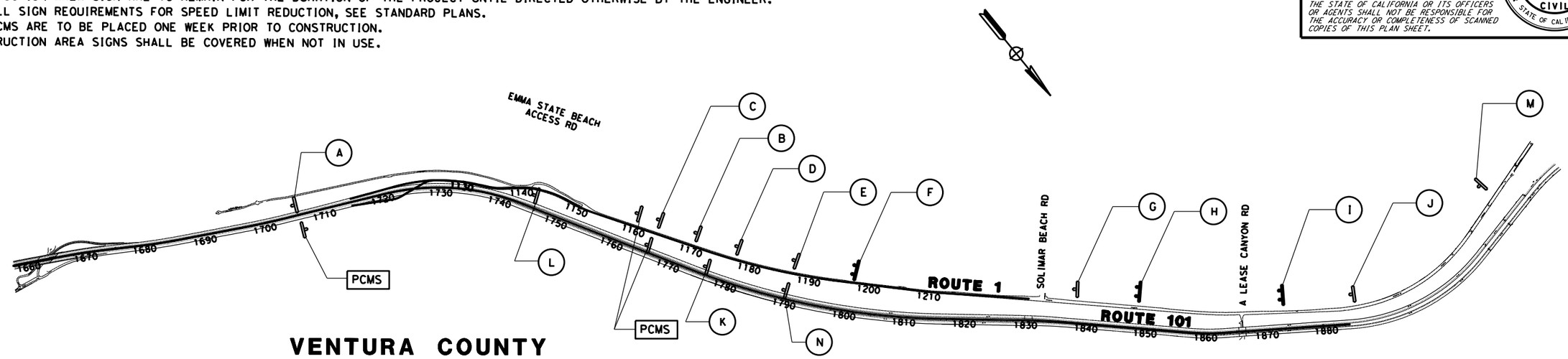
REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp 9-30-25
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. LOCATIONS OF CONSTRUCTION AREA SIGNS SHOWN ARE APPROXIMATE. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.
2. REMOVE OR COVER ALL CONFLICTING SIGNING AS DIRECTED BY THE ENGINEER.
3. CONSTRUCTION AREA SIGN SHALL BE LOCATED APPROXIMATELY 50 FEET AWAY FROM THE INTERSECTION.
4. SEE TRAFFIC HANDLING PLANS FOR ADDITIONAL CONSTRUCTION AREA SIGNS.
5. CONSTRUCTION AREA SIGN ARE TO REMAIN FOR THE DURATION OF THE PROJECT UNTIL DIRECTED OTHERWISE BY THE ENGINEER.
6. FOR ALL SIGN REQUIREMENTS FOR SPEED LIMIT REDUCTION, SEE STANDARD PLANS.
7. THE PCMS ARE TO BE PLACED ONE WEEK PRIOR TO CONSTRUCTION.
8. CONSTRUCTION AREA SIGNS SHALL BE COVERED WHEN NOT IN USE.



VENTURA COUNTY

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN ID	SIGN DESIGNATION	PANEL SIZE	SIGN MESSAGE	No. OF POST AND SIZE	No. OF SIGNS
(A)	W20-2	36" X 18"	END ROAD WORK	1-6" x 6"	1
(B)	R2-1(35) G20-5aP	36" X 48" 18" X 24"	SPEED LIMIT 25 MPH WITH WORK ZONE PANEL	1-6" x 6"	1
(C)	R2-1(25) G20-5aP	36" X 48" 18" X 24"	SPEED LIMIT 25 MPH WITH WORK ZONE PANEL	1-6" x 6"	1
(D)	W3-5(35)	36" X 48"	SPEED LIMIT 35 MPH	1-6" x 6"	1
(E)	W3-5(25)	36" X 48"	SPEED LIMIT 35 MPH	1-6" x 6"	1
(F)		132" X 102"	ROAD CLOSED AHEAD EXIT EMMA STATE BEACH	2-6" x 6"	1
(G)		48" X 48"	ROAD CLOSED AHEAD	1-6" x 6"	1
(H)	C40 (CA)	108" x 42"	TRAFFIC FINES DOUBLED IN CONSTRUCTION ZONES	2-6" x 6"	1
(I)	TYPE 2	132" X 102"	CONSTRUCTION PROJECT FUNDING IDENTIFICATION	2-6" x 6"	1
(J)		48" X 48"	ROAD CLOSED AHEAD	1-6" x 6"	1
(K)	W20-1	48" X 48"	ROAD WORK AHEAD	1-6" x 6"	1
(L)	W21-5bR	48" X 48"	Rt SHOULDER CLOSED AHEAD	1-6" x 6"	1
(M)	C30A (CA)	48" X 48"	SHOULDER CLOSED	1-6" x 6"	1
(N)	M4-9A (Rt)	48" X 48"	PEDESTRIAN AND BICYCLIST DETOUR	1-6" x 6"	2
PCMS			TBD		3

LEGEND:

- CONSTRUCTION AREA SIGN WITH TWO POST
- CONSTRUCTION AREA SIGN WITH ONE POST
- (X) CONSTRUCTION AREA SIGN

APPROVED FOR CONSTRUCTION SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
LAST REVISION

BORDER LAST REVISED 8/5/2020
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT .
PROJECT NUMBER & PHASE .

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	45	xx

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

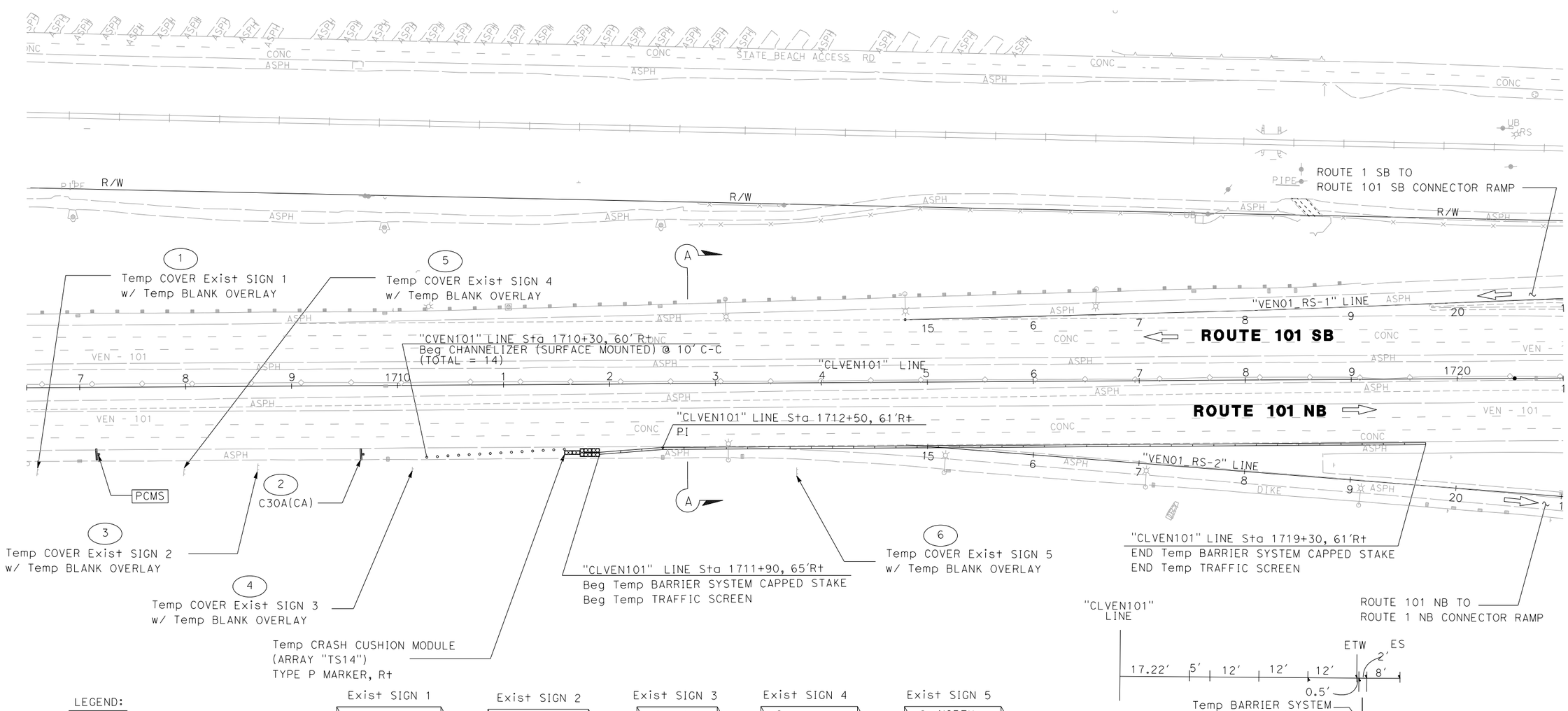
PLANS APPROVAL DATE

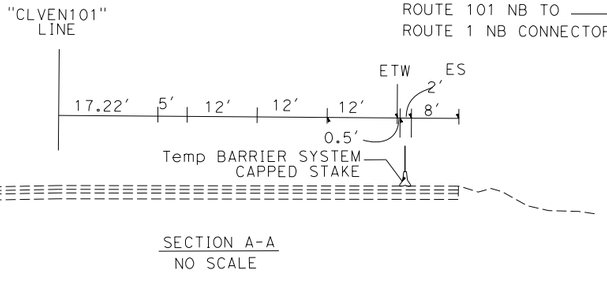
H.A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. SIGN LOCATIONS SHOWN ARE APPROXIMATE, EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.
3. REMOVE OR COVER ALL CONFLICTING SIGNING AS DIRECTED BY THE ENGINEER.
4. SEE THD FOR CLOSURE SIGNS AND DETAILS.

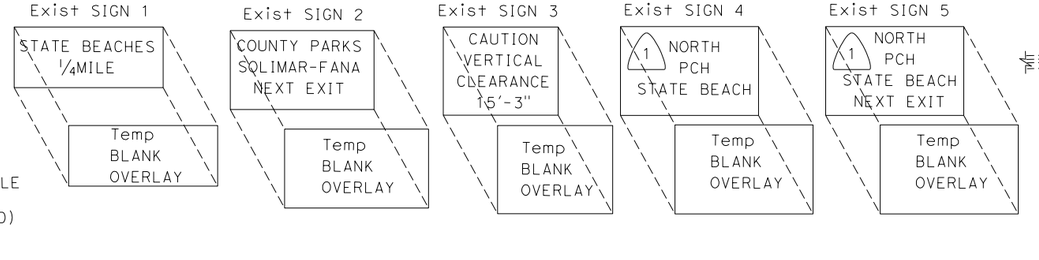




SECTION A-A
NO SCALE

LEGEND:

- CONSTRUCTION AREA SIGN
- CONSTRUCTION AREA SIGN No.
- TEMPORARY CRASH CUSHION MODULE
- CHANENELIZER (SURFACE MOUNTED)
- TYPE III BARRICADE



APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

SCALE: 1" = 50'

TH-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — **DESIGN**

CALCULATED-DESIGNED BY	CHECKED BY	FUNCTIONAL SUPERVISOR	REVISED BY	DATE REVISED
AARON FOONG	REFUGIO DOMIMGUEZ	REFUGIO DOMIMGUEZ		

LAST REVISION 00-00-00 | DATE PLOTTED => 9/25/2023 | TIME PLOTTED => 11:54:06 AM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Work-Div\0731960md001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

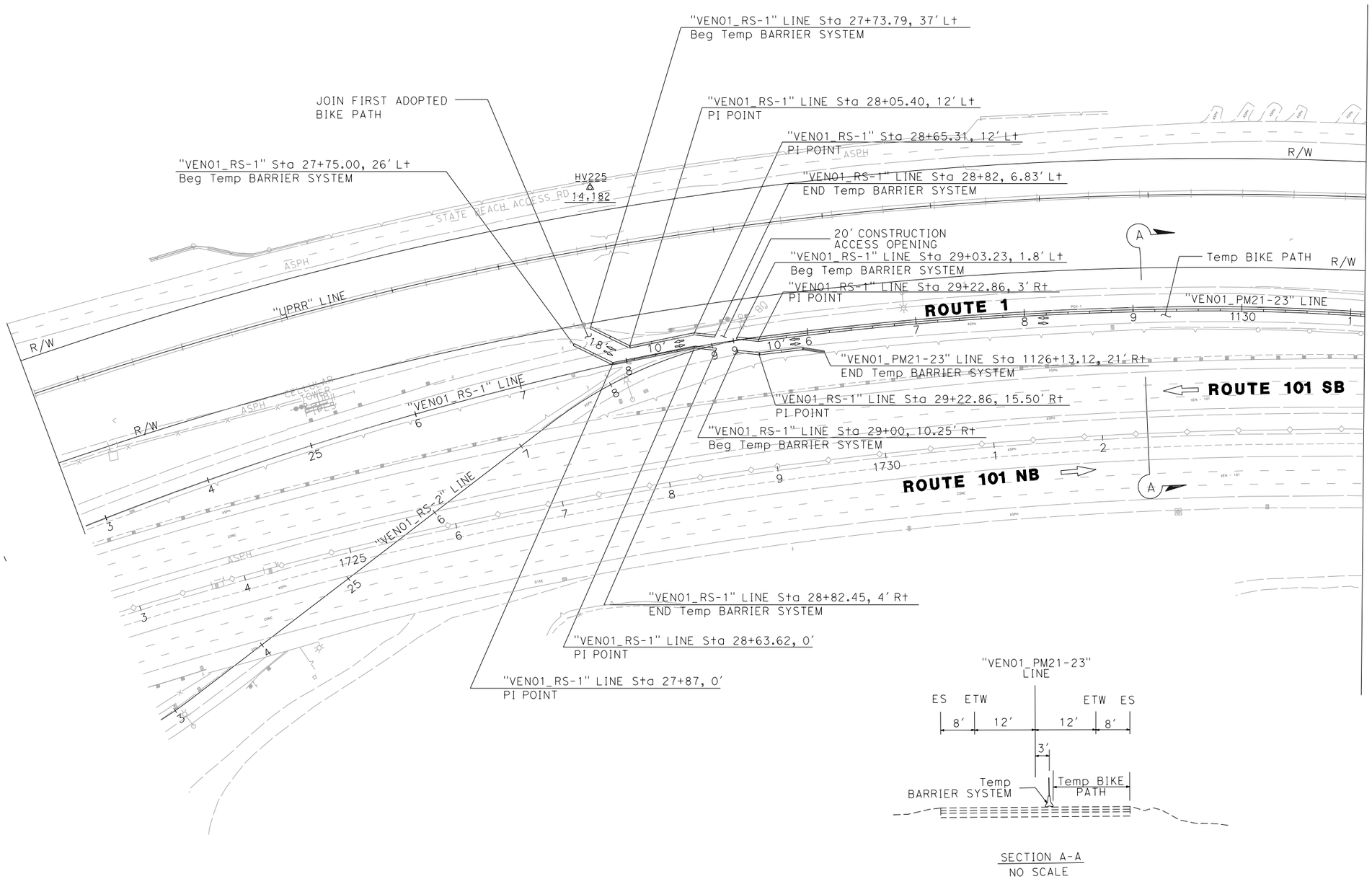
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	46	

H. A. Foong
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
H.A. FOONG
No. 50858
Exp. 9-30-25
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SECTION A-A
NO SCALE

TRAFFIC HANDLING PLAN

SCALE: 1" = 50'

TH-2

CALCULATED-DESIGNED BY	AARON FOONG	REVISED BY			
CHECKED BY	REFUGIO DOMIMGUEZ	DATE REVISED			
FUNCTIONAL SUPERVISOR	REFUGIO DOMIMGUEZ				
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN				

Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => 10/6/2023
TIME PLOTTED => 1:28:51 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Work-Div\0731960md002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	xx	47

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

H.A. FOONG No. 50858 Exp. 9-30-25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

12' Temp BIKE PATH

4" HMA (TYPE A) Pvmt

2% 2:1 (Min) 2:1 (Min)

OG

SECTION C-C
NO SCALE

EP — Temp BARRIER SYSTEM

STATE BEACH ACCESS ROAD

GRADE TO LEVEL

SECTION B-B
NO SCALE

MATCH LINE "VEN01_PM21-23" Sta 1131+10 SEE SHEEET TH-2

"CLVEN101" LINE Sta 1734+71.65, 89.25' Lt
Beg Temp HMA (TYPE A) PAVEMENT

"VEN01_PM21-23" LINE Sta 1137+31, 78.50' Lt
Beg Temp BARRIER SYSTEM (TYPE K)
TOTAL LENGTH = 420'

"VEN01_PM21-23" LINE Sta 1131+50, 3' Rt
PI POINT

R/W

STATE BEACH ACCESS RD

Temp BIKE PATH
4" HMA PAVEMENT
12' W x 20' L
SEE SECTION C-C

"VEN01_PM21-23" LINE Sta 1132+30, 20' Rt
END Temp BARRIER SYSTEM

"VEN01_PM21-23" LINE

"CLVEN101" LINE Sta 1735+22.50
END Temp REMOVE GUARDRAIL

"CLVEN101" LINE Sta 1735+00, 73.33' Lt
END Temp HMA (TYPE A) PAVEMENT

"CLVEN101" LINE Sta 1734+94.61, 59.73' Lt
PI POINT

"CLVEN101" LINE Sta 1734+85
Beg Temp REMOVE GUARDRAIL

"CLVEN101" LINE Sta 1734+76.58, 69.07' Lt
Beg Temp BARRIER SYSTEM CAPPED STAKE
Beg Temp TRAFFIC SCREEN

45' CONSTRUCTION
ACCESS OPENING
w/ 40 TYPE III BARRICADES

"VEN01_PM21-23" LINE Sta 1141+19, 20.50' Lt
END Temp BARRIER SYSTEM (TYPE K)

"VEN01_PM21-23" LINE Sta 1141+67, 23' Lt
Beg Temp BARRIER SYSTEM (TYPE K)
TOTAL LENGTH = 800'

ROUTE 1

8' Temp BIKE PATH

8' Temp BICYCLE AND POC BRIDGE
SEE STRUCTURE PLANS

ROUTE 101 SB

ROUTE 101 NB

10:1 TAPER

"CLVEN101" LINE Sta 1745+40, 69.85' Lt
PI POINT

"CLVEN101" LINE Sta 1746+00, 75.21' Lt
END Temp BARRIER SYSTEM CAPPED STAKE
END Temp TRAFFIC SCREEN

Temp CRASH CUSSHION MODULE
(ARRAY "TS14")
TYPE P MARKER, Rt

CHANNELIZER (SURFACE MOUNTED) @ 10' C-C
10:1 TRANSITION
(TOTAL = 13)

MATCH LINE "VEN01_PM21-23" Sta 1144+80 SEE SHEEET TH-4

"CLVEN101" LINE

ES ETW ROUTE 101 SB

8' TO 10' & Var | 2' | 12' | 12' | 12' | 5' | 17.22'

1'-0"

Temp TRAFFIC SCREEN

Temp BARRIER SYSTEM CAPPED STAKE

SECTION A-A
NO SCALE

APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

SCALE: 1" = 50'

TH-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN

FUNCTIONAL SUPERVISOR: REFUGIO DOMIMGUEZ

CALCULATED-DESIGNED BY: AARON FOONG

CHECKED BY: REFUGIO DOMIMGUEZ

REVISED BY | DATE REVISED

DATE PLOTTED => 10/6/2023
TIME PLOTTED => 1:31:41 PM

LAST REVISION 00-00-00

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Work-Div\0731960md003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	48	

H.A. Foong
REGISTERED CIVIL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9-30-25 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

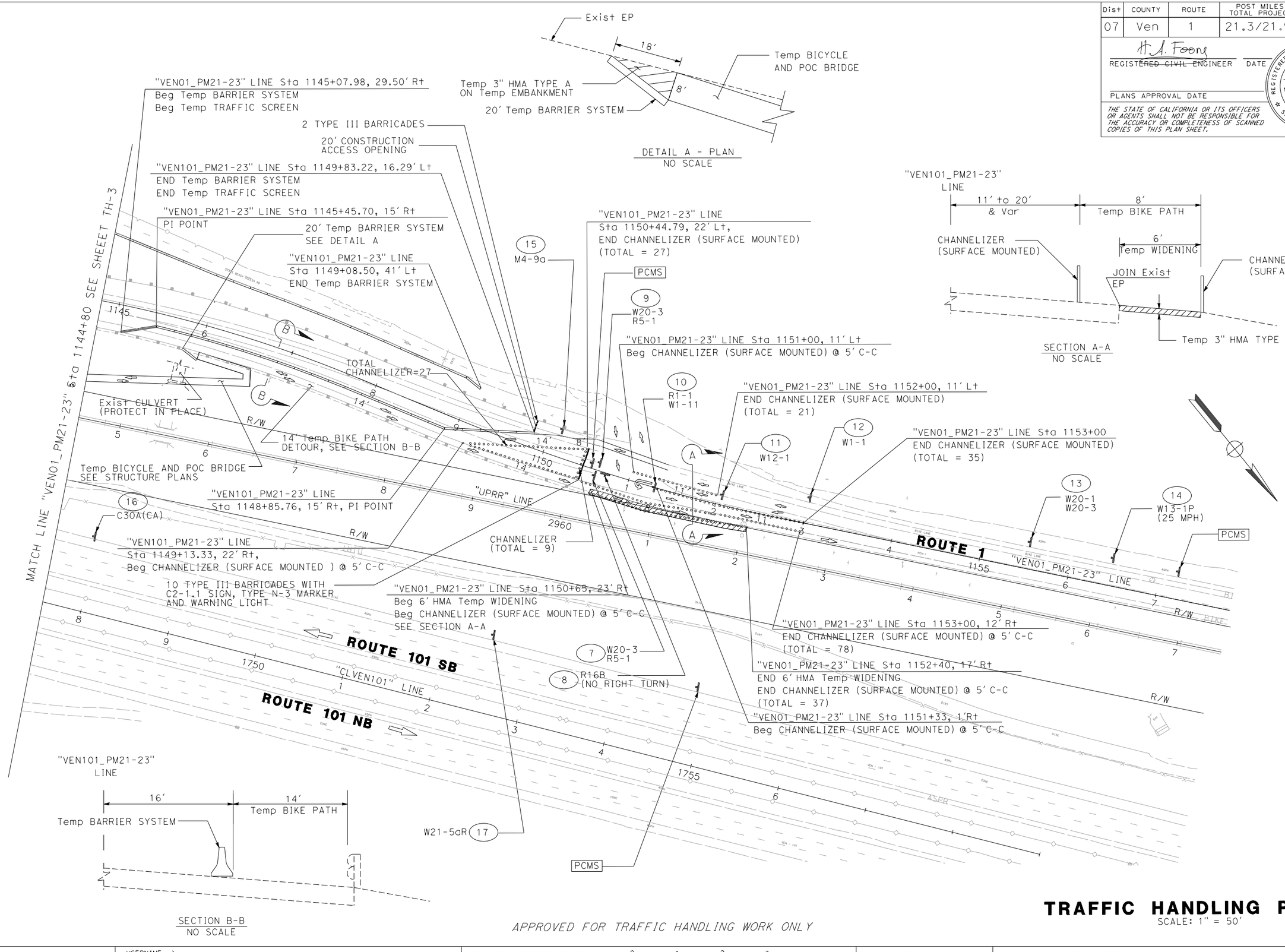
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REVISED BY	DATE REVISED
AARON FOONG	
REFUGIO DOMIMGUEZ	

CALCULATED-DESIGNED BY
CHECKED BY

FUNCTIONAL SUPERVISOR
REFUGIO DOMIMGUEZ

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN



APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

SCALE: 1" = 50'

TH-4

LAST REVISION 00-00-00
DATE PLOTTED => 10/6/2023
TIME PLOTTED => 1:33:28 PM

BORDER LAST REVISED 7/2/2010 | USERNAME => | DGN FILE => ...\Work-Div\0731960md004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

NOTE:
FOR ADDITIONAL QUANTITY, SEE O-2 SHEET.

SHEET NO.	STATION LINE	STATION TO STATION	DIRECTION	CHANELIZER (SURFACE MOUNTED)	TEMPORARY CRASH CUSHION MODULE	TYPE III BARRICADES	TEMPORARY BARRIER SYSTEM	PCMS	TEMPORARY TRAFFIC SCREEN	TYPE P MARKER	HOT MIX ASPHALT (TYPE A)	CONSTRUCTION AREA SIGNS (TRAFFIC HANDLING)					
												SIGN NO.	SIGN CODE	PANEL SIZE	POST SIZE	NO. OF POST	REMARKS
				EA	EA	EA	LF	EA	LF	EA	TON						
TH-1	CLVEN101	1711+90 TO 1719+30	NB				800										
TH-2	VEN01_RS-1	27+75 TO 27+86	NB				40										
TH-2	VEN01_RS-1	27+73.79 TO 28+82	NB				120										
TH-2	VEN01_RS-1/VEN01_PM21-23	29+03.23 TO 1131+10	NB				600										
TH-2	VEN01_RS-1/VEN01_PM21-23	29+00 TO 1126+13.12	NB				80										
TH-2	VEN01_RS-1/VEN01_PM21-23	29+03.23 TO 1131+10	NB				120										
TH-2	VEN01_PM21-23	1131+10 TO 1132+30					560										
TH-3	CLVEN101	1734+76.58 TO 1746+00	NB				1160										
TH-4	VEN01_PM21-23	1145+40 TO 1148+89	--				360										
TH-4	VEN01_PM21-23	1145+40 TO 1148+89	--		14		120										
TH-1	CLVEN101	1711+90	NB		14												
TH-3	CLVEN101	1746+00	SB														
TH-1	CLVEN101	1710+30 TO 1712+50	NB	14													
TH-3	CLVEN101	1746+25	SB	13													
TH-4	VEN01_PM21-23	1149+17.31 TO 1149+17.31	--	27													
TH-4	VEN01_PM21-23	1149+17.31 TO 1152+40	--	78													
TH-4	VEN01_PM21-23	1150+44	--	9													
TH-4	VEN01_PM21-23	1150+65 TO 1152+40	NB	37													
TH-4	VEN01_PM21-23	1151+00 TO 1152+00	SB	21													
TH-3	CLVEN101	1734+94.61 TO 1746+00	SB						1066								
TH-1	CLVEN101	1712+50	NB							1							
TH-3	CLVEN101	1745+40	SB							1							
TH-4	VEN01_PM21-23	1150+50	--			15											
TH-4	VEN01_PM21-23	1151+33 TO 1153+00	NB	35													
TH-1	CLVEN101	1707+00	NB														
TH-3	CLVEN101	1745+40	NB					1									
TH-4	CLVEN101	1750+00	SB					1									
TH-4	CLVEN101	1755+40	NB					1									
TH-4	VEN01_PM21-23	1150+50	SB					1									
TH-4	VEN01_PM21-23	1150+57	SB					1									
TH-4	VEN01_PM21-23	1150+65 TO 1152+40									0.5						
TH-4	VEN01_PM21-23	1146+00									0.2						
TH-1												1					COVER Exist SIGN
TH-1												2	C30A(CA)	48" x 48"	6" x 6"	1	
TH-1												3					COVER Exist SIGN
TH-1												4					COVER Exist SIGN
TH-1												5					COVER Exist SIGN
TH-1												6					COVER Exist SIGN
TH-4												7 6	W20-3 R5-1	36" x 48"	6" x 6"	1	
TH-4												8	R16B	36" x 48"	6" x 6"	1	
TH-4												9	W20-3 R5-1	36" x 48" 30" x 30"	6" x 6"	1	
TH-4												10	R1 W1-11	30" x 30" 48' x 48"	6" x 6"	1	
TH-4												11	W12-1	36" x 48"	6" x 6"	1	
TH-4												12	W1-1	48" x 48"	6" x 6"	1	
TH-4												13	W20-1 W20-3	48" x 48"	6" x 6"	1	
TH-4												14	W13-1P	36" x 48"	6" x 6"	1	25 MPH
TH-4												15	M4-9a	36" x 48"	6" x 6"	1	
TH-4												16	C30A (CA)	36" x 48"	6" x 6"	1	
TH-4												17	W21-5aR	36" x 48"	6" x 6"	1	
TH-3,TH-4						40	1220										
		TOTAL		234	28	55	5,180	5	1,066	2	0.7						

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	49	xx

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

6/30/21
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REVISED BY | DATE REVISED
AARON FOONG | REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

TRAFFIC HANDLING QUANTITIES

THQ-1

LAST REVISION 00-00-00 | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1819 | PROJECT NUMBER & PHASE 07160000251

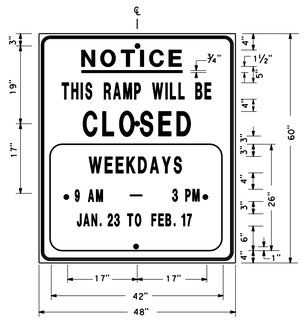
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER — DATE 08-10-23

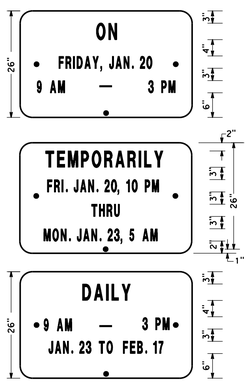
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — DYARI AHMED — No. 66868 — Exp. 9-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SIGN SP-1



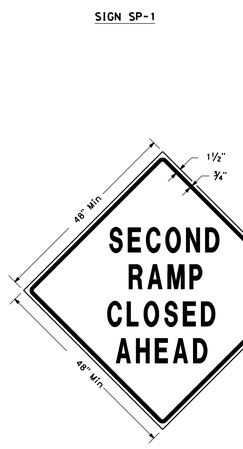
ALTERNATE OVERLAY PANELS (TYPICAL)

SPECIAL ADVANCE NOTICE PUBLICITY SIGN

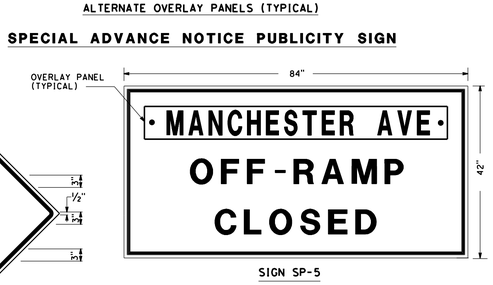
NOTES: SIGN SP-1

1. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
2. BOLT HOLES MUST BE ⅜" DIAMETER.
3. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
4. SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.

SIZE	BORDER WIDTH	MARGIN WIDTH	LETTER SIZE					CORNER RADIUS
			LINE 1	LINE 2*	LINE 3	LINE 4	LINE 5, 6, & 7*	
48"x60"	1¼"	¾"	4E	4D	6E	4D		3"
42"x26"	OVERLAY						3D	1½"
* CONDENSED SPACING IF NECESSARY								



SIGN SP-3



SIGN SP-5

NOTES: SIGNS SP-3 & SP-5

1. LETTERS - 6" SERIES D.
2. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED ORANGE BACKGROUND.
3. BOLT HOLES MUST BE ⅜" DIAMETER.
4. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
5. SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND.
6. SIGN SP-5 MUST BE USED IF THE OFF-RAMP TO BE CLOSED FOLLOWS A FREEWAY OFF-CONNECTOR.

SPECIAL SIGNS FOR EXIT RAMP CLOSURES

SIGN SP-4

OVERLAY PANEL (TYPICAL)

NOTES: SIGN SP-4

1. LETTERS - 6" SERIES C.
2. LETTERS AND BORDER MUST BE BLACK ON REFLECTORIZED WHITE BACKGROUND.
3. BOLT HOLES MUST BE ⅜" DIAMETER.
4. BASE MATERIAL MUST BE ALUMINUM (MINIMUM 0.06").
5. SIGNS MUST BE PLACED AT RAMP ENTRANCES IN ADDITION TO SIGNS POSTED IN ACCORDANCE WITH STANDARD PLAN T14.

SPECIAL SIGN FOR ENTRANCE RAMP CLOSURES

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS
SHEET 1 OF 2

NO SCALE

THD-1

CALCULATED-DESIGNED BY	KL	11/21
CHECKED BY		
	DUC M. TRAN	
FUNCTIONAL SUPERVISOR	DYARI AHMED	
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DTM	

REVISED BY | DATE REVISED

USER NAME => DATE PLOTTED => 8/10/2023
DGN FILE => ...\DTM\73196me001.dgn TIME PLOTTED => 9:09:51 AM

BORDER LAST REVISED 8/5/2020 | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1863 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER — 08-10-23 DATE

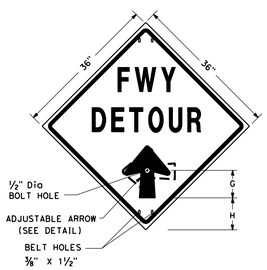
DYARI AHMED — No. 66868 — Exp. 9-30-24 — CIVIL — STATE OF CALIFORNIA — REGISTERED PROFESSIONAL ENGINEER

PLANS APPROVAL DATE

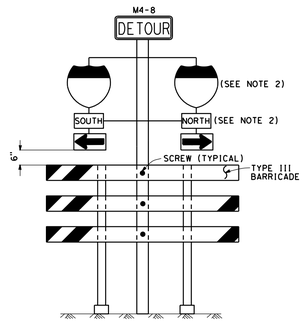
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ABBREVIATION

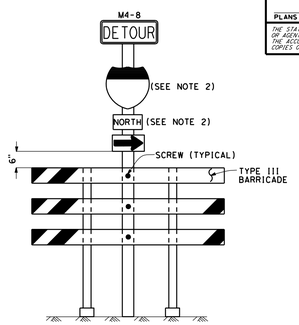
(CA) CALIFORNIA CODE



SIGN SP-2



SIGN SP-6 (SEE NOTE 1)



SIGN SP-7 (SEE NOTE 1)

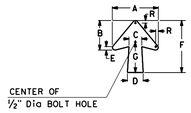
NOTES: SIGN SP-2

1. LETTERS - 6" SERIES E.
2. LETTERS, BORDER AND ARROW - BLACK ON RETROREFLECTORIZED ORANGE BACKGROUND.
3. BASE MATERIAL FOR SIGNS AND ARROWS MUST BE ALUMINUM (MINIMUM 0.06").
4. BELTS (LUGGAGE STRAPS) MUST BE 1" WIDE BY 48" LONG, MADE OF COTTON OR POLYPROPYLENE WEB MATERIAL.
5. SIGNS MUST BE MOUNTED WITH BOTTOMS OF SIGNS A MINIMUM OF 7' ABOVE GROUND EXCEPT AS OTHERWISE SHOWN ON OTHER TRAFFIC HANDLING DETAILS PLANS.

NOTES: SIGNS SP-6 & SP-7

1. IN LIEU OF PLACING SIGNS ON TYPE III BARRICADES, SIGNS, INCLUDING POSTS, MAY BE PLACED INTO THE GROUND OR FASTENED ONTO ELECTROLIERS.
2. USE APPROPRIATE ROUTE MARKER [G26-2(CA), G27-2(CA), G28-2(CA)] AND CARDINAL DIRECTION [NORTH (M3-1), SOUTH (M3-3), EAST (M3-2), WEST (M3-4)].

SPECIAL PORTABLE FREEWAY DETOUR SIGNS



DIMENSIONS								
A	B	C	D	E	F	G	H	R
11¼"	7¼"	3⅛"	4"	⅞"	13"	6⅜"	7¾"	⅝"

SPECIAL PORTABLE FREEWAY DETOUR SIGN

ADJUSTABLE ARROW DETAIL

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS

SHEET 2 OF 2

NO SCALE

THD-2

REVISED BY	DATE REVISED
DD	9/22

CALCULATED-DESIGNED BY: DUC M. TRAN
CHECKED BY: DYARI AHMED
FUNCTIONAL SUPERVISOR: DYARI AHMED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DTM

DATE PLOTTED => 8/10/2023
TIME PLOTTED => 15:10:13 AM

BORDER LAST REVISED 8/5/2020

USERNAME =>
DGN FILE => ...\DTM\731960me002.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1863

PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER — DATE: 08-10-23

DYARI AHMED No. 66868 Exp. 9-30-24 CIVIL STATE OF CALIFORNIA — REGISTERED PROFESSIONAL ENGINEER

PLANS APPROVAL DATE

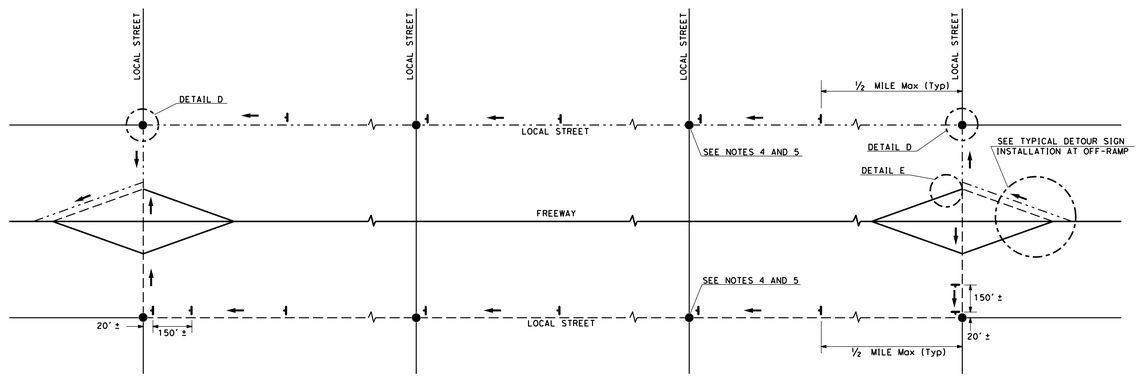
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND

- SIGN SP-2
- AND/OR — DESIGNATED DETOUR ROUTE
- DETOUR DIRECTION
- CONTROLLED INTERSECTION

NOTES:

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS MUST NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. SIGN LOCATIONS ARE APPROXIMATE. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER.
4. SP-2 SIGNS MUST BE POSTED AT EACH CONTROLLED INTERSECTION (EXCEPT AT COMMERCIAL PROPERTY, RESIDENTIAL COMPLEX OR T-INTERSECTION FROM ONE-WAY STREET) ALONG THE DESIGNATED DETOUR ROUTE.
5. UNLESS OTHERWISE SHOWN ON OTHER THD PLANS, WHEN CONTROLLED INTERSECTIONS ALONG THE DESIGNATED DETOUR ROUTE ARE CLOSELY SPACED, PLACE SP-2 SIGNS AT CONTROLLED INTERSECTIONS AT A DISTANCE NOT TO EXCEED ¼ MILE FROM THE PRECEDING DETOUR SIGN.
6. EXCEPT AS OTHERWISE SHOWN ON OTHER PLANS OR SPECIFIED IN THE SPECIAL PROVISIONS, SP-2 SIGNS MUST BE PLACED AS SHOWN ON THIS PLAN.



TYPICAL DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

TRAFFIC HANDLING DETAILS

TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE

SHEET 1 OF 3

NO SCALE

THD-3

CALCULATED-DESIGNED BY	DUC M. TRAN		
CHECKED BY	DYARI AHMED		
FUNCTIONAL SUPERVISOR	DYARI AHMED		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DTM		
		REVISED BY	KL
		DATE REVISED	11/21

LAST REVISION — DATE PLOTTED => 8/10/2023 TIME PLOTTED => 11:12:38 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\DTM\731960me003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1863 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER — 08-10-23 DATE

REGISTERED PROFESSIONAL ENGINEER — DYARI AHMED — No. 66868 — Exp. 9-30-24 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

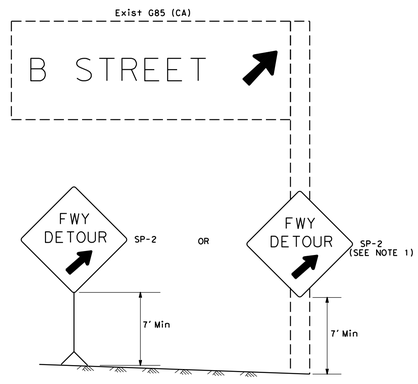
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CALCULATED-DESIGNED BY	CHECKED BY	REVISED BY	DATE REVISED
DUC M. TRAN	DYARI AHMED	KL	11/21

FUNCTIONAL SUPERVISOR: DYARI AHMED

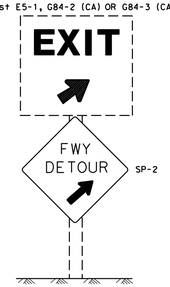
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — DTM — Caltrans

Exist G85 (CA)



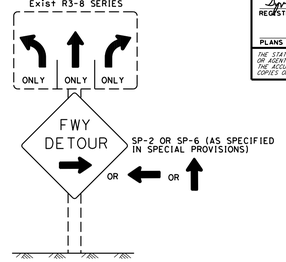
DETAIL A (SEE NOTE 3)

Exist E5-1, G84-2 (CA) OR G84-3 (CA)

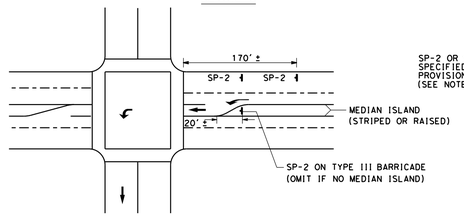


DETAIL B (SEE NOTE 3)

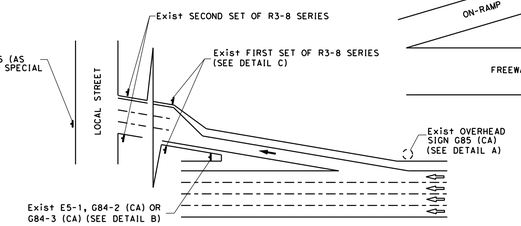
Exist R3-8 SERIES



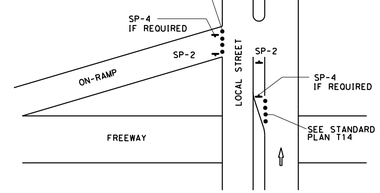
DETAIL C (SEE NOTES 4, 5, AND 6)



DETAIL D



TYPICAL DETOUR SIGN INSTALLATION AT OFF-RAMP



DETAIL E

LEGEND

- TRAFFIC CONE
- TEMPORARY TRAFFIC CONTROL SIGN
- DETOUR DIRECTION
- EXISTING OVERHEAD SIGN

NOTES: SIGN SP-2

1. SP-2 SIGNS MAY BE STRAPPED ON EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
2. SP-2 SIGNS MUST NOT BE INSTALLED ON BARRICADES EXCEPT AS OTHERWISE SHOWN.
3. OMIT DETAILS A AND B FOR FULL FREEWAY CLOSURES.
4. SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS PLAN SHEET 2 OF 2 FOR SP-6 SIGN DETAILS.
5. IF R3-8 SERIES SIGNS ARE NOT PRESENT AT THE OFF-RAMP, SP-2 OR SP-6 SIGNS MUST BE FASTENED ONTO EXISTING ELECTROLIER, SIGNAL POST OR SIGN POST.
6. EXCEPT FOR DETAILS A & B, OMIT SP-2 SIGNS IF RAMP HAS MANDATORY SINGLE MOVE.

SIGN CODE LEGEND

XXYY-Y: FEDERAL SIGN CODE PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

XXYY-Y (CA): CALIFORNIA SIGN CODE PER CALIFORNIA MUTCD

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE
SHEET 2 OF 3

NO SCALE — **THD-4**

LAST REVISION — DATE PLOTTED => 8/10/2023 — TIME PLOTTED => 09:44:58 AM

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\DTM\731960me004.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1863 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER — 08-10-23 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — DYARI AHMED — No. 66868 — Exp. 9-30-24 — CIVIL — STATE OF CALIFORNIA

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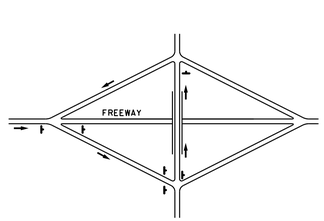
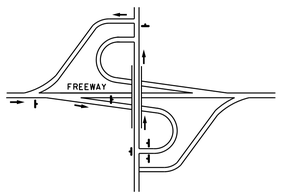


TYPE I



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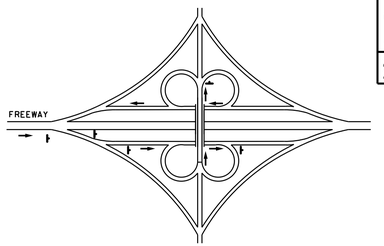

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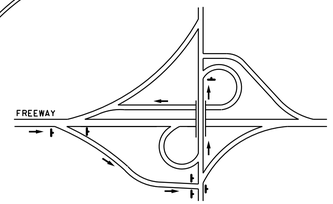
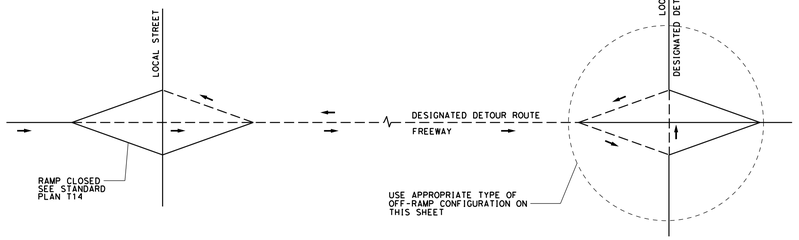
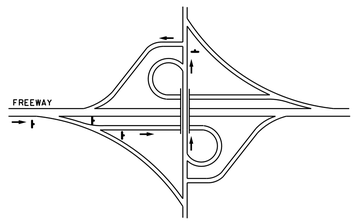


TYPE IV





TYPE V

TYPE OF OFF-RAMP CONFIGURATION	MINIMUM No. OF SP-2
TYPE I	6
TYPE II	6
TYPE III	5
TYPE IV	6
TYPE V	4

TYPICAL DETOUR SIGN INSTALLATION FOR OFF-RAMP CLOSURE

NOTES:

1. FOR RAMP CONFIGURATIONS NOT SHOWN, THE EXACT LOCATIONS AND MINIMUM NUMBER OF SP-2 SIGNS MUST BE DETERMINED BY THE ENGINEER.
2. SEE TRAFFIC HANDLING DETAILS-TRAFFIC CONTROL SYSTEM FOR RAMP CLOSURES, DETOUR SIGNS, AND MISCELLANEOUS DETAILS PLAN SHEET 2 OF 2 FOR SP-2 SIGN DETAILS.

LEGEND

- SIGN SP-2
- DETOUR DIRECTION
- DESIGNATED DETOUR ROUTE

TRAFFIC HANDLING DETAILS
TRAFFIC CONTROL SYSTEM FOR DETOUR SIGN INSTALLATION ALONG DESIGNATED DETOUR ROUTE
SHEET 3 OF 3

NO SCALE

THD-5

REVISED BY	KL		
DATE REVISED	11/21		
CALCULATED-DESIGNED BY	DUC M. TRAN		
CHECKED BY	DYARI AHMED		
FUNCTIONAL SUPERVISOR	DYARI AHMED		
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DTM		

BORDER LAST REVISED 8/5/2020 | USERNAME => | DGN FILE => ...\DTM\731960me005.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1863 | PROJECT NUMBER & PHASE 07160000251

LAST REVISION — DATE PLOTTED => 8/10/2023 — TIME PLOTTED => 9:42:42 AM

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	55	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

ANH D. NGUYEN No. 62370 Exp 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

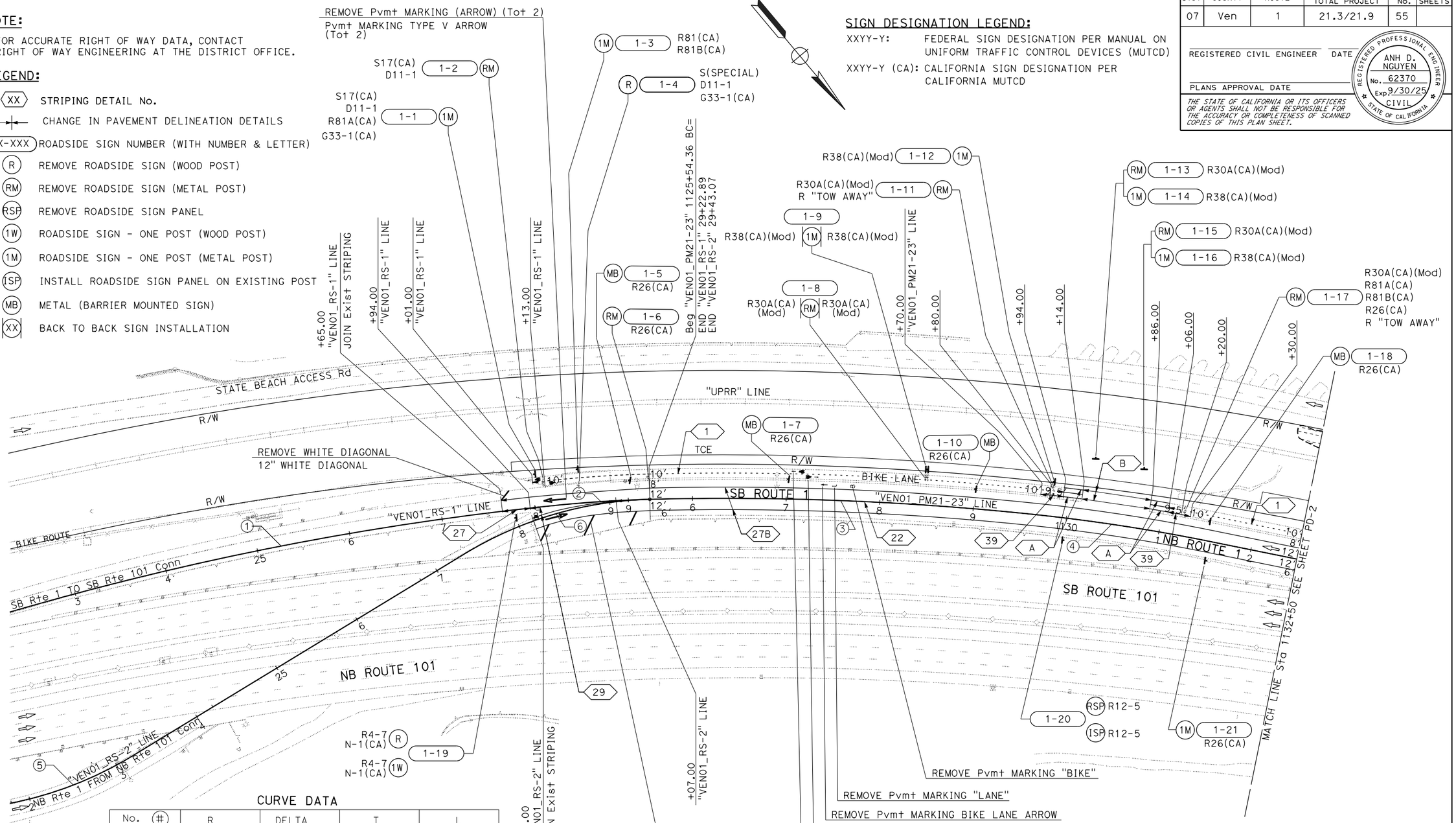
LEGEND:

- (XX) STRIPING DETAIL No.
- CHANGE IN PAVEMENT DELINEATION DETAILS
- (X-XXX) ROADSIDE SIGN NUMBER (WITH NUMBER & LETTER)
- (R) REMOVE ROADSIDE SIGN (WOOD POST)
- (RM) REMOVE ROADSIDE SIGN (METAL POST)
- (RSP) REMOVE ROADSIDE SIGN PANEL
- (1W) ROADSIDE SIGN - ONE POST (WOOD POST)
- (1M) ROADSIDE SIGN - ONE POST (METAL POST)
- (ISP) INSTALL ROADSIDE SIGN PANEL ON EXISTING POST
- (MB) METAL (BARRIER MOUNTED SIGN)
- (XX) BACK TO BACK SIGN INSTALLATION

SIGN DESIGNATION LEGEND:

XXYY-Y: FEDERAL SIGN DESIGNATION PER MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

XXYY-Y (CA): CALIFORNIA SIGN DESIGNATION PER CALIFORNIA MUTCD



CURVE DATA

No. (#)	R	DELTA	T	L
(1)	3,250.00′	10°39′27"	303.14′	604.53′
(2)	1,311.29′	04°19′18"	49.48′	98.91′
(3)	3,168.00′	07°22′38"	204.23′	407.89′
(4)	2,000.00′	05°31′20"	96.46′	192.76′
(5)	400.00′	21°38′03"	76.43′	151.03′
(6)	400.00′	29°50′27"	106.58′	208.33′

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50′

PD-1

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

REVISED BY	DATE REVISED
JAMES M. CANALITA	
ANH D. NGUYEN	
CALCULATED-DESIGNED BY	
CHECKED BY	
FUNCTIONAL SUPERVISOR	ANH D. NGUYEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

S:\design\31960\Traffic\Civil\Plans\Current\0731960na001.dgn

LAST REVISION | DATE PLOTTED => 25-SEP-2023 TIME PLOTTED => 07:50

BORDER LAST REVISED 8/5/2020 | USERNAME => s132301 DGN FILE => 0731960na001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	56	

REGISTERED CIVIL ENGINEER DATE

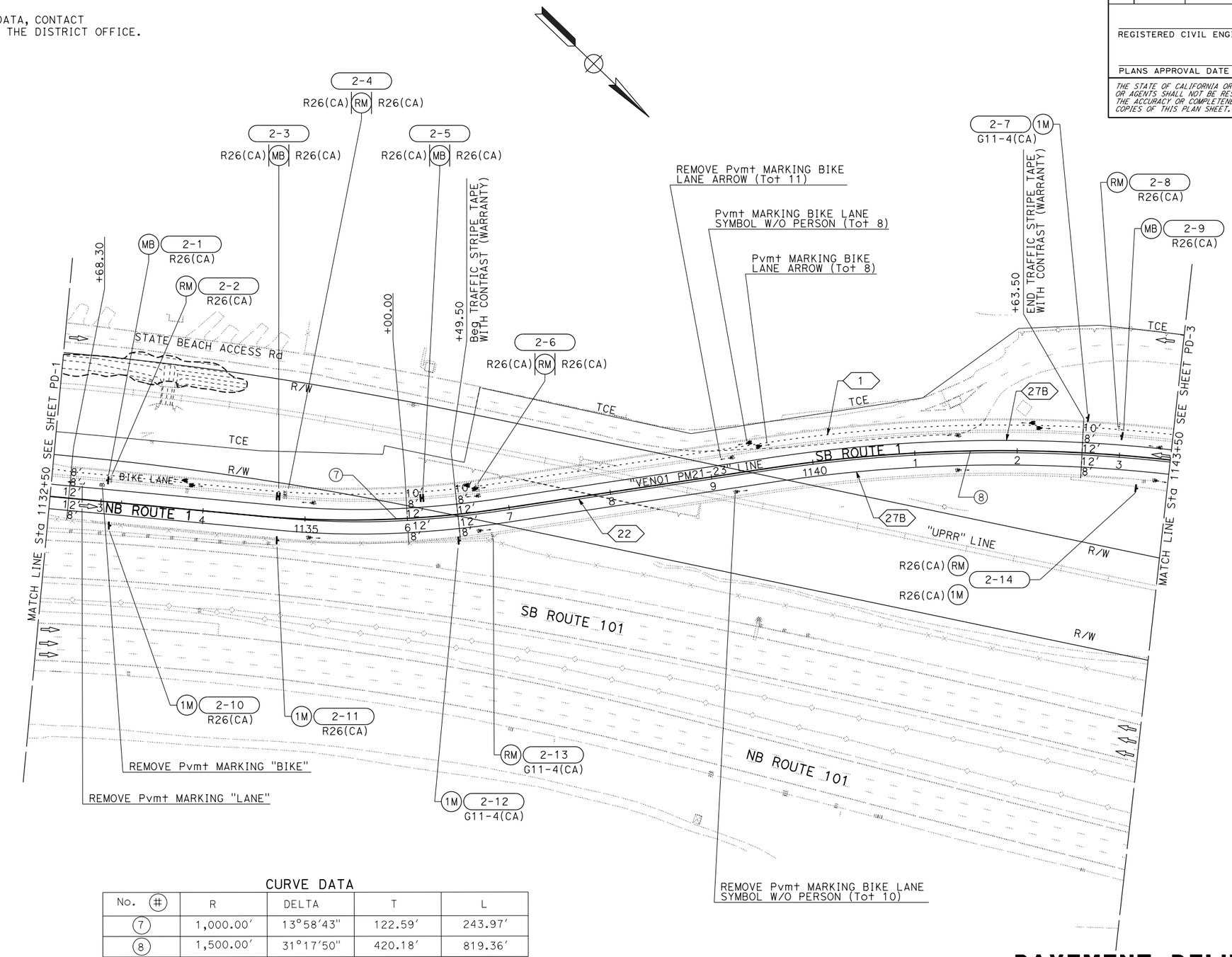
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ANH D. NGUYEN — No. 62370 — Exp 9/30/25 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. (#)	R	DELTA	T	L
(7)	1,000.00′	13°58′43"	122.59′	243.97′
(8)	1,500.00′	31°17′50"	420.18′	819.36′

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50′

PD-2

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: JAMES M. CANALITA
CHECKED BY: ANH D. NGUYEN
FUNCTIONAL SUPERVISOR: ANH D. NGUYEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION DATE PLOTTED => 25-SEP-2023
TIME PLOTTED => 07:52

S:\desig\319601\traffic\Civil\Plans\Current\0731960na002.dgn

BORDER LAST REVISED 8/5/2020 | USERNAME => s132301 | DGN FILE => 0731960na002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	57	

REGISTERED CIVIL ENGINEER DATE

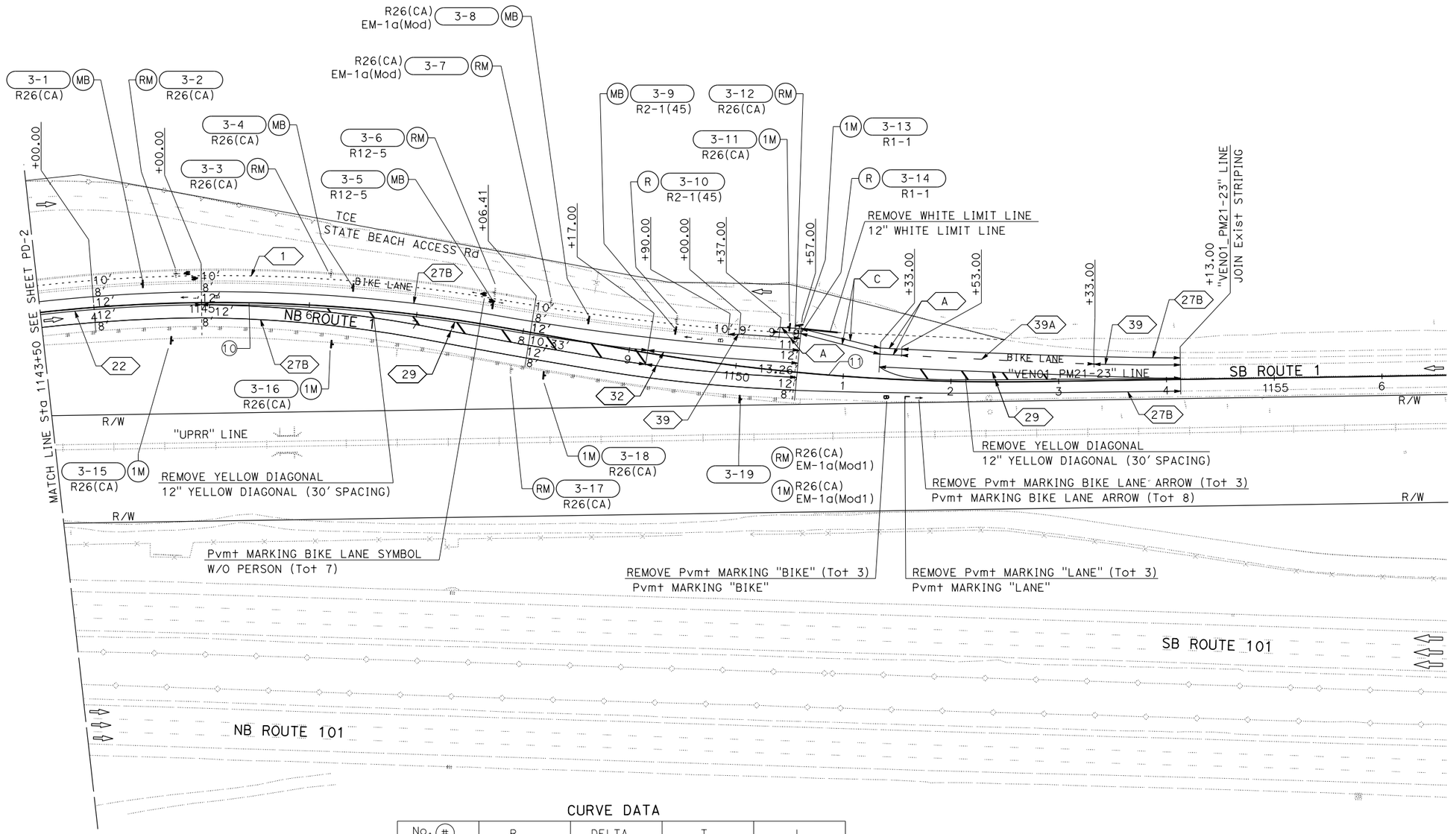
PLANS APPROVAL DATE

ANH D. NGUYEN No. 62370 Exp 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:

FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



CURVE DATA

No. (#)	R	DELTA	T	L
(10)	1,500.00′	31°17′50"	420.18′	819.36′
(11)	2,010.00′	10°53′07"	191.51′	381.87′

PAVEMENT DELINEATION AND SIGN PLAN

SCALE: 1" = 50′

PD-3

APPROVED FOR PAVEMENT DELINEATION AND SIGN WORK ONLY

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY: JAMES M. CANALITA
CHECKED BY: ANH D. NGUYEN
FUNCTIONAL SUPERVISOR: ANH D. NGUYEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION
DATE PLOTTED => 25-SEP-2023
TIME PLOTTED => 07:53

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BORDER LAST REVISED 8/5/2020 | USERNAME => s132301 DGN FILE => 0731960na003.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	58	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

ANH D. NGUYEN No. 62370 Exp 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

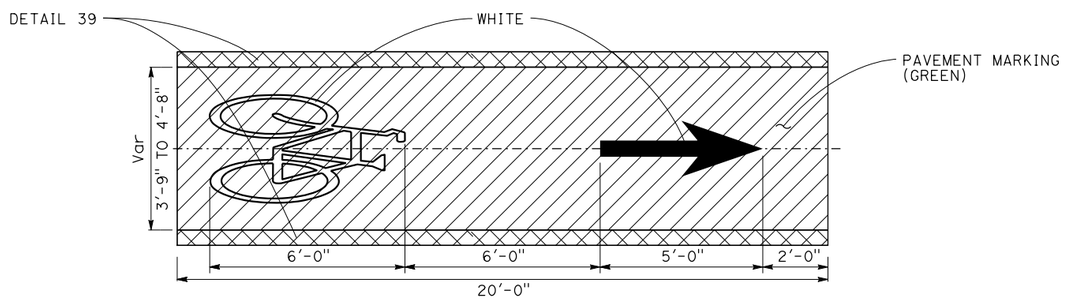
NOTE:

1. SEE RSP A20D FOR STRIPING DETAILS.

LEGEND:

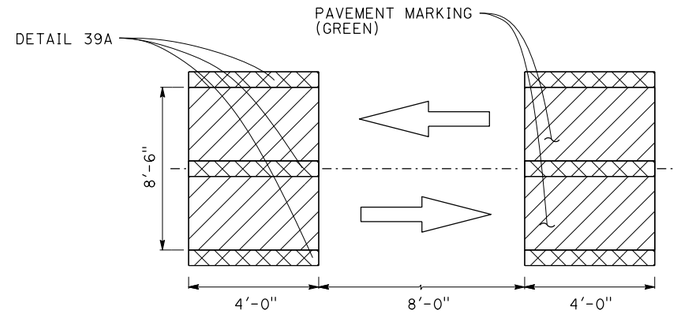
WHITE THERMOPLASTIC STRIPE

PAVEMENT MARKING (GREEN)



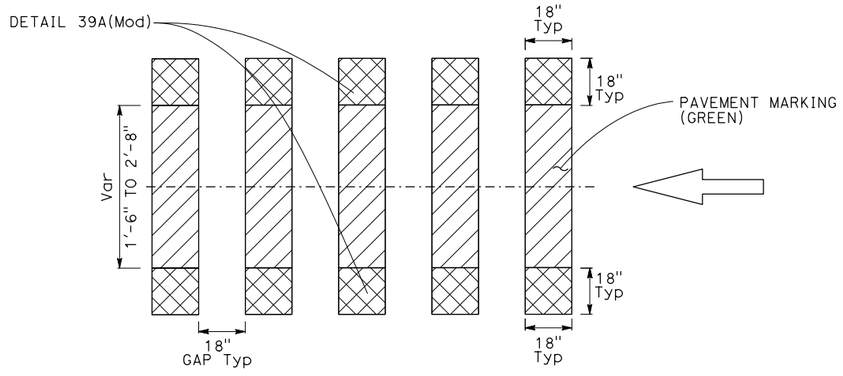
DETAIL A

BEGINNING AND ENDING OF BIKE LANE CONFLICT ZONES



DETAIL B

DASHED BIKE LANE MARKINGS THROUGH CONFLICT ZONES



DETAIL C

DASHED BIKE LANE EXTENSION THROUGH INTERSECTIONS

PAVEMENT DELINEATION DETAILS

NO SCALE

PDD-1

LAST REVISION: DATE PLOTTED => 25-SEP-2023 TIME PLOTTED => 07:54

REVISED BY	DATE REVISED

CALCULATED-DESIGNED BY	CHECKED BY
JAMES M. CANALITA	ANH D. NGUYEN

FUNCTIONAL SUPERVISOR: ANH D. NGUYEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® TRAFFIC DESIGN

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	59	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

ANH D. NGUYEN No. 62370 Exp 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PAVEMENT DELINEATION QUANTITIES

SHEET No.	STATION	REMOVE YELLOW THERMOPLASTIC TRAFFIC STRIPE (HAZARDOUS WASTE)				REMOVE					TRAFFIC STRIPE TAPE WITH CONTRAST (WARRANTY)			THERMOPLASTIC TRAFFIC STRIPE (ENHANCED WET NIGHT VISIBILITY)								PREFORMED THERMOPLASTIC PAVEMENT MARKING				THERMOPLASTIC PAVEMENT MARKING (ENHANCED WET NIGHT VISIBILITY)		METHYL METHACRYLATE PAINT PAVEMENT MARKING (GREEN)	PAVEMENT MARKER	
						THERMOPLASTIC TRAFFIC STRIPE			THERMOPLASTIC PAVEMENT MARKING	PAVEMENT MARKER																			RETROREFLECTIVE	
		4"	4"	4"	4"	4"	4"	6"			6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"								
		Det 22	Det 27	Det 29	Det 32	Det 39	Det 39A	Det 27B			Det 1	Det 22	Det 27B	Det 1	Det 39A	Det 22	Det 27	Det 27B	Det 29	Det 32	Det 39									
		SOLID YELLOW	SOLID YELLOW	DOUBLE SOLID YELLOW	DOUBLE SOLID YELLOW	SOLID WHITE	(BROKEN 8-4) (WHITE)	SOLID WHITE	THERMOPLASTIC		(BROKEN 17-7) (YELLOW)	SOLID YELLOW	SOLID WHITE	(BROKEN 17-7) (YELLOW)	(BROKEN 8-4) (WHITE)	SOLID YELLOW	SOLID YELLOW	SOLID WHITE	DOUBLE SOLID YELLOW	DOUBLE SOLID YELLOW	SOLID WHITE	ARROWS	WORDS	SYMBOLS	LIMIT LINE	DIAGONAL	18" x 18" Det 39A(Mod)	METHYL METHACRYLATE PAINT PAVEMENT MARKING (GREEN)	TYPE D	TYPE RY
		LF	LF	LF	LF	LF	LF	LF	SQFT	EA	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	LF	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	SQFT	EA	EA
PD-1	27+65.0 "VEN01_RS-1" LINE/ 28+16.0 "VEN01_RS-2" LINE TO 1132+50.0 "VEN01_PM21-23" LINE	980	41	244		514		1,673	139	130				714	219	731	30	1,673	91		170	94		56		75		515	74	2
PD-2	1132+50.0 TO 1143+50.0 "VEN01_PM21-23" LINE	1,474				42		2,200	127	94	614	614	1,228	486		486		972	870			28		56					98	
PD-3	1143+50.0 TO 1154+13.0 "VEN01_PM21-23" LINE	100		1,862	237	788	30	2,036	208	100				692	180	149		2,036	695	140	160	28	33	49	34	130	113	315	100	
SUBTOTAL		2,554	41	2,106	237	1,344	30	5,909	474	324	614	614	1,228	1,892	399	1,366	30	4,681	1,656	140	330	150	33	161	34	205	113	830	272	2
TOTAL		4,938				7,283			474	324	614	1,842		1,892	399	8,203						378				318		830	274	

CALCULATED-DESIGNED BY | JAMES M. CANALITA | REVISED BY

CHECKED BY | ANH D. NGUYEN | DATE REVISED

FUNCTIONAL SUPERVISOR | ANH D. NGUYEN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® TRAFFIC DESIGN

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PAVEMENT DELINEATION QUANTITIES

PDQ-1

LAST REVISION | DATE PLOTTED => 25-SEP-2023 | TIME PLOTTED => 07:55

BORDER LAST REVISED 8/5/2020 | USERNAME => s132301 | DGN FILE => 0731960nc001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	60	

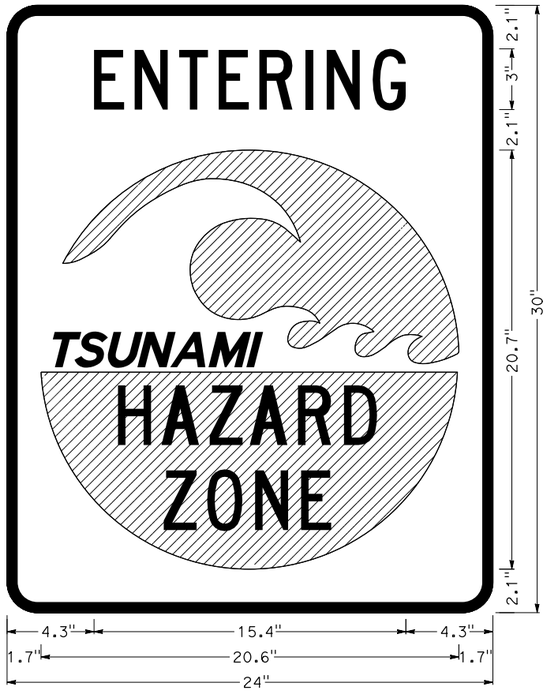
REGISTERED CIVIL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER — ANH D. NGUYEN — No. 62370 — Exp 9/30/25 — CIVIL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

EM-1a(Mod1)



1.50" RADIUS, 0.50" BORDER, BLUE ON WHITE;
[ENTERING] C; [HAZARD ZONE] C;

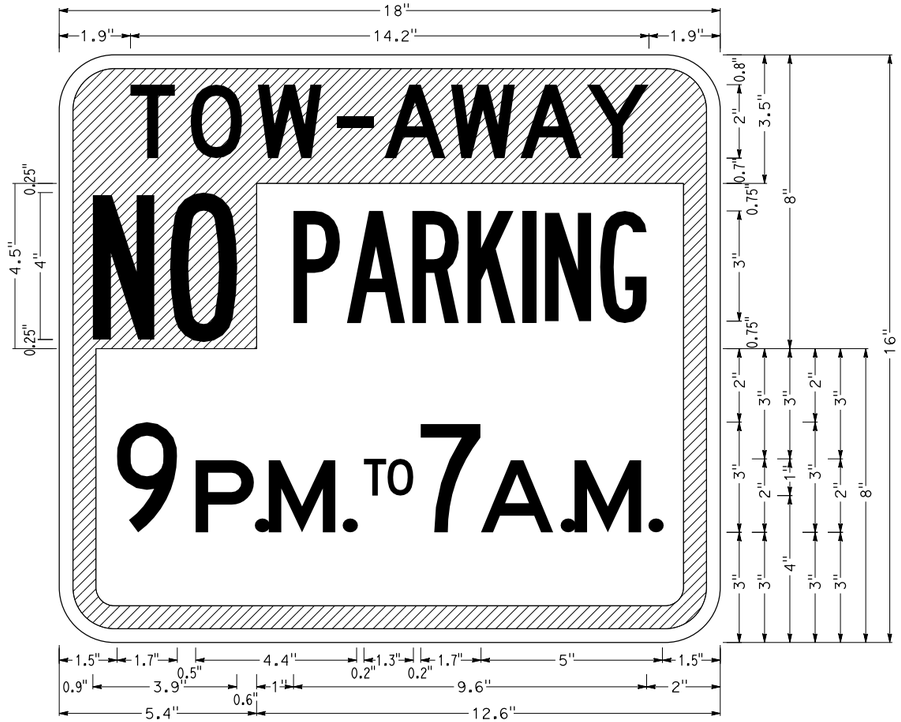
3-19

EM-1a(Mod)

1.50" RADIUS, 0.50" BORDER, BLUE ON WHITE;
[LEAVING] C; [HAZARD ZONE] C;

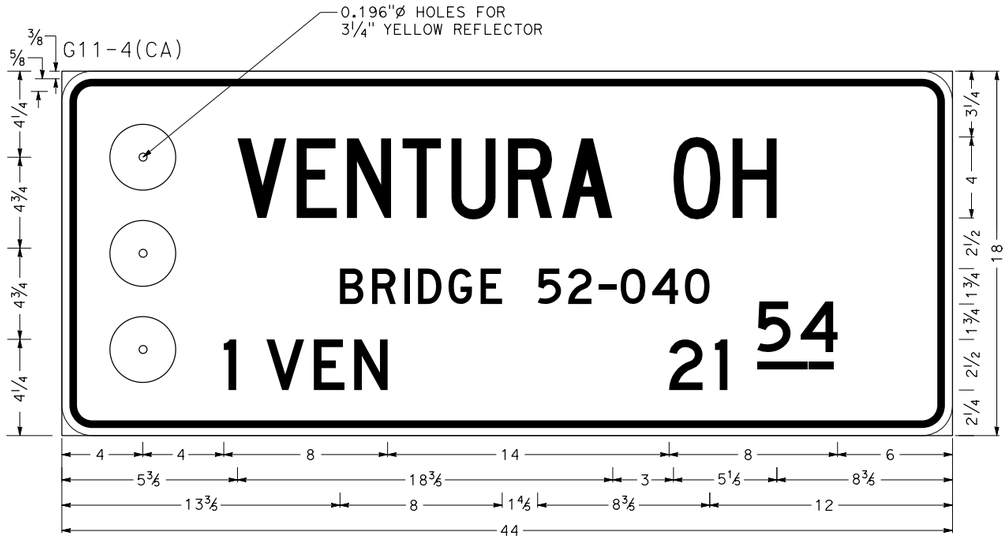
3-8

R38(CA)(Mod)



1.50" RADIUS, 0.38" BORDER, WHITE ON RED;
[TOW-AWAY] D 112% SPACING;
[NO] B 56% SPACING; [PARKING] B 42% SPACING;
[9] C 48% SPACING; [P.M.] E 40% SPACING; [TO] D 18% SPACING;
[7"] C 48% SPACING; [A.M.] E 40% SPACING;

1-9 1-12 1-14 1-16



ALL DIMENSIONS ARE IN INCHES
1½ RADIUS, ⅝ BORDER, ⅜ INDENT
WHITE BACKGROUND, BLACK LEGEND, BORDER AND LEGEND (NON-REFLECTIVE)
[VENTURA OH] C 72% SPACING; [BRIDGE 52-040] D; [1 VEN] D; [21] D; [54] D;

2-7 2-12

SIGN DETAILS

NO SCALE

SD-1

CALCULATED-DESIGNED BY	REVISED BY
TRINH NGUYEN	DATE REVISED
CHECKED BY	
ANH D. NGUYEN	
FUNCTIONAL SUPERVISOR	
ANH D. NGUYEN	

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

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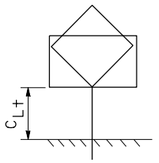
LAST REVISION | DATE PLOTTED => 25-SEP-2023 | TIME PLOTTED => 07:57

BORDER LAST REVISED 8/5/2020 | USERNAME => s132301 | DGN FILE => 0731960ob001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07160000251



TYPICAL POST HEIGHT DETAIL
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	61	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

ANH D. NGUYEN No. 62370 Exp 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

SIGN QUANTITIES

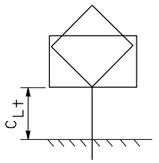
SHEET No.	SIGN No.	SIGN DESIGNATION	SIGN PANEL SIZE LENGTH (INCH)	SIGN PANEL SIZE DEPTH (INCH)	SINGLE FACED	POST DATA: CLEARANCE (C) IN FEET L+	POST DATA: CLEARANCE (C) IN FEET R+	POST DATA: SIZE (INCH×INCH)	POST DATA: TOTAL LENGTH IN FEET L+	POST DATA: TOTAL LENGTH IN FEET R+	SIGN FACING MATERIAL: BACKGROUND SHEETING COLOR	BACKGROUND RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND RETROREFLECTIVE ASTM TYPE	PROTECTIVE OVERLAY PREMIUM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063" - UNFRAMED) SQFT	ROADSIDE SIGN - ONE POST (WOOD POST) EA	ROADSIDE SIGN - ONE POST (METAL POST) EA	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST EA	METAL (BARRIER MOUNTED SIGN) LB	REMOVE: ROADSIDE SIGN (WOOD POST) EA	REMOVE: ROADSIDE SIGN (METAL POST) EA	REMOVE: ROADSIDE SIGN PANEL EA	TREATED WOOD WASTE LB	REMARKS
PD-1	1-1	S17(CA)	24	6	•	7		2.5 x 2.5	14.5		G	XI	W	XI	•	1.0		1								
		D11-1	24	18	•						G	XI	W	XI	•	3.0										
		R81A(CA)	12	5	•						G	XI	W	XI	•	0.5										
		G33-1(CA)	24	6	•						G	XI	W	XI	•	1.0										
	1-2	S17(CA)																				1				
		D11-1																								
	1-3	R81(CA)	12	8	•	7		2.5 x 2.5	12.6		W	VIII	B		•	0.7		1								
		R81B(CA)	8	5	•						W	VIII	B		•	0.3										
	1-4	S(SPECIAL)																			1				60	
		D11-1																								
		G33-1(CA)																								
	1-5, 1-6, 1-7, 1-10, 1-18	R26(CA)	12	18	•	7		4 NPS XS	5.0		W	VIII	R	XI	•	6.0				360		1				
	1-8, 1-11, 1-13, 1-15	R30A(CA)(Mod)																				4				
		R "TOW AWAY"																								
	1-9, 1-12, 1-14, 1-16	R38(CA)(Mod)	18	16	•	7		2.5 x 2.5	13.0		W	VIII	R	XI	•	8.0		4								SIGN 1-9 BACK TO BACK, SEE SD-1 FOR SIGN DETAILS
SHEET TOTAL																20.5		6		360	1	6		60	

LEGEND: B = BLACK ; Y = YELLOW ; R = RED ; W = WHITE ; G = GREEN ; BL = BLUE ; BR = BROWN ;
P = PANTONE ; FG = FLUORESCENT YELLOW GREEN ; FY = FLUORESCENT YELLOW

SIGN QUANTITIES
SQ-1

CALCULATED-DESIGNED BY: JAMES M. CANALITA
CHECKED BY: ANH D. NGUYEN
FUNCTIONAL SUPERVISOR: ANH D. NGUYEN
REVISED BY
DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN
S:\design\319601\traffic\Civil\Plans\Current\0731960od001.dgn
LAST REVISION
DATE PLOTTED => 25-SEP-2023
TIME PLOTTED => 07:59

BORDER LAST REVISED 8/5/2020 | USERNAME => s132301 DGN FILE => 0731960od001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07160000251



TYPICAL POST HEIGHT DETAIL
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	62	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

ANH D. NGUYEN No. 62370 Exp 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

SIGN QUANTITIES

SHEET No.	SIGN No.	SIGN DESIGNATION	SIGN PANEL SIZE LENGTH INCH	SIGN PANEL SIZE DEPTH INCH	SINGLE FACED	POST DATA CLEARANCE (C) IN FEET L+	POST DATA CLEARANCE (C) IN FEET R+	POST DATA SIZE INCH×INCH	POST DATA TOTAL LENGTH IN FEET L+	POST DATA TOTAL LENGTH IN FEET R+	SIGN FACING MATERIAL BACKGROUND SHEETING COLOR	BACKGROUND RETROREFLECTIVE ASTM TYPE	LEGEND SHEETING COLOR	LEGEND RETROREFLECTIVE ASTM TYPE	PROTECTIVE OVERLAY PREMIUM	FURNISH SINGLE SHEET ALUMINUM SIGN (0.063" - UNFRAMED) SQFT	ROADSIDE SIGN - ONE POST (WOOD POST) EA	ROADSIDE SIGN - ONE POST (METAL POST) EA	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST EA	METAL (BARRIER MOUNTED SIGN) LB	REMOVE ROADSIDE SIGN (WOOD POST) EA	REMOVE ROADSIDE SIGN (METAL POST) EA	REMOVE ROADSIDE SIGN PANEL EA	TREATED WOOD WASTE LB	REMARKS
PD-1	1-17	R30A(CA)																								
		R81A(CA)																								
		R81B(CA)																								
		R26(CA)																								
		R "TOW AWAY"																								
	1-19	R4-7	24	30	•	7		4 x 6	16.2		W	VIII	B		•	5.0	1				1			60	
		N-1(CA)	18	18	•						FY	XI	B		•	2.3									
	1-20	R12-5	24	36	•						W	VIII	B		•	6.0			1				1		10T 13T 15T
	1-21	R26(CA)	12	18	•	7		2.5 x 2.5	13.0		W	VIII	B		•	1.5		1							
PD-2	2-1, 2-2, 2-3, 2-4, 2,5, 2-6, 2-8, 2-9,	R26(CA)	12	18	•	7		4 NPS XS	5.0		W	VIII	R	XI	•	9.0				360		4			SIGNS 2-3 AND 2-5 BACK TO BACK
	2-7, 2-12, 2-13	G11-4(CA)	44	18	•	3		2.5 x 2.5	9.0		W	VIII	B		•	11.0		2				1			SEE SD-1 FOR SIGN DETAILS
	2-10, 2-11, 2-14	R26(CA)	12	18	•	7		2.5 x 2.5	13.0		W	VIII	B		•	4.5		3				1			
PD-3	3-1, 3-2, 3-3, 3-4	R26(CA)	12	18	•	7		4 NPS XS	5.0		W	VIII	R	XI	•	3.0				180		2			
	3-5, 3-6	R12-5	24	36	•	7		4 NPS XS	6.5		W	VIII	B		•	6.0				113		1			10T 13T 15T
	3-7, 3-8	R26(CA)	12	18	•	7		4 NPS XS	7.5		W	VIII	R	XI	•	1.5				128		1			
		EM-1a(Mod)	24	30	•						W	VIII	BL	XI	•	5.0									SEE SD-1 FOR SIGN DETAILS
SHEET TOTAL																54.8	1	4	1	781	1	11	1	60	

LEGEND: B = BLACK ; Y = YELLOW ; R = RED ; W = WHITE ; G = GREEN ; BL = BLUE ; BR = BROWN ;
P = PANTONE ; FG = FLUORESCENT YELLOW GREEN ; FY = FLUORESCENT YELLOW

SIGN QUANTITIES
SQ-2

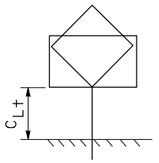
CALCULATED-DESIGNED BY: JAMES M. CANALITA
CHECKED BY: ANH D. NGUYEN
FUNCTIONAL SUPERVISOR: ANH D. NGUYEN
REVISED BY
DATE REVISED

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

S:\design\319601\traffic\Civil\Plans\Current\0731960od002.dgn

LAST REVISION
DATE PLOTTED => 25-SEP-2023
TIME PLOTTED => 08:01

BORDER LAST REVISED 8/5/2020 | USERNAME => s132301 DGN FILE => 0731960od002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 2124 | PROJECT NUMBER & PHASE 07160000251



TYPICAL POST HEIGHT DETAIL
NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	63	

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — ANH D. NGUYEN — No. 62370 — Exp 9/30/25 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

SIGN QUANTITIES

SHEET No.	SIGN No.	SIGN DESIGNATION	SIGN PANEL SIZE		SINGLE FACED	POST DATA				SIGN FACING MATERIAL					FURNISH SINGLE SHEET ALUMINUM SIGN	ROADSIDE SIGN - ONE POST (WOOD POST)	ROADSIDE SIGN - ONE POST (METAL POST)	INSTALL ROADSIDE SIGN PANEL ON EXISTING POST	METAL (BARRIER MOUNTED SIGN)	REMOVE			TREATED WOOD WASTE	REMARKS
										BACKGROUND		LEGEND		PROTECTIVE OVERLAY										
			LENGTH	DEPTH		CLEARANCE (C) IN FEET		SIZE	TOTAL LENGTH IN FEET						(0.063" - UNFRAMED)					ROADSIDE SIGN (WOOD POST)	ROADSIDE SIGN (METAL POST)	ROADSIDE SIGN PANEL		
			INCH	INCH		L†	R†	INCH×INCH	L† R†	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	SHEETING COLOR	RETROREFLECTIVE ASTM TYPE	PREMIUM	SQFT	EA	EA	EA	LB	EA	EA	EA	LB	
PD-3	3-9, 3-10	R2-1(45)	24	30	•	7		4 NPS XS	6.0	W	VIII	B		•	5.0				105		1			
	3-11, 3-12, 3-15, 3-16, 3-17, 3-18	R26(CA)	12	18	•	7		2.5 x 2.5	13.0	W	VIII	B		•	4.5		3				3			
	3-13, 3-14	R1-1	30	30	•	7		2.5 x 2.5	14.0	W	VIII	R	XI	•	6.3		1				1			
	3-19	R26(CA)	12	18	•	7		2.5 x 2.5	15.5	W	VIII	R	XI	•	1.5		1				1			
		EM-1a(Mod1)	24	30	•					W	VIII	BL	XI	•	5.0									SEE SD-1 FOR SIGN DETAILS
SHEET TOTAL															22.3		5		105		6			
SHEET TOTAL FROM SQ-1															20.5		6		360	1	6		60	
SHEET TOTAL FROM SQ-2															54.8	1	4	1	781	1	11	1	60	
TOTAL															97.6	16		1	1,246	2	23	1	120	

LEGEND: B = BLACK ; Y = YELLOW ; R = RED ; W = WHITE ; G = GREEN ; BL = BLUE ; BR = BROWN ;
P = PANTONE ; FG = FLUORESCENT YELLOW GREEN ; FY = FLUORESCENT YELLOW

SIGN QUANTITIES
SQ-3

CALCULATED-DESIGNED BY: JAMES M. CANALITA
CHECKED BY: ANH D. NGUYEN
FUNCTIONAL SUPERVISOR: ANH D. NGUYEN
REVISED BY
DATE REVISED
LAST REVISION
DATE PLOTTED => 25-SEP-2023
TIME PLOTTED => 08:02

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

S:\design\319601\traffic\Civil\Plans\Current\0731960od003.dgn

BORDER LAST REVISED 8/5/2020
USERNAME => s132301
DGN FILE => 0731960od003.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 2124
PROJECT NUMBER & PHASE 07160000251

NOTE:

FOR QUANTITY GRAND TOTAL, SEE SHEET Q-2.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	64	xx

H. A. Foong
REGISTERED CIVIL ENGINEER — DATE

H.A. FOONG No. 50858 Exp. 9/30/25 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ROADWAY QUANTITIES

SHEET NO.	LINE	STATION TO STATION	DIRECTION	ROADWAY EXCAVATION	CRASH CUSHION SCI-100 GM	REMOVE GUARDRAIL	2' PEDESTRIAN RAILING	4' PEDESTRIAN RAILING	RUBBERIZED HOT MIX ASPHALT GAP GRADE (RHMA-G)	HOT MIX ASPHALT (TYPE A)	LEAN CONCRETE BASE	CLASS 3 AGGREGATE BASE	JPCP	COLD PLANE ASPHALT CONCRETE PAVEMENT	REMOVE CONCRETE BARRIER (TYPE K)	CONCRETE BARRIER TYPE 86HB (Mod 2)	CONCRETE BARRIER TYPE 86HB (Mod 3)	TREATED WOOD WASTE	TACK COAT (SEAL)	MIDWEST GUARRAIL SYSTEM - STEEL POST	TRANSITION RAILING (TYPE WB-31)	END CAP (TYPE A)	VEGETATION CONTROL (MINOR CONCRETE)	REMOVE AC DIKE	PLACE HMA DIKE (TYPE F)	GUARD RAILING DELIENATOR	ROADWAY EXCAVATION RETAINING WALL	Temp HIGH-VISIBILITY FENCE (ESA)	ALTERNATIVE IN-LINE TERMINAL SYSTEM
				CY	EA	LF		LF	TON	TON	CY	CY	CY	SQYD	LF	LF	LF	LB	TON	LF	EA	EA	SQYD	LF	LF	EA	CY	LF	EA
L-1	VEN01_RS-1	27+92.77 TO 28+32.82	SB	59																									
L-1	VEN01_RS-1	28+82.06 TO 29+22.89	SB	60																									
L-1	VEN01_PM21-23	1125+54.36 TO 1132+50	SB	1018																									
L-2	VEN01_PM21-23	1132+50 TO 1136+19.50	SB/NB	1396																									
L-2	VEN01_PM21-23	1142+93.50 TO 1143+50	SB/NB	215																									
L-3	VEN01_PM21-23	1143+50 TO 1145+00	SB/NB	606																									
L-3	VEN01_PM21-23	1147+80 TO 1150+52.72	SB	145																									
L-1	VEN01_RS-1	28+82.06 TO 29+22.89	SB														41												
L-1	VEN01_PM21-23	1125+54.36 TO 1129+80	SB														426												
L-1	VEN01_PM21-23	1131+20 TO 1132+50	SB														130												
L-2	VEN01_PM21-23	1132+50 TO 1136+17.50	SB														368												
L-2	VEN01_PM21-23	1142+95.50 TO 1143+50	SB														55												
L-3	VEN01_PM21-23	1143+50 TO 1150+00	SB														650												
L-3	VEN01_PM21-23	1145+00 TO 1147+80	SB											1823															
L-3	VEN01_PM21-23	1147+80 TO 1150+54.72	SB											1567															
L-1	VEN01_RS-1	28+82.06 TO 29+22.83	SB				41																						
L-1	VEN01_RS-1	28+13.09 TO 28+32.87	SB					20																					
L-1	VEN01_RS-1	28+82.06 TO 29+22.89						41																					
L-1	VEN01_PM21-23	1125+54.36 TO 1129+80	SB				426																						
L-1	VEN01_PM21-23	1131+20 TO 1136+17.5	SB				498																						
L-2	VEN01_PM21-23	1142+95.50 TO 1150+00	SB				705																						
L-1	VEN01_PM21-23	1125+54.36 TO 1129+80	SB					426																					
L-1	VEN01_PM21-23	1131+20 TO 1132+50	SB					130																					
L-2	VEN01_PM21-23	1132+50 TO 1132+68.30	SB					18																					
L-3	VEN01_PM21-23	1148+03.87 TO 1150+55	SB					251																					
L-1	VEN01_RS-1	27+79.69 TO 1126+00	SB																									193	
L-1,L-2	VEN01_PM21-23	1132+00 TO 1135+79.51	SB																									321	
L-2	VEN01_PM21-23	1136+21.69 TO 1137+64.44	SB																									146	
L-2	CLVEN101	1745+00 TO 1745+00	SB																									155	
L-2,L-3	CLVEN101	1745+16.77 TO 1747+17.90	SB																									212	
L-3	VEN01_PM21-23	1146+00 TO 1147+00	NB																									145	
L-2	VEN01_PM21-23	1136+00 TO 1136+75	NB			75												445											
L-2,L-3	VEN01_PM21-23	1142+50 TO 1150+54.72	SB			805												12,151											
L-2,L-3	VEN01_PM21-23	1143+05.15 TO 1147+20	NB																	400	1	1	90		415	35			
L-2,L-3	VEN01_PM21-23	1142+50 TO 1147+20	NB			470																							
		SUBTOTAL		3,500	0	1,350	1,670	886	0	0	0	0	0	3,390	0	0	1,670	12,596	0	400	1	1	90		415	35	0	1,172	

SUMMARY OF QUANTITIES
Q-1

REVISED BY | DATE REVISED
AARON FOONG | REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN
Caltrans

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	65	xx

H. A. Foong
REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — H.A. FOONG — No. 50858 — Exp. 9/30/25 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

ROADWAY QUANTITIES

SHEET NO.	STATION LINE	STATION TO STATION	DIRECTION	ROADWAY EXCAVATION	CRASH CUSHION SCI-100 GM	REMOVE GUARDRAIL	2' PEDESTRIAN RAILING	4' PEDESTRIAN RAILING	RUBBERIZED HOT MIX ASPHALT GAP GRADE (RHMA-G)	HOT MIX ASPHALT (TYPE A)	LEAN CONCRETE BASE	CLASS 3 AGGREGATE BASE	JPCP	COLD PLANE ASPHALT CONCRETE PAVEMENT	REMOVE CONCRETE BARRIER (TYPE K)	CONCRETE BARRIER TYPE 86HB (Mod 2)	CONCRETE BARRIER TYPE 86HB (Mod 3)	TREATED WOOD WASTE	TACK COAT (SEAL)	MIDWEST GUARRAIL SYSTEM - STEEL POST	TRANSITION RAILING (TYPE WB-31)	END CAP (TYPE A)	VEGETATION CONTROL (MINOR CONCRETE)	REMOVE AC DIKE	PLACE HMA DIKE (TYPE F)	GUARD RAILING DELIENATOR	ROADWAY EXCAVATION RETAINING WALL	Temp HIGH-VISIBILITY FENCE (ESA)	ALTERNATIVE IN-LINE TERMINAL SYSTEM
				CY	EA	LF	LF	LF	TON	TON	CY	CY	CY	SQYD	LF	LF	LF	LB	TON	LF	EA	EA	SQYD	LF	LF	EA	CY	LF	EA
L-1	VEN01_PM21-23	1129+80	SB		1																								
L-1	VEN01_PM21-23	1131+20	SB		1																								
L-3	VEN01_PM21-23	1150+00	SB		1																								
L-1	VEN01_RS-1	27+85.50 TO 28+32.82	SB									18	14																
L-1	VEN01_RS-1	28+82.06 TO 29+22.89	SB									16	12																
L-1	VEN01_PM21-23	1125+54.36 TO 1132+50	SB						187	326	285	812	195																
L-2	VEN01_PM21-23	1132+50 TO 1136+19.50	SB/NB						198	347	302	690	83																
L-2	VEN01_PM21-23	1142+93.50 TO 1143+50	SB/NB						31	53	46	106	13																
L-3	VEN01_PM21-23	1143+50 TO 1145+00	SB/NB						81	141	123	292	42																
L-3	VEN01_PM21-23	1145+00 TO 1147+80	SB/NB						150	263	229	436																	
L-3	VEN01_PM21-23	1147+80 TO 1150+54.72	SB/NB						148	258	224	513	61																
L-2,L-3	VEN01_PM21-23	1142+64.50 TO 1148+06.41	SB																								3150		
L-2	VEN01_PM21-23	1136+54.66 TO 1137+38.02	---																								850		
L-3	VEN01_PM21-23	1143+05 TO 1147+87																											
L-3	VEN01_PM21-23	1145+00 TO 1147+20																											
L-1	VEN01_PM21-23	1129+80 TO 1132+20	NB												240														
L-1,L-2	VEN01_PM21-23	1129+80 TO 1132+93.20	NB													315													
L-2,L-3	VEN01_PM21-23	1142+50 TO 1147+20	NB																						470				
L-3	VEN01_PM21-23	1155+80 TO 1156+30	SB																										1
		SUBTOTAL		0	3	0		0	795	1,388	1,209	2,883	420	0	240	315	0	0	0	0	0		0	470	0	0	4,000	0	1
		GRAND TOTAL		3,500	3	1,350	1,670	886	795	1,388	1,209	2,883	420	3,390	240	315	1,670	12,596	1	400	1	1	90	470	415	35	4,000	1,172	1

TEMPORARY WATER POLLUTION CONTROL QUANTITIES

ITEM DESCRIPTION	STATION LINE	STATION/LOCATION	UNIT	QUANTITY
TEMPORARY FIBER ROLL	ROUTE 1 AND STATE BEACH ACCESS Rd.	27+87.79 TO 1139+00	LF	3,020
TEMPORARY GRAVEL BAG BERM	N/A	Misc LOCATIONS	LF	1000
TEMPORARY MULCH	ROUTE 1 AND STATE BEACH ACCESS Rd.	Ret WALL/Misc LOCATIONS	SQYD	2,300

SUMMARY OF QUANTITIES
Q-2

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION 00-00-00
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME

BORDER LAST REVISED 7/2/2010
USERNAME => $USER
DGN FILE => $REQUEST
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1819
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	66	

George Olguin
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

IRRIGATION SPRINKLER SCHEDULE

SYMBOL	ITEM DESCRIPTION	SPRAY PATTERN	RADIUS	OPERATING PRESSURE	PRESSURE COMPENSATING	DISCHARGE RATE (+/- 5%)	INLET CONNECTION DIAMETER	RISER SPRINKLER ASSEMBLY		TREE WELL DRAINPIPE LENGTH	REMARKS
								MATERIAL	SIZE (IPS INCH)		
			ft	psi	psi	GPM	INCH			INCH	
O	TREE WELL SPRINKLER ASSEMBLY	F		30	X	0.25	½	PI	½	36	BUBBLER, ① ②

NOTES: APPLICABLE WHERE CIRCLED

① 2 BUBBLER PER TREE
② WITH IN-LINE CHECK VALVE

IRRIGATION QUANTITY
(LATERAL SUPPLY SIDE OF CONTROL VALVE)

SHEET NUMBER	PLASTIC PIPE (SCHEDULE 40) (SUPPLY LINE)	CAM COUPLER ASSEMBLY	SPRINKLER ASSEMBLY
	1"	1"	TREE WELL
	LF	EA	EA
IP-2	400	1	16
SUBTOTAL IP-2	400	1	16
TOTAL	400	1	16

REVISED BY | DATE REVISED
RYOHEI OTA | JULEE PARK
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR | GEORGE OLGUIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
LANDSCAPE ARCHITECTURE

LAST REVISION | DATE PLOTTED => 27-SEP-2023
TIME PLOTTED => 13:07

IRRIGATION SPRINKLER SCHEDULE

ISS-1

BORDER LAST REVISED 9/8/2021 | USERNAME => s149320 | DGN FILE => 0731960sm001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1850 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	67	

George Olguin
LICENSED LANDSCAPE ARCHITECT

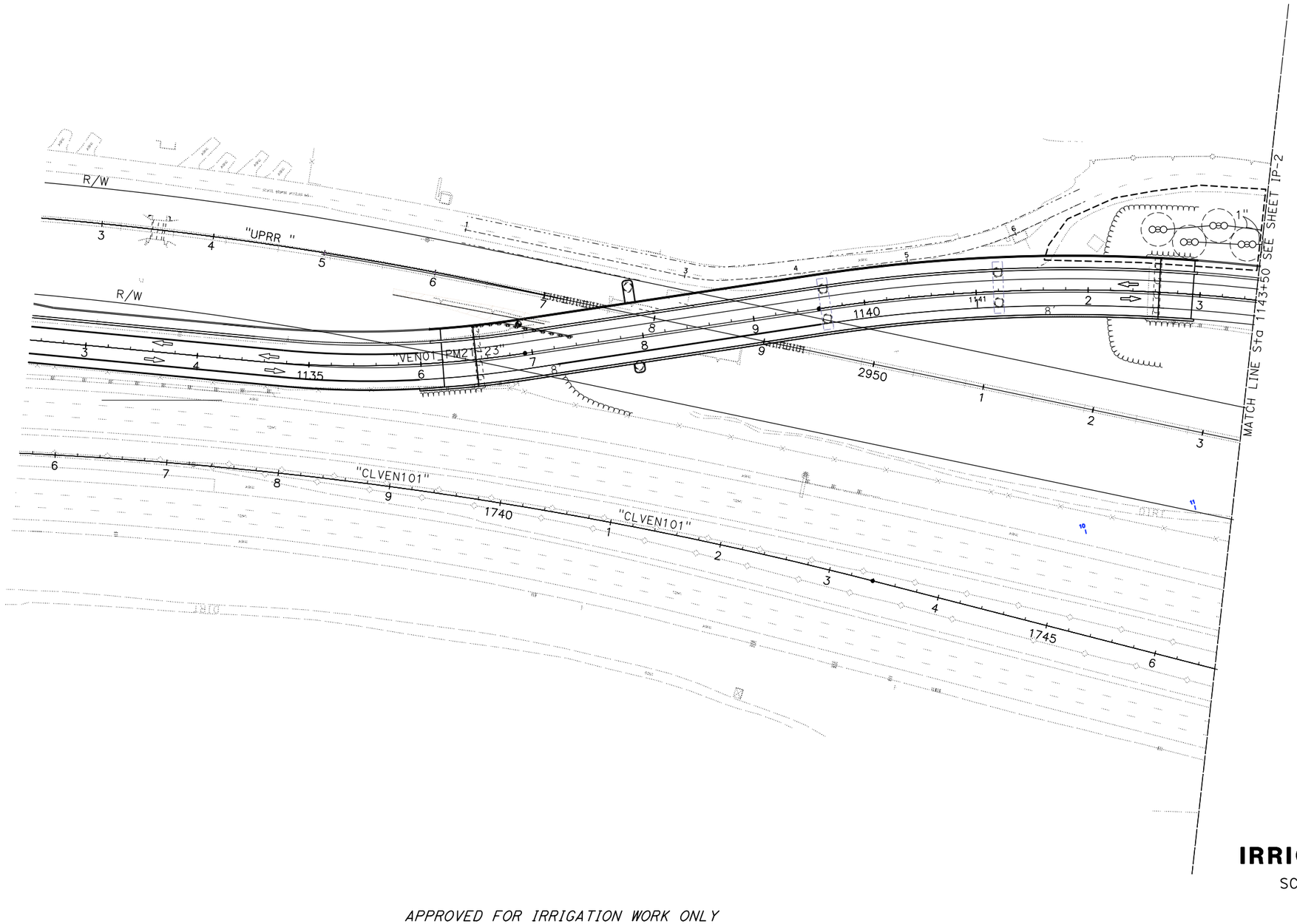
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. TEMPORARY IRRIGATION SYSTEM TO BE USED FOR IRRIGATING THE HYDROSEED AND TREES. CONTRACTOR TO CONNECT TO CAM COUPLER TO IRRIGATE THE TREES SHOWN ON THIS SHEET.



IRRIGATION PLAN

SCALE: 1" = 50'

IP-1

APPROVED FOR IRRIGATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LANDSCAPE ARCHITECTURE
Caltrans

FUNCTIONAL SUPERVISOR: GEORGE OLGUIN
CALCULATED-DESIGNED BY: RYOHEI OTA
CHECKED BY: JULEE PARK
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 21-SEP-2023
TIME PLOTTED => 13:07

BORDER LAST REVISED 9/8/2021
USERNAME => s149320
DGN FILE => 0731960sp001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1850
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	68	

George Olguin
LICENSED LANDSCAPE ARCHITECT

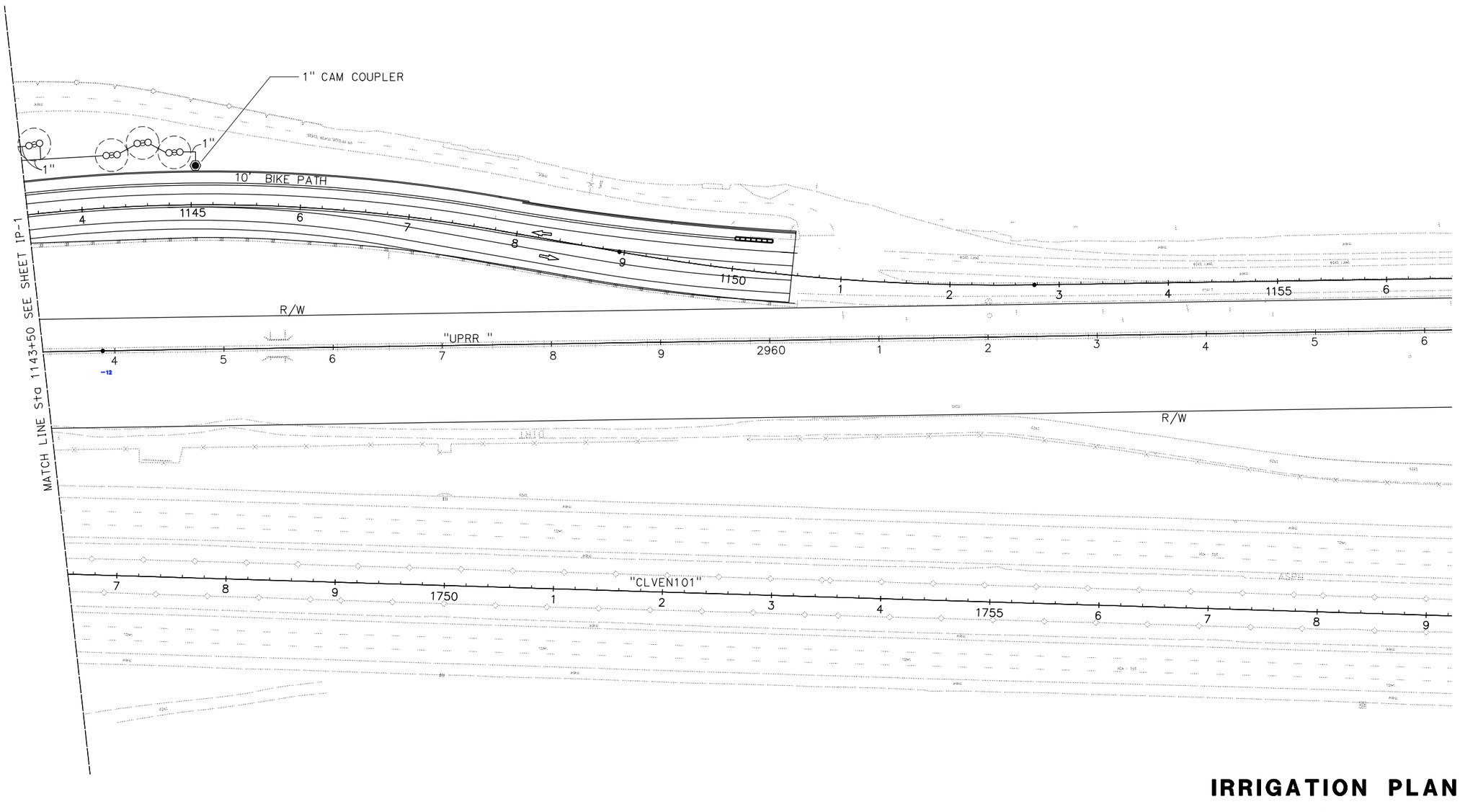
PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. TEMPORARY IRRIGATION SYSTEM TO BE USED FOR IRRIGATING THE HYDROSEED AND TREES. CONTRACTOR TO CONNECT TO CAM COUPLER TO IRRIGATE THE TREES SHOWN ON THIS SHEET.



IRRIGATION PLAN

SCALE: 1" = 50'

IP-2

APPROVED FOR IRRIGATION WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LANDSCAPE ARCHITECTURE
Caltrans

FUNCTIONAL SUPERVISOR: GEORGE OLGUIN
CALCULATED-DESIGNED BY: RYOHEI OTA
CHECKED BY: JULEE PARK
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 27-SEP-2023
TIME PLOTTED => 13:07

BORDER LAST REVISED 9/8/2021
USERNAME => s149320
DGN FILE => 0731960sp002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1850
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	69	

George Olguin
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

PLANT LEGEND

PLANT GROUP (SIZE)	PLANT No.	SYMBOL	BOTANICAL NAME	COMMON NAME	HOLE SIZE		BASIN TYPE	WOOD MULCH ③	APPLICATION RATES						MINIMUM PLANTING DISTANCE FROM:						REMARKS
					DIAMETER	DEPTH		BASIN	SOIL AMENDMENT	IRON SULFATE	SLOW-RELEASE FERTILIZER PLT	SLOW-RELEASE FERTILIZER PLT ESTB	PACKET FERTILIZER	ON CENTER SPACING	ETW	EP	FENCE	WALL	PAVED DITCH	EARTH DITCH	
					INCH	INCH		CY	CY	oz	oz	oz	EA	ft	ft	ft	ft	ft	ft	ft	
U (15 Gal)	1	○	HESPEROCYPARUS MACROCARPA	MONTEREY CYPRESS	①	①	I	0.08	0.09	4		4	4	②	40		20	20	20	22	TREE, ④

NOTES: APPLICABLE WHERE CIRCLED

① SUFFICIENT TO RECEIVE ROOTBALL
② AS SHOWN ON PLANS
③ WOOD CHIP MULCH
④ TWO (2) STAKES PER TREE

RC
PE

RC - ROADSIDE CLEARING
PE - PLANT ESTABLISHMENT

MAINTAIN EXISTING PLANTED AREAS (MEPA)
(INCLUDES ROADSIDE CLEARING)

○ TREE PROTECTION AND PRUNE Exist TREE

REMOVE Exist TREE

PLANT QUANTITIES

BOTANICAL NAME	COMMON NAME	PLANT GROUP K	PACKET FERTILIZER	PLANT BASIN WOOD MULCH	PLANT BASIN SOIL AMENDMENT	PLANT BASIN IRON SULFATE
		EA	EA	CY	CY	LB
HESPEROCYPARUS MACROCARPA	MONTEREY CYPRESS	8	32	0.1	0.8	2
	SUBTOTAL	8	32	0.1	0.8	2
	TOTAL	8	32	0.1	0.8	2

TREE REMOVAL (ROADSIDE CLEARING)

SHEET No.	QUANTITY
	EA
PP-2	1
PP-2	2
SUBTOTAL	3
TOTAL	3

REVISED BY | DATE REVISED
RYOHEI OTA | JULEE PARK
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: GEORGE OLGUIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LANDSCAPE ARCHITECTURE
Caltrans

LAST REVISION | DATE PLOTTED => 27-SEP-2023 | TIME PLOTTED => 13:07

PLANT LEGEND
PL-1

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	70	

George Olguin
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

EROSION CONTROL LEGEND

EROSION CONTROL

EROSION CONTROL

SEQUENCE	ITEM	MATERIAL	MATERIAL TYPE	APPLICATION RATE
STEP 1	COMPOST	COMPOST	MEDIUM/COARSE	130 CY/ACRE
STEP 2	HYDROSEED	SEED	MIX	51 LB/ACRE
		FIBER	WOOD	500 LB/ACRE
STEP 2	HYDROMULCH	FIBER	WOOD	1,500 LB/ACRE
		TACKIFIER	PSYLLIUM	125 LB/ACRE

EROSION CONTROL QUANTITIES

EC SHEET	DESCRIPTION	COMPOST	HYDROSEED	HYDROMULCH	HYDROSEED MATERIALS (N)		HYDROMULCH MATERIALS (N)	
					SEED	FIBER	FIBER	TACKIFIER
		CY	SQFT	SQFT	LB	LB	LB	LB
1	EROSION CONTROL	324	108,300	108,300	127	1244	3730	311
	TOTAL	324	108,300	108,300	127	1244	3730	311

(N) - NOT A SEPARATE BID ITEM, FOR INFORMATION ONLY

SEED MIX

BOTANICAL NAME (COMMON NAME)	PERCENT GERMINATION (MINIMUM)	POUNDS PURE LIVE SEED PER ACRE (SLOPE MEASUREMENT)
ACMISPON GLABER VAR GLABER (DEERWEED)	38	3.0
ARTEMISIA CALIFORNICA (CALIFORNIA SAGEBUSH)	7	2.0
ENCELIA CALIFORNICA (CALIFORNIA BRICKLEBUSH)	2	5.0
COREOPSIS GIGANTEA (GIANT COREOPSIS)	41	2.0
DATURA WRIGHTII (SACRED DATURA)	15	2.0
ERIOGONUM FASCICULATUM (CALIFORNIA BUCKWHEAT)	6	4.0
ERIOGONUM CINERUM (ASHY LEAF BUCKWHEAT)	6	4.0
ERIOPHYLLUM CONFERTIFLORUM (GOLDEN YARROW)	20	2.0
ESCHSCHOLZIA CALIFORNIA (CALIFORNIA POPPY)	6	3.0
ISOCOMA MENZIESII (COAST GOLDENBUSH)	10	1.0
LEYMUS CONDENSATUS (GIANT WILD-RYE)	15	4.0
LUPINUS SUCCULENTUS (ARROYO LUPINE)	25	2.0
MALOSMA LAURINA (LAUREL SUMAC)	50	5.0
PERITYLE EMORYI (EMORY'S ROCKROSE)	25	3.0
SALVIA APIANA (WHITE SAGE)	25	2.0
SALVIA MELLIFERA (BLACK SAGE)	25	2.0
RHUS INTEGRIFOLIA (LEMONADE BERRY)	50	5.0

PLANT LEGEND
PL-2

REVISED BY | DATE REVISED
RYOHEI OTA | JULEE PARK
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: GEORGE OLGUIN
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
LANDSCAPE ARCHITECTURE
LAST REVISION | DATE PLOTTED => 27-SEP-2023 | TIME PLOTTED => 13:07

BORDER LAST REVISED 9/8/2021 | USERNAME => s149320 | DGN FILE => 0731960st002.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1850 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	71	

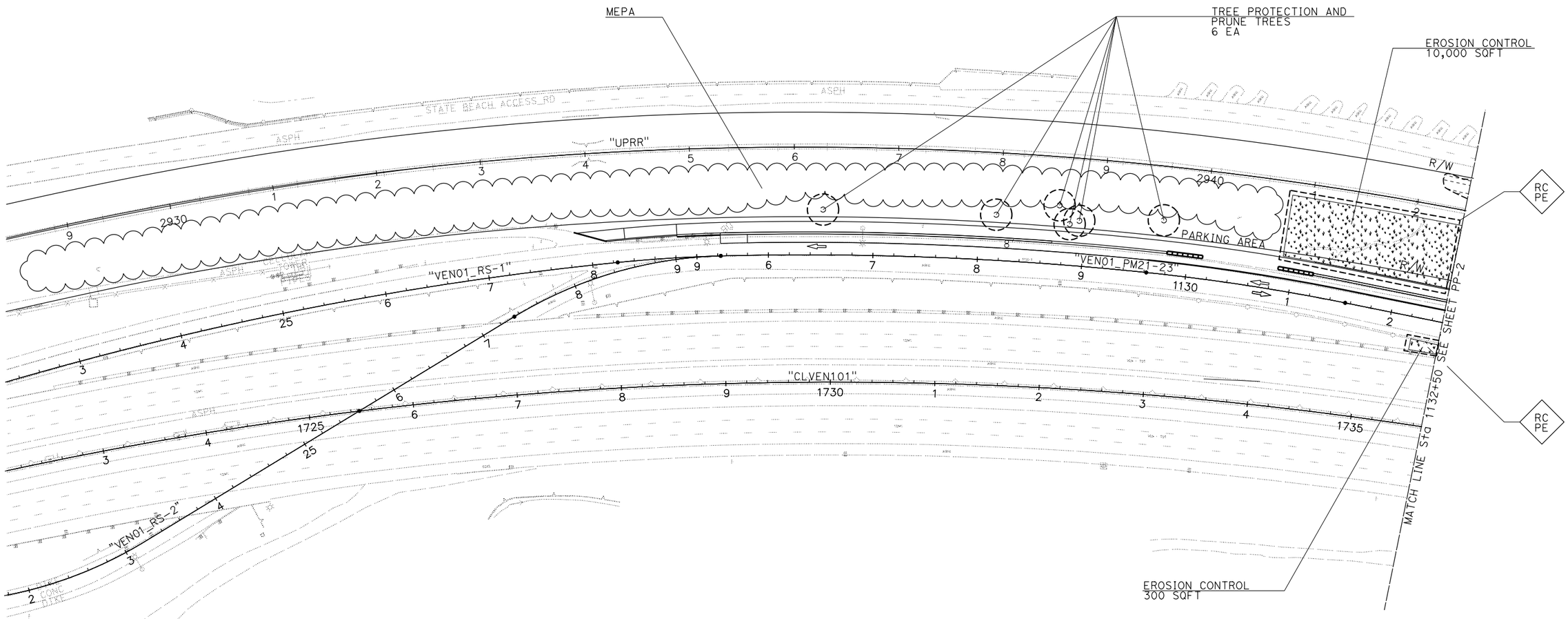
George Olguin
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PLANTING PLAN

SCALE: 1" = 50'

PP-1

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LANDSCAPE ARCHITECTURE
Caltrans

FUNCTIONAL SUPERVISOR: GEORGE OLGUIN
CALCULATED-DESIGNED BY: RYOHEI OTA
CHECKED BY: JULEE PARK
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 27-SEP-2023
TIME PLOTTED => 13:07

BORDER LAST REVISED 9/8/2021
USERNAME => s149320
DGN FILE => 0731960su001.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1850
PROJECT NUMBER & PHASE 07160000251

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

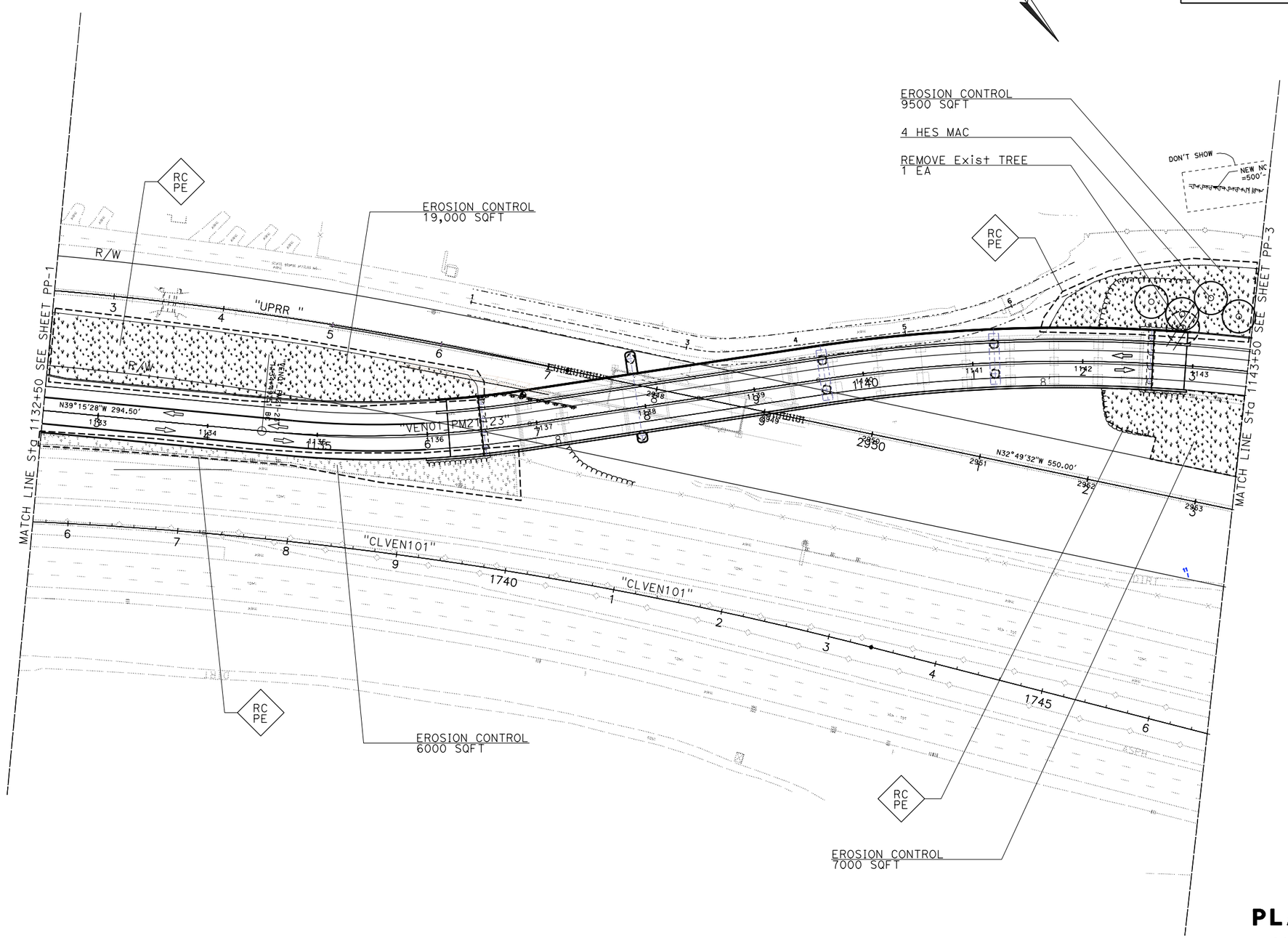
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	72	

George Olguin
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA



PLANTING PLAN

SCALE: 1" = 50'

PP-2

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
LANDSCAPE ARCHITECTURE

FUNCTIONAL SUPERVISOR: GEORGE OLGUIN
CALCULATED-DESIGNED BY: RYOHEI OTA
CHECKED BY: JULEE PARK
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 21-SEP-2023
TIME PLOTTED => 13:07

BORDER LAST REVISED 9/8/2021
USERNAME => s149320
DGN FILE => 0731960su002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1850
PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	73	

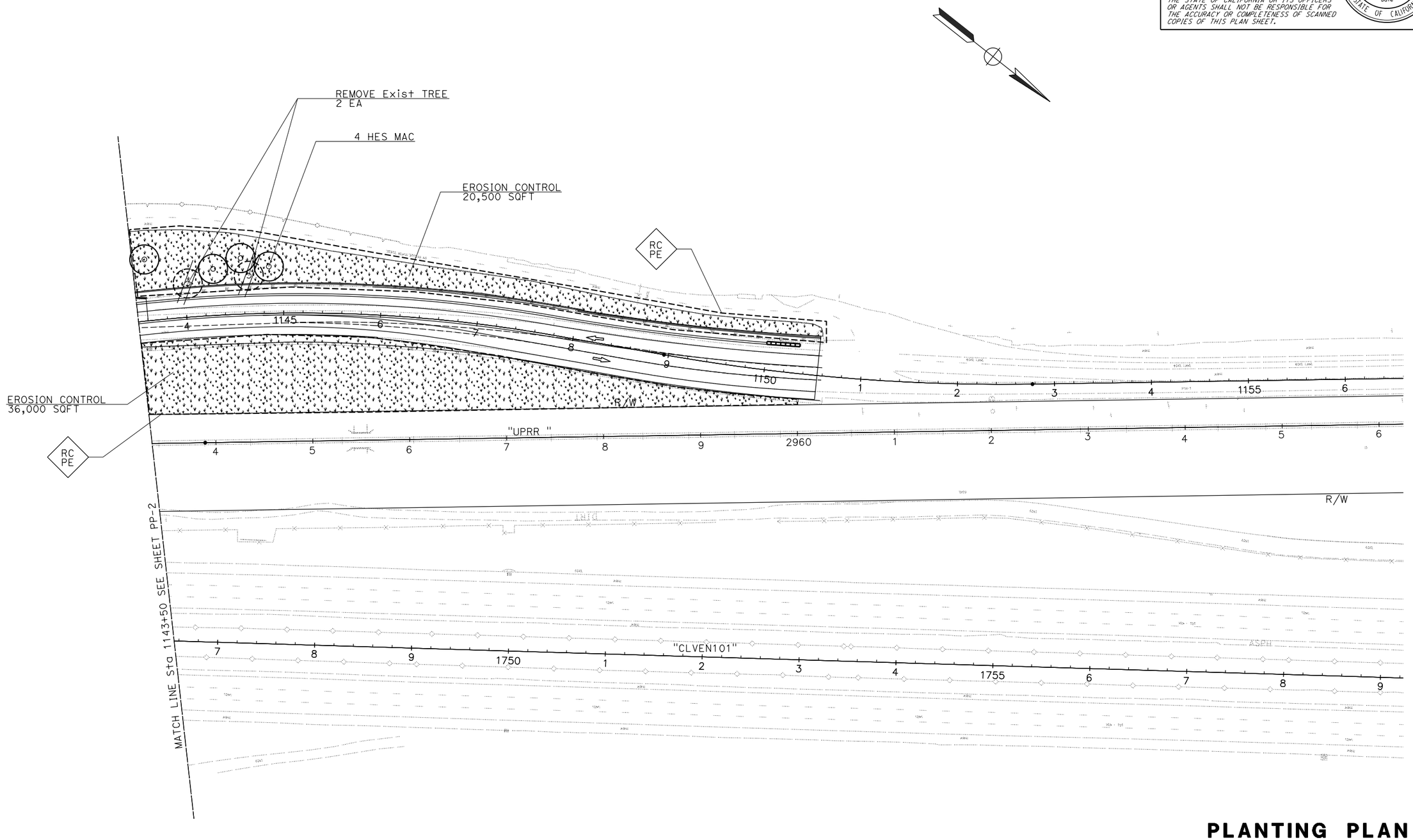
George Olguin
LICENSED LANDSCAPE ARCHITECT

PLANS APPROVAL DATE

LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



PLANTING PLAN

SCALE: 1" = 50'

PP-3

APPROVED FOR PLANTING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
LANDSCAPE ARCHITECTURE

FUNCTIONAL SUPERVISOR: GEORGE OLGUIN

CALCULATED-DESIGNED BY: RYOHEI OTA
CHECKED BY: JULEE PARK

REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => 27-SEP-2023
TIME PLOTTED => 13:07

BORDER LAST REVISED 9/8/2021

USERNAME => s149320
DGN FILE => 0731960su003.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1850

PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	74	

George Olguin
LICENSED LANDSCAPE ARCHITECT

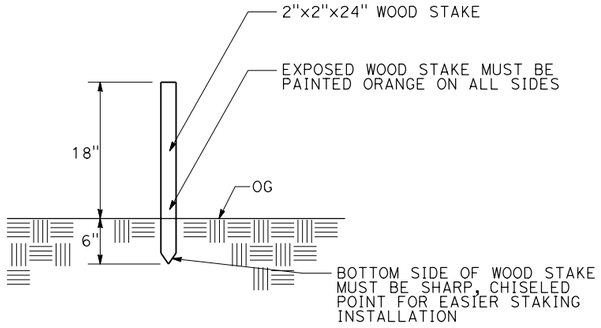
PLANS APPROVAL DATE

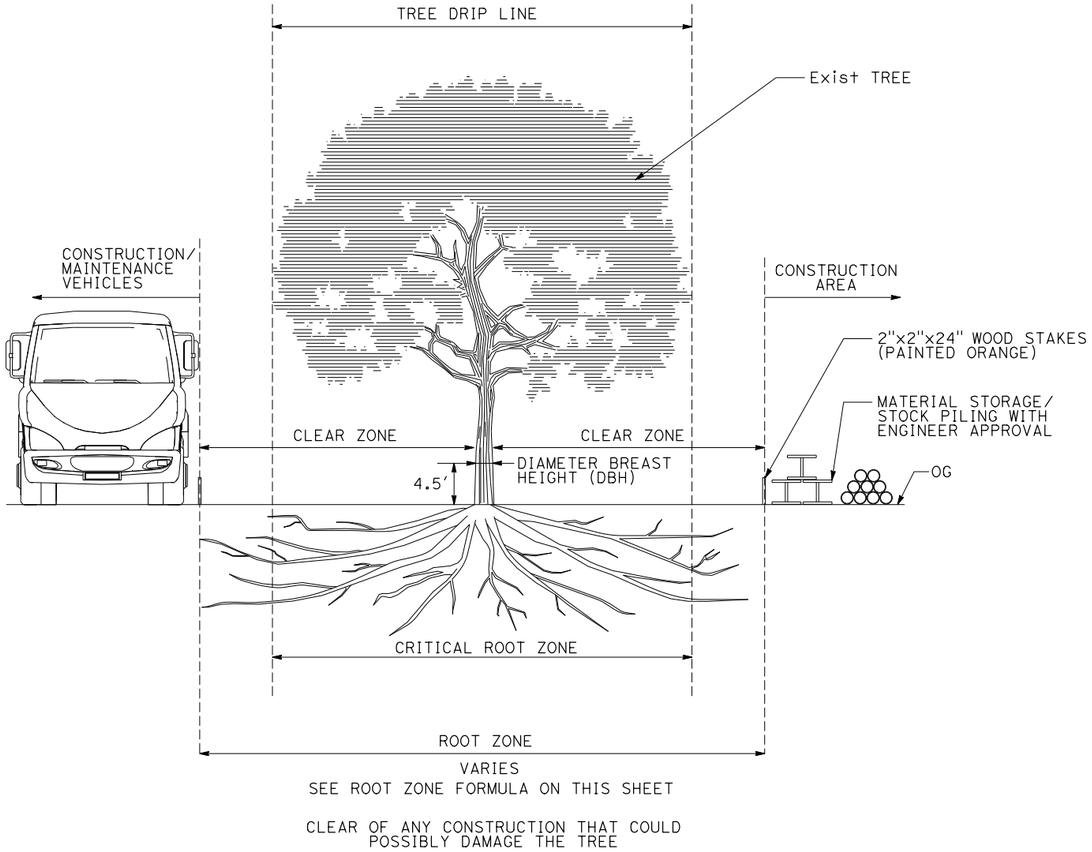
LICENSED LANDSCAPE ARCHITECT
GEORGE OLGUIN
NO. 4333
George Olguin
Signature
08-31-24
Renewal Date
09-25-23
Date
STATE OF CALIFORNIA

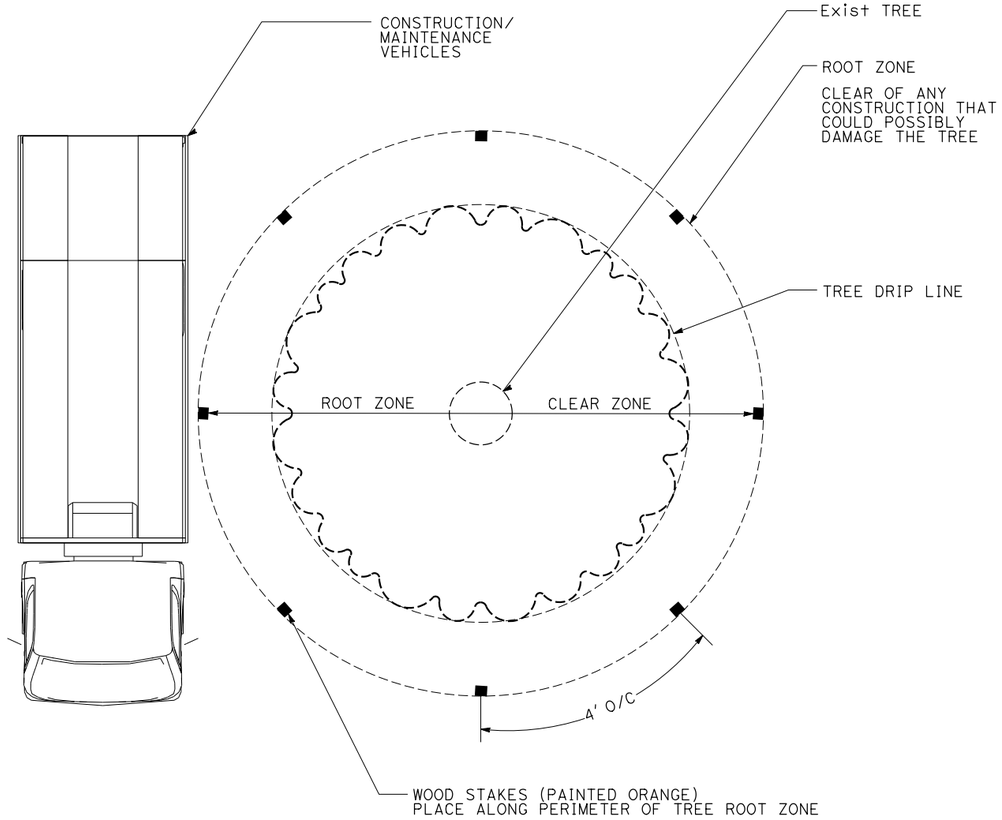
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. SEE PLANS AND SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION AND REPLACEMENT REQUIREMENTS.
2. CUTTING OR DAMAGING MORE THAN 20% OF THE ROOT ZONE CAN CAUSE DECLINE OF HEALTH OR DEATH AND MAY DESTABLILIZE THE TREE.
3. PRUNING MUST NOT BE PERFORMED UNLESS APPROVED BY THE DISTRICT LANDSCAPE ARCHITECT OR ENGINEER.
4. CONSTRUCTION AND MAINTENANCE VEHICLES SHALL NOT OPERATE WTHIN THE ROOT ZONE OF THE TREE.
5. CONSTRUCTION EQUIPMENT AND MATERIALS MUST NOT BE STORED WITHIN THE ROOT ZONE.
6. ANY MINOR GRADING WITHIN THE CRITICAL ROOT ZONE MUST BE DONE MANUALLY AND WITH PRIOR APPROVAL FROM THE DISTRICT LANDSCAPE ARCHITECT OR ENGINEER.







ROOT ZONE FORMULA

DIAMETER BREAST HEIGHT (DBH) (INCHES) x 6 = ROOT ZONE RADIUS (INCHES)

NOTE: DBH MUST BE MEASURED AT 4.5' ABOVE THE OG.

TREE PROTECTION

NO SCALE

PLANTING DETAILS

PLD-1

REVISED BY	RYOHEI OTA	CALCULATED-DESIGNED BY	
DATE REVISED	JULEE PARK	CHECKED BY	

FUNCTIONAL SUPERVISOR: GEORGE OLGUIN

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
LANDSCAPE ARCHITECTURE
Caltrans

LAST REVISION | DATE PLOTTED => 27-SEP-2023 | TIME PLOTTED => 13:07

BORDER LAST REVISED 9/8/2021 | USERNAME => s149320 | DGN FILE => 0731960sv001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1850 | PROJECT NUMBER & PHASE 07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	75	XX

REGISTERED ELECTRICAL ENGINEER — 3/31/23 DATE

REGISTERED PROFESSIONAL ENGINEER — MUSTAFA MANAH — No. E24025 — Exp. 06/30/24 ELECTRICAL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ALL NEW CONDUIT MUST BE TYPE 1

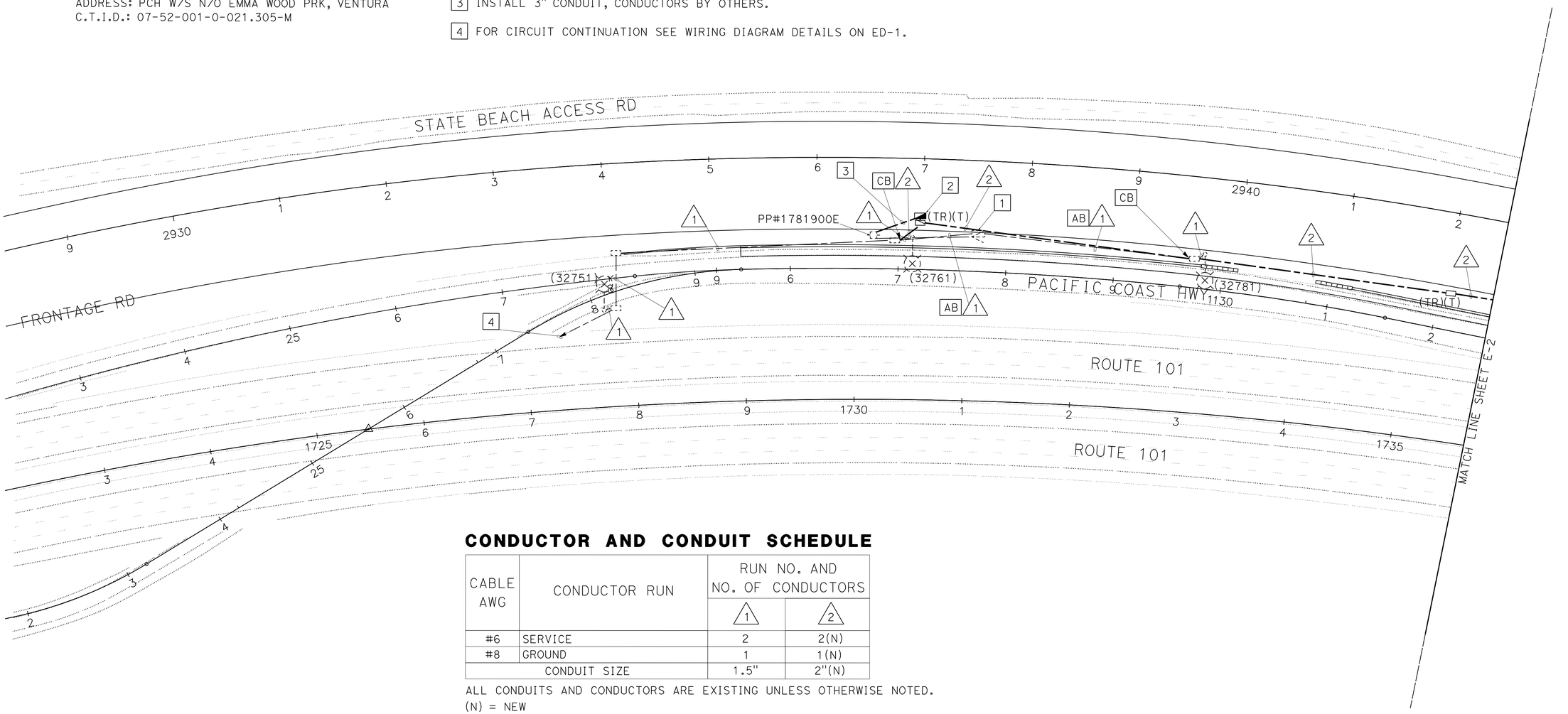
LEGEND:(THIS SHEET ONLY)

1 RC EXISTING 120/240 VOLT TYPE 3R METERED SERVICE EQUIPMENT ENCLOSURE WITH:
200A, 2P, CB-MAIN
15A, 1P, CB-TYPE V PEC
40A, 2P, CB-LTG
40A, 2P, CB-LTG
ADDRESS: PCH W/S N/O EMMA WOOD PRK, VENTURA
C.T.I.D.: 07-52-001-0-021.305-M

2 INSTALL NEW 120/240 VOLT TYPE III-CF METERED SERVICE EQUIPMENT ENCLOSURE WITH:
200A, 2P, CB-MAIN
15A, 1P, CB-TYPE V PEC
40A, 2P, CB-LTG
40A, 2P, CB-LTG
30A, 2P, CB-LTG (RAILROAD SOFFITS)
30A, 2P, CB-LTG (PARKS SOFFITS)
30A, 2P, CB-HAWK
30A, 2P, CB-EMPTY
ADDRESS: 123 PACIFIC COAST HIGHWAY, VENTURA
C.T.I.D.: 07-52-001-0-021.301-M

3 INSTALL 3" CONDUIT, CONDUCTORS BY OTHERS.

4 FOR CIRCUIT CONTINUATION SEE WIRING DIAGRAM DETAILS ON ED-1.



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NO. AND NO. OF CONDUCTORS	
		1	2
#6	SERVICE	2	2(N)
#8	GROUND	1	1(N)
CONDUIT SIZE		1.5"	2"(N)

ALL CONDUITS AND CONDUCTORS ARE EXISTING UNLESS OTHERWISE NOTED.
(N) = NEW

MODIFYING LIGHTING SYSTEMS

SCALE: 1"=50'

E-1

APPROVED FOR ELECTRICAL WORK ONLY

REVISED BY | DATE REVISED
MUSTAFA MANAH | OSWALD ELIZONDO
CALCULATED-DESIGNED BY | CHECKED BY
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION — DATE PLOTTED => 27-SEP-2023 — TIME PLOTTED => 11:11

BORDER LAST REVISED 8/5/2020 | USERNAME => s146958 | DGN FILE => 0731960ua075.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1878 | PROJECT NUMBER & PHASE: 071600025

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	76	XX

REGISTERED ELECTRICAL ENGINEER — 3/31/23 DATE

MUSTAFA MANAH No. E24025 Exp. 06/30/24 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

PLANS APPROVAL DATE

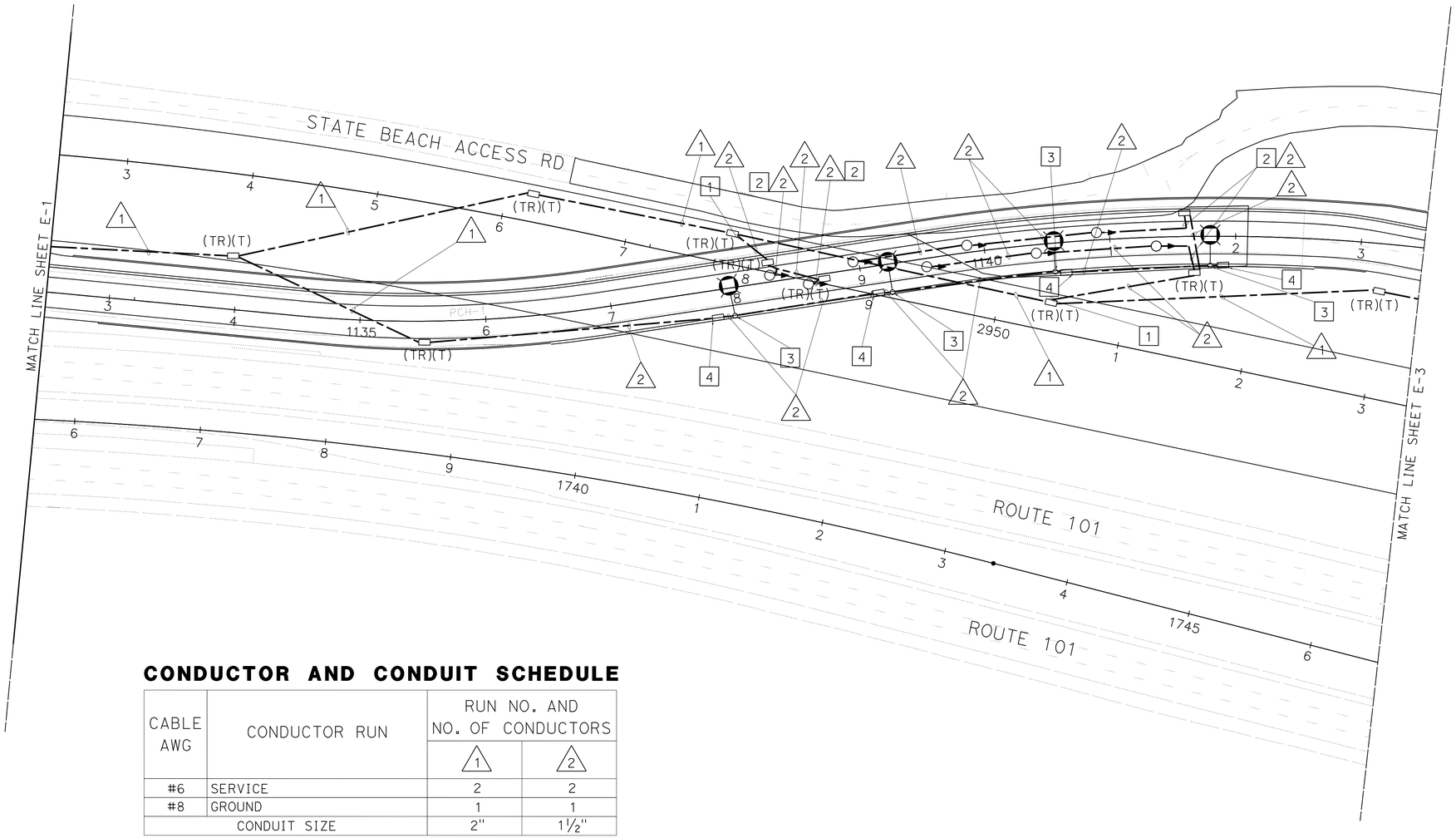
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ALL NEW CONDUIT MUST BE TYPE 1

LEGEND:(THIS SHEET ONLY)

1. SOFFIT CONDUCTORS TO NEW SERVICE CABINET
   ADDRESS: 123 PACIFIC COAST HIGHWAY, VENTURA
   C.T.I.D.: 07-52-001-0-021.301-M
2. DROP SOFFIT LIGHTING CONDUIT ALONG BRIDGE COLUMN TO PULLBOX
3. INSTALL TYPE 21 BARRIER RAIL MOUNTED ELECTROLIER WITH 15′ LUMINAIRE MAST ARM
4. INSTALL TYPE 9A PULL BOX ALONG BARRIER



CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NO. AND NO. OF CONDUCTORS	
		1	2
#6	SERVICE	2	2
#8	GROUND	1	1
CONDUIT SIZE		2"	1½"

ALL CONDUITS AND CONDUCTORS ARE NEW UNLESS OTHERWISE NOTED.

APPROVED FOR ELECTRICAL WORK ONLY

MODIFYING LIGHTING SYSTEMS

SCALE: 1"=50′

E-2

REVISED BY | DATE REVISED

CALCULATED-DESIGNED BY: MUSTAFA MANAH
CHECKED BY: OSWALD ELIZONDO
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION | DATE PLOTTED => 27-SEP-2023 | TIME PLOTTED => 11:15

BORDER LAST REVISED 8/5/2020

USERNAME => s146958
DGN FILE => 0731960ua076.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1878

PROJECT NUMBER & PHASE: 071600025

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	77	XX

REGISTERED ELECTRICAL ENGINEER — 3/31/23 DATE

PLANS APPROVAL DATE

MUSTAFA MANAH No. E24025 Exp. 06/30/24 ELECTRICAL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. ALL NEW CONDUIT MUST BE TYPE 1

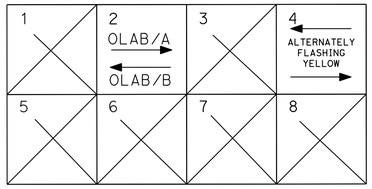
LEGEND: (THIS SHEET ONLY)

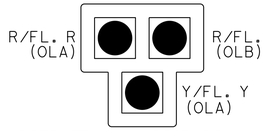
1 INSTALL R10-23 SIGN.

2 INSTALL NEW APS ASSEMBLY, PUSH BUTTON, AND COUNTDOWN PEDESTRIAN SIGNAL HEAD.

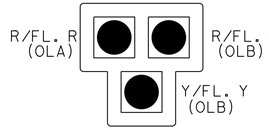
3 STATE FURNISHED MODEL 2070 CONTROLLER.

PROPOSED PHASE DIAGRAM





PEDESTRIAN HYBRID BEACON
DETAIL A
Not to Scale

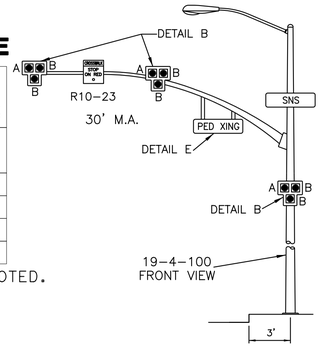


PEDESTRIAN HYBRID BEACON
DETAIL B
Not to Scale

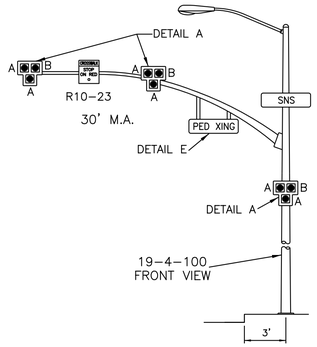
CONDUCTOR AND CONDUIT SCHEDULE

CABLE AWG	CONDUCTOR RUN	RUN NO. AND NO. OF CONDUCTORS		
		1	2	3
#14	5 CONDUCTOR CABLE	-	5	1
#6	SERVICE	2	-	-
#8	GROUND	1	1	1
	CONDUIT SIZE	2"	2"	2"

ALL CONDUITS AND CONDUCTORS ARE NEW UNLESS OTHERWISE NOTED.



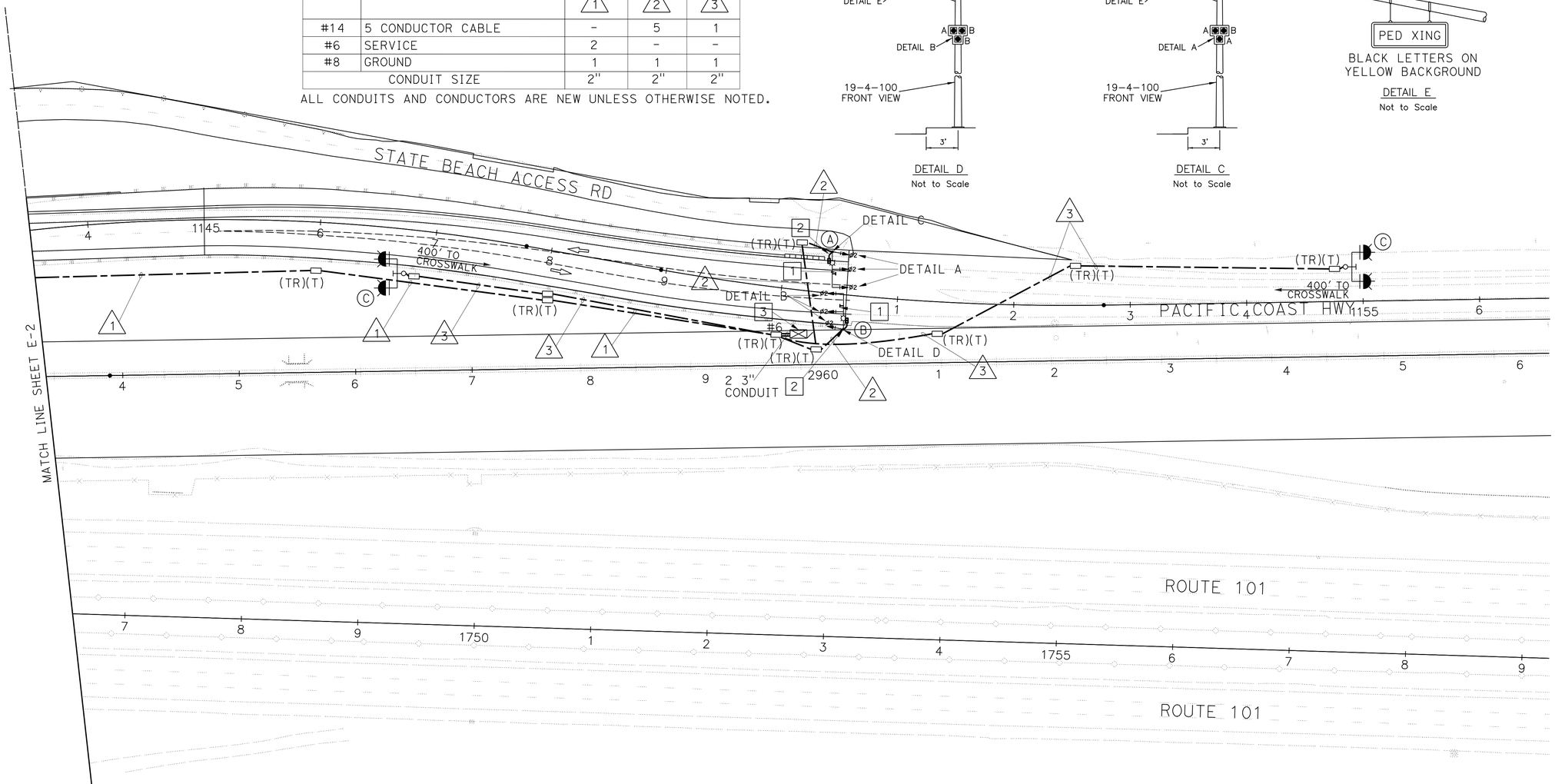
DETAIL D
Not to Scale



DETAIL C
Not to Scale

BLACK LETTERS ON YELLOW BACKGROUND

DETAIL E
Not to Scale



PEDESTRIAN HYBRID BEACON SYSTEM

SCALE: 1"=50'

APPROVED FOR ELECTRICAL WORK ONLY

E-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

CALCULATED-DESIGNED BY: MUSTAFA MANAH
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED

LAST REVISION
DATE PLOTTED => 27-SEP-2023
TIME PLOTTED => 11:17

BORDER LAST REVISED 8/5/2020

USERNAME => s146958
DGN FILE => 0731960ua077.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1878

PROJECT NUMBER & PHASE: 071600025

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	78	XX

REGISTERED ELECTRICAL ENGINEER — 3/31/23 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MUSTAFA MANAH
No. E24025
Exp. 06/30/24
ELECTRICAL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

STANDARD AND EQUIPMENT SCHEDULE

STANDARD				VEH SIG MTG				PED SIGNAL		APS		LED LUMINAIRE	REFLECTORIZED SNS
No.	TYPE	SMA	LMA	Ø	MAST ARM	Ø	POLE	Ø	MTG	Ø	ARROW		
(A)	19-4-100(N)	25′	12′	-	2 MAS-3A	-	1 MAS-3A	-	SP-2	-	→	-	-
(B)	19-4-100(N)	25′	12′	-	2 MAS-3A	-	1 MAS-3A	-	SP-2	-	←	-	-
(C)	TYPE 15-FBS(N)	-	-	-	-	-	-	-	-	-	-	-	-

(N) = NEW

APPROVED FOR ELECTRICAL WORK ONLY

PEDESTRIAN HYBRID BEACON SYSTEM

SCALE: 1"=50′

E-4

CALCULATED-DESIGNED BY: MUSTAFA MANAH
CHECKED BY: OSWALD ELIZONDO
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION
DATE PLOTTED => 27-SEP-2023
TIME PLOTTED => 11:28

BORDER LAST REVISED 8/5/2020
USERNAME => s146958
DGN FILE => 0731960ua078.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1878
PROJECT NUMBER & PHASE: 071600025

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9	79	XX

REGISTERED ELECTRICAL ENGINEER — 3/31/23 DATE

PLANS APPROVAL DATE

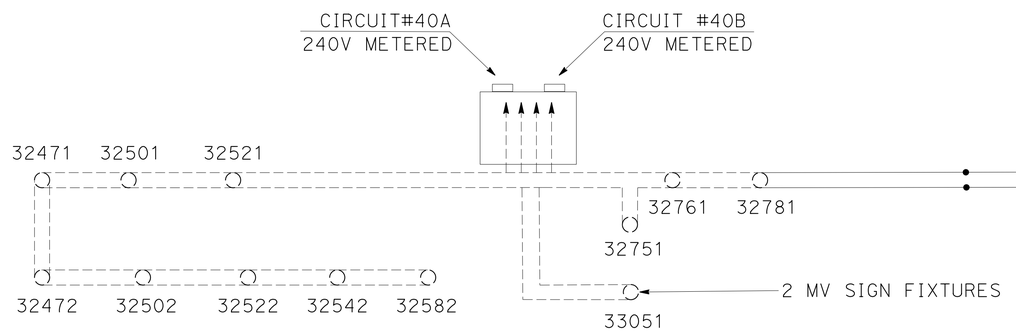
REGISTERED PROFESSIONAL ENGINEER — MUSTAFA MANAH — No. E24025 — Exp. 06/30/24 ELECTRICAL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

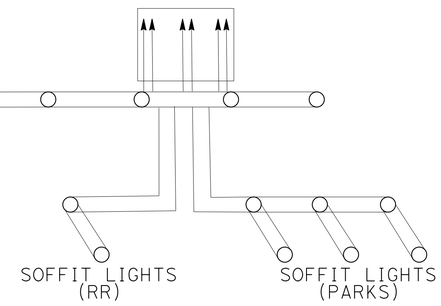
LEGEND:(THIS SHEET ONLY)

- EXISTING CONDUCTOR
- NEW CONDUCTOR
- EXISTING LAMP
- NEW LAMP
- SPLICE

EXISTING 120/240V TYPE III-BF
METERED SERVICE
ADDRESS: PCH W/S N/O EMMA WOOD PRK, VENTURA
C.T.I.D.: 07-52-001-0-021.305-M

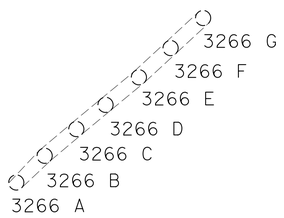


NEW 120/240V TYPE III-CF
METERED SERVICE
ADDRESS: 123 PACIFIC COAST HIGHWAY, VENTURA
C.T.I.D.: 07-52-001-0-021.301-M



EXISTING 120/240V TYPE III-BF
METERED SERVICE
ADDRESS: PCH W/S N/O EMMA WOOD PRK, VENTURA
C.T.I.D.: 07-52-001-0-021.305-M

7 SOFFIT LIGHTS



ELECTRICAL SYSTEM DETAILS

NO SCALE

ED-1

APPROVED FOR ELECTRICAL WORK ONLY

CALCULATED-DESIGNED BY	REVISED BY	DATE REVISED
CHECKED BY	MUSTAFA MANAH	OSWALD ELIZONDO

FUNCTIONAL SUPERVISOR: OSWALD ELIZONDO

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® TRAFFIC DESIGN

LAST REVISION — DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 11:55

BORDER LAST REVISED 8/5/2020 | USERNAME => s146958 DGN FILE => 0731960ub001.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT: 1878 | PROJECT NUMBER & PHASE: 071600025

EXPEDITE

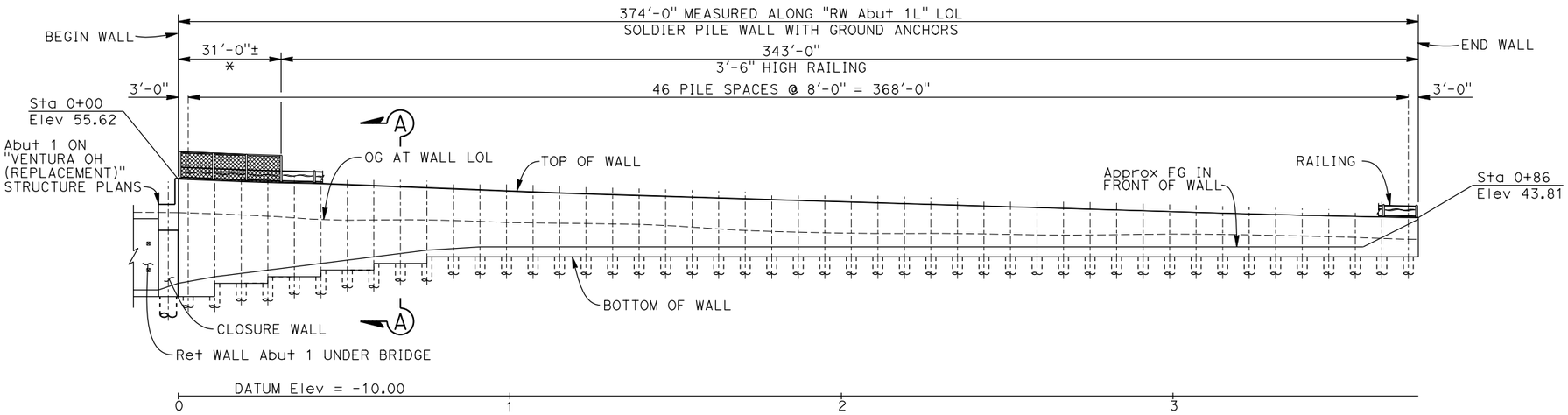
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

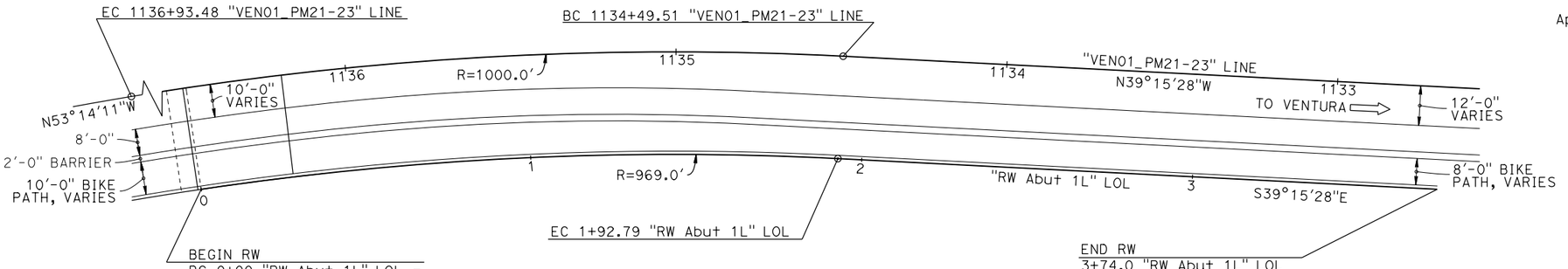
REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



* 3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 1), SEE NOTE 2

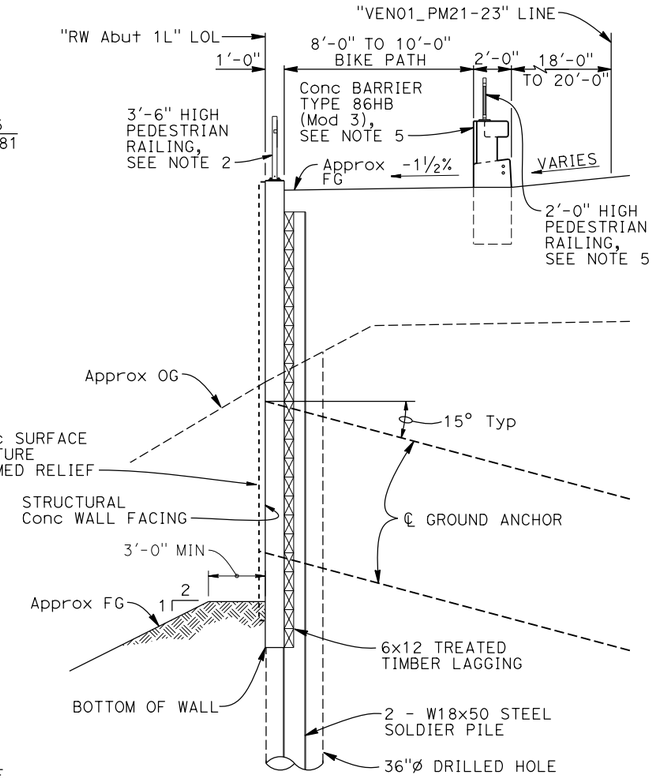
DEVELOPED ELEVATION
1" = 20'



PLAN
1" = 20'

CURVE DATA

"VEN01_PM21-23" LINE	"RW Abut 1L" LINE
R = 1000.00'	R = 969.00'
Δ = 13°58'43"	Δ = 11°23'57"
T = 122.59'	T = 96.71'
L = 234.97'	L = 192.79'



TYPICAL SECTION A-A
¼" = 1'-0"

NOTES:

1. For "INDEX TO PLANS" and "GENERAL NOTES", see "INDEX TO PLANS" sheet.
2. For 3'-6" High Pedestrian Railing and 3'-6" High Pedestrian Railing with Chain Link Railing Type 7 (Mod 1) details, see "VENTURA OH (REPLACEMENT)" Structure Plans.
3. For Conc Surface Texture Formed Relief see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1 & 2" sheets.
4. For Ret Wall Abut 1 Under Bridge and closure wall details, see "RETAINING WALL ABUTMENT 1 UNDER BRIDGE" plans.
5. For Conc Barrier Type 86HB (Mod 3) section with 2'-0" high Pedestrian Railing, see ROADWAY PLANS.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

John Peterson
BRANCH CHIEF

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	SEISMIC ANALYSIS	BY X	CHECKED X
DETAILS	BY A. Onodera/T. Bradshaw	CHECKED X. Carrillo/T. Sayre	LAYOUT	BY A. Malla	CHECKED X. Carrillo/T. Sayre
QUANTITIES	BY A. Quiroz	CHECKED I. Ghneam	SPECIFICATIONS	BY X	PLANS AND SPECS COMPARED X

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52E0029
POST MILE 21.52

RETAINING WALL ABUTMENT 1 LEFT
GENERAL PLAN

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 15:55
FILE => 52e0029-a-gp.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 5-30-23 | 7-21-23 | 09-27-23

SHEET 1 OF 13

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD BRIDE DESIGN SPECIFICATIONS, 8th EDITION
with CALIFORNIA Amendments, preface dated April 2019.

Standards Plans and Specifications, 2023 Edition

SEISMIC DESIGN:
Kh = 0.24. Kv = 0.0

LIVE LOADING:
240 PSF equivalent to 2 feet soil weight.

REINFORCED CONCRETE WALL FACING:
f'c = 4000 psi

fy = 60 ksi

STEEL PLATE:
GRADE 50

Fy = 50,000 psi

STEEL SOLDIER PILES:
GRADE 50

Fy = 50,000 psi

fs = 27,500 psi

PRESTRESSING STEEL (GROUND ANCHOR):
See "SUB HORIZONTAL GROUND ANCHOR DETAILS" sheet.

STRUCTURAL TIMBER:
Treated Douglas Fir No. 1 or better

Timber to be full sawn.

SOIL PARAMETERS:
(For Determination of Design Lateral Earth Pressure)

Layer	Elevation (ft)		
			γ= 120 pcf
1	FG TO 18.1	Φ= 34°	γ= 120 pcf
2	18.1 TO 8.1	Φ= 31°	

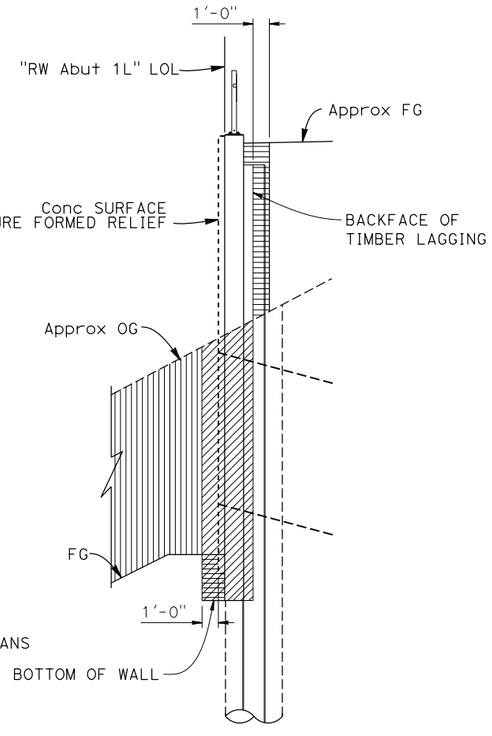
LEGEND:

STRUCTURE EXCAVATION (Soldier Pile Wall)

STRUCTURE BACKFILL (Soldier Pile Wall)

ROADWAY EXCAVATION

NOTE: For roadway section, see ROADWAY PLANS



LIMITS OF PAYMENT FOR EXCAVATION & BACKFILL

NO SCALE

NOTE: For limits of Roadway Excavation, see ROADWAY PLANS

INDEX TO PLANS

SHEET No.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	STRUCTURE PLAN No. 1
4	STRUCTURE PLAN No. 2
5	FOUNDATION PLAN No. 1
6	FOUNDATION PLAN No. 2
7	TYPICAL SECTION No. 1
8	TYPICAL SECTION No. 2
9	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1
10	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 2
11	SUB HORIZONTAL GROUND ANCHOR DETAILS
12	MISCELLANEOUS DETAILS
13	SOLDIER PILE WALL LAGGING DETAILS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

SUB HORIZONTAL GROUND ANCHOR LOAD TABLE

SOLDIER PILE NO.	FDL (kips)			FTL (kips)			LL (kips)		
	ANCHOR 1	ANCHOR 2	ANCHOR 3	ANCHOR 1	ANCHOR 2	ANCHOR 3	ANCHOR 1	ANCHOR 2	ANCHOR 3
1	146	82	124	146	82	124	88	50	75
2	146	65	100	146	65	100	88	39	60
3,4	130	58	76	130	58	76	78	35	46
5,6	141	78	-	141	78	-	85	47	-
7,8	125	68	-	125	68	-	75	41	-
9,10	101	44	-	101	44	-	61	27	-
11,12,13,14, 15,16	116	-	-	116	-	-	70	-	-
17,18,19,20 21,22,23	101	-	-	101	-	-	61	-	-
24,25,26,27 28,29,30,31,32	82	-	-	82	-	-	50	-	-
33,34,35,36 37,38,39,40,41	64	-	-	64	-	-	39	-	-
42,43,44,45 46,47	49	-	-	49	-	-	30	-	-

FDL = Factored Design Load per anchor
FTL = Factored Test Load per anchor
LL = Lock-off Load per anchor

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	N. Vadiraj/A. Onodera/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Quiroz	I. Ghneam

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0029
POST MILE 21.52

RETAINING WALL ABUTMENT 1 LEFT
INDEX TO PLANS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:35
FILE => 52e0029-a-itp.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
3-28-23		7-28-23	8-18-23	2	13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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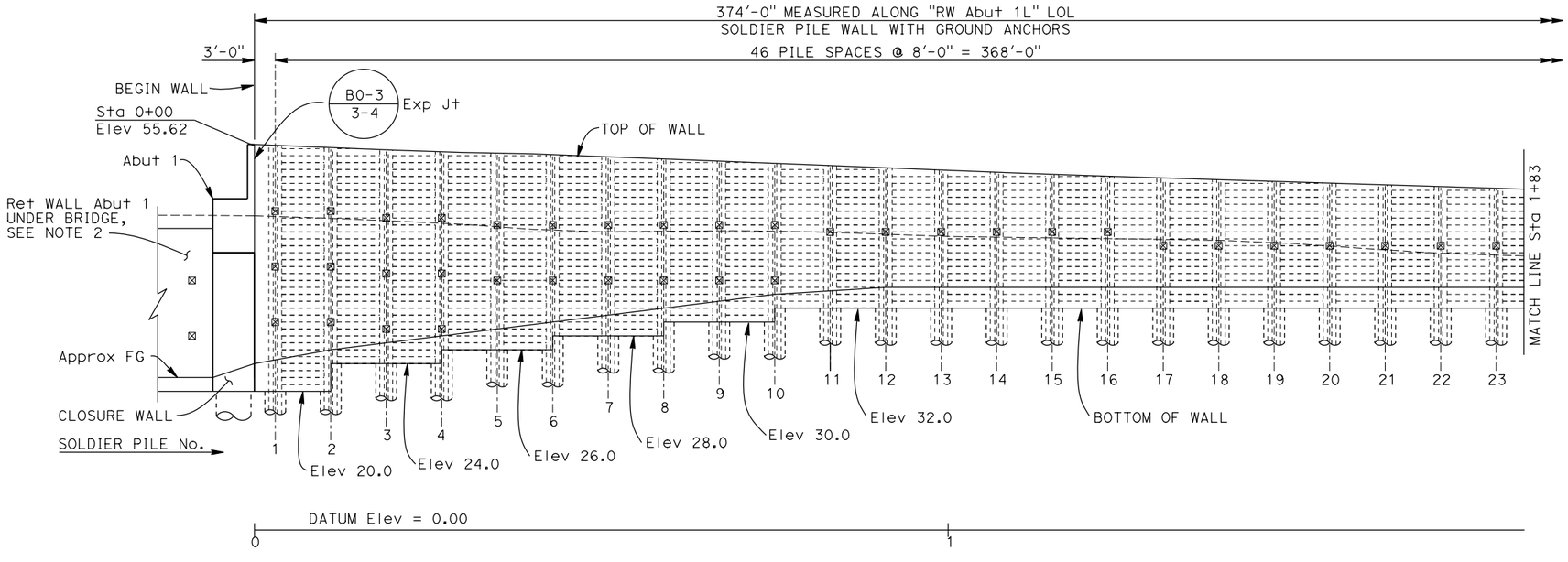


NOTES:

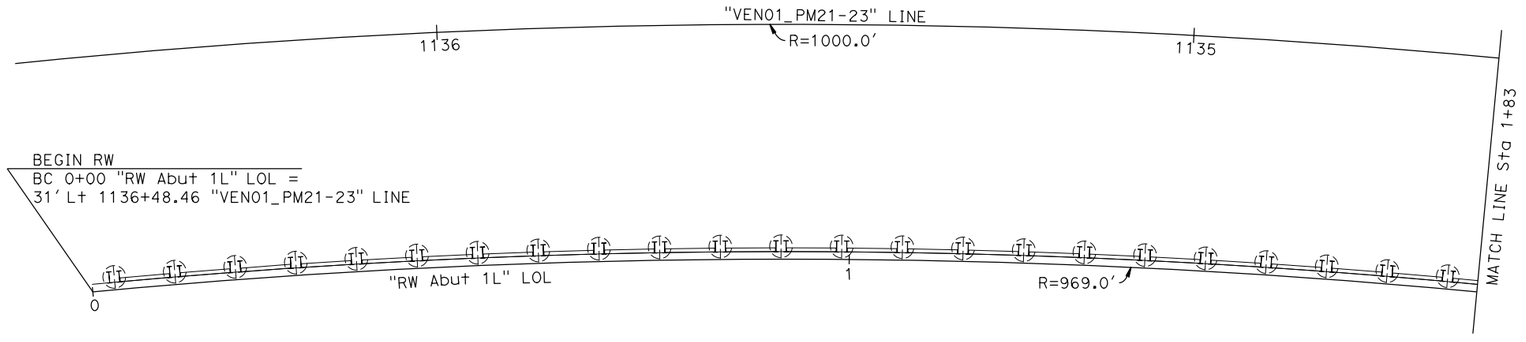
1. Railing not shown for clarity.
2. For Ret WALL Abut 1 UNDER BRIDGE and CLOSURE WALL see "RETAINING WALL ABUTMENT 1 UNDER BRIDGE" Structure Plan sheets.

DEVELOPED ELEVATION
1" = 10'

LEGEND:
⊠ Ground Anchor

PILE AND GROUND ANCHOR DATA TABLE

SOLDIER PILE NUMBER	STATION	TOP OF WALL ELEVATION (ft)	PILE TIP ELEVATION (ft)	ELEVATION (ft)		
				ANCHOR 1	ANCHOR 2	ANCHOR 3
1	0+03.0	55.48	13.0	46.0	38.0	30.0
2	0+11.0	55.17	15.0			
3	0+19.0	54.86	16.0	45.0	37.0	29.0
4	0+27.0	54.48				
5	0+35.0	54.35	17.0	44.0	36.0	-
6	0+43.0	54.11				
7	0+51.0	53.82	18.0	44.0	36.0	-
8	0+59.0	53.52				
9	0+67.0	53.21	21.0	44.0	36.0	-
10	0+75.0	52.89				
11	0+83.0	52.57	23.0	43.0	-	-
12	0+91.0	52.24				
13	0+99.0	51.92				
14	1+07.0	51.59				
15	1+15.0	51.29				
16	1+23.0	51.00				
17	1+31.0	50.74	25.0	41.0	-	-
18	1+39.0	50.48				
19	1+47.0	50.22				
20	1+55.0	49.96				
21	1+63.0	49.70				
22	1+71.0	49.44				
23	1+79.0	49.19				



PLAN
1" = 10'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	
DETAILS	BY A. Onodera/N. Vadiraj/T. Bradshaw	CHECKED X. Carrillo/T. Sayre	
QUANTITIES	BY A. Quiroz	CHECKED I. Ghneam	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0029
POST MILE 21.52

RETAINING WALL ABUTMENT 1 LEFT
STRUCTURE PLAN No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:35
FILE => 52e0029-c-sp01.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES: 12-20-22 | 2-21-23 | 3-28-23 | 4-14-23

SHEET 3 OF 13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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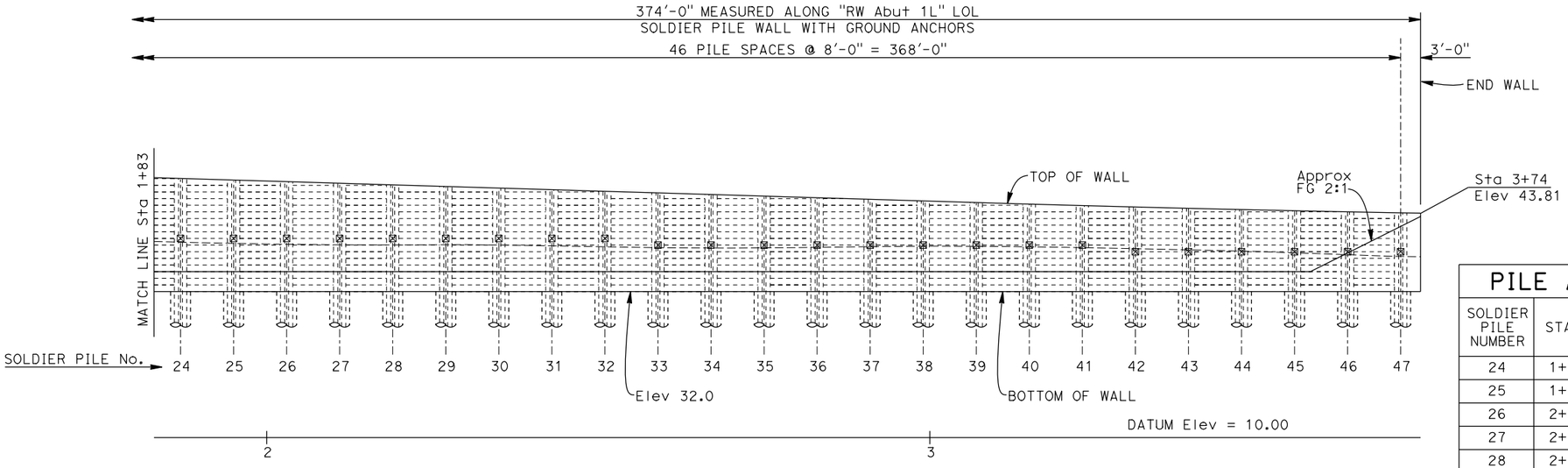


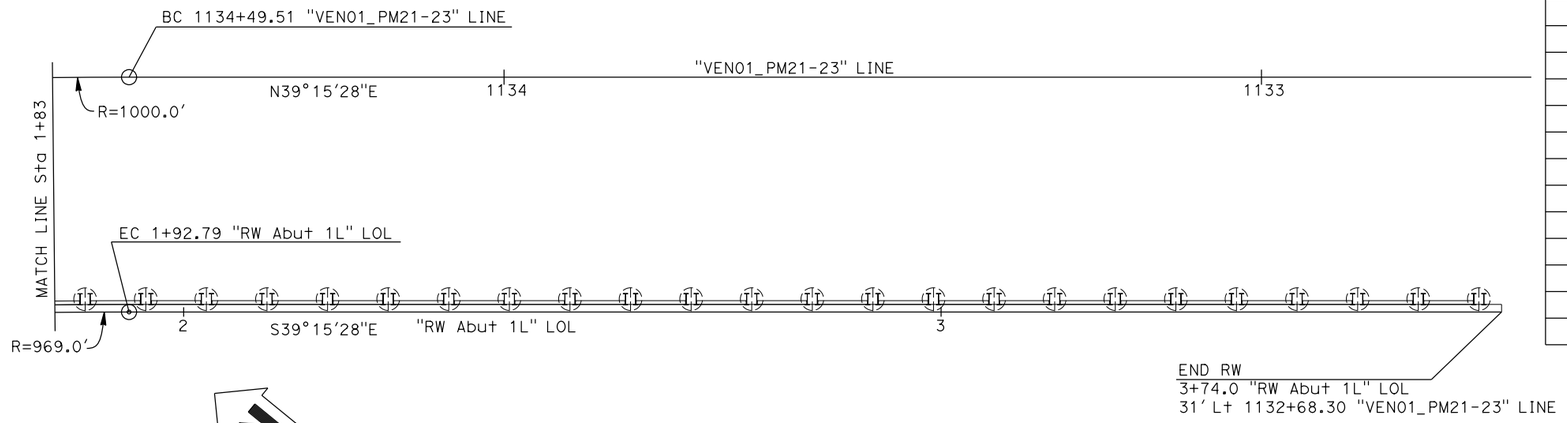
NOTE: Railing not shown

DEVELOPED ELEVATION
1" = 10'

LEGEND:
⊠ Ground anchor

PILE AND GROUND ANCHOR DATA TABLE

SOLDIER PILE NUMBER	STATION	TOP OF WALL ELEVATION (ft)	PILE TIP ELEVATION (ft)	ELEVATION (ft) ANCHOR 1	ANCHOR 2	ANCHOR 3
24	1+87.0	48.94	26.0	40.0	-	-
25	1+95.0	48.70				
26	2+03.0	48.46				
27	2+11.0	48.22				
28	2+19.0	47.98				
29	2+27.0	47.75				
30	2+35.0	47.51				
31	2+43.0	47.27				
32	2+51.0	47.03				
33	2+59.0	46.80	26.0	39.0	-	-
34	2+67.0	46.56				
35	2+75.0	46.32				
36	2+83.0	46.08				
37	2+91.0	45.85				
38	2+99.0	45.61				
39	3+07.0	45.37				
40	3+15.0	45.14				
41	3+23.0	44.92				
42	3+31.0	44.71	27.0	38.0	-	-
43	3+39.0	44.52				
44	3+47.0	44.34				
45	3+55.0	44.17				
46	3+63.0	44.00				
47	3+71.0	43.85				



PLAN
1" = 10'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	A. Onodera/N. Vadiraj/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Quiroz	I. Ghneam

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52E0029
POST MILE 21.52

RETAINING WALL ABUTMENT 1 LEFT
STRUCTURE PLAN No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:35
FILE => 52e0029-c-sp02.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-20-22	1-26-23	3-9-23	4-14-23	4	13

CURVE DATA				
No.	R	Δ	T	L
②	1000.00′	13°58′43"	122.59′	243.97′
④	3366.12′	08°02′03"	236.39′	472.01′
⑤	1024.00′	02°53′16"	25.81′	51.61′
⑥	842.00′	08°31′04"	62.70′	125.17′
⑦	969.00′	11°23′57"	96.71′	192.79′

RAIL ELEVATION (TOP)

Ⓐ - 23.02 Ⓑ - 22.99

SOFFIT ELEVATIONS

1 - 44.33 16 - 44.99
2 - 44.52 17 - 43.66
3 - 44.53

EXISTING BRIDGE LOCATION

① - 21.94 Ft Lt "VEN01_PM21-23" LINE, Sta 1136+83.48, Elev = 48.30±
③ - 21.73 Ft Rt "VEN01_PM21-23" LINE, Sta 1136+84.12, Elev = 48.98±

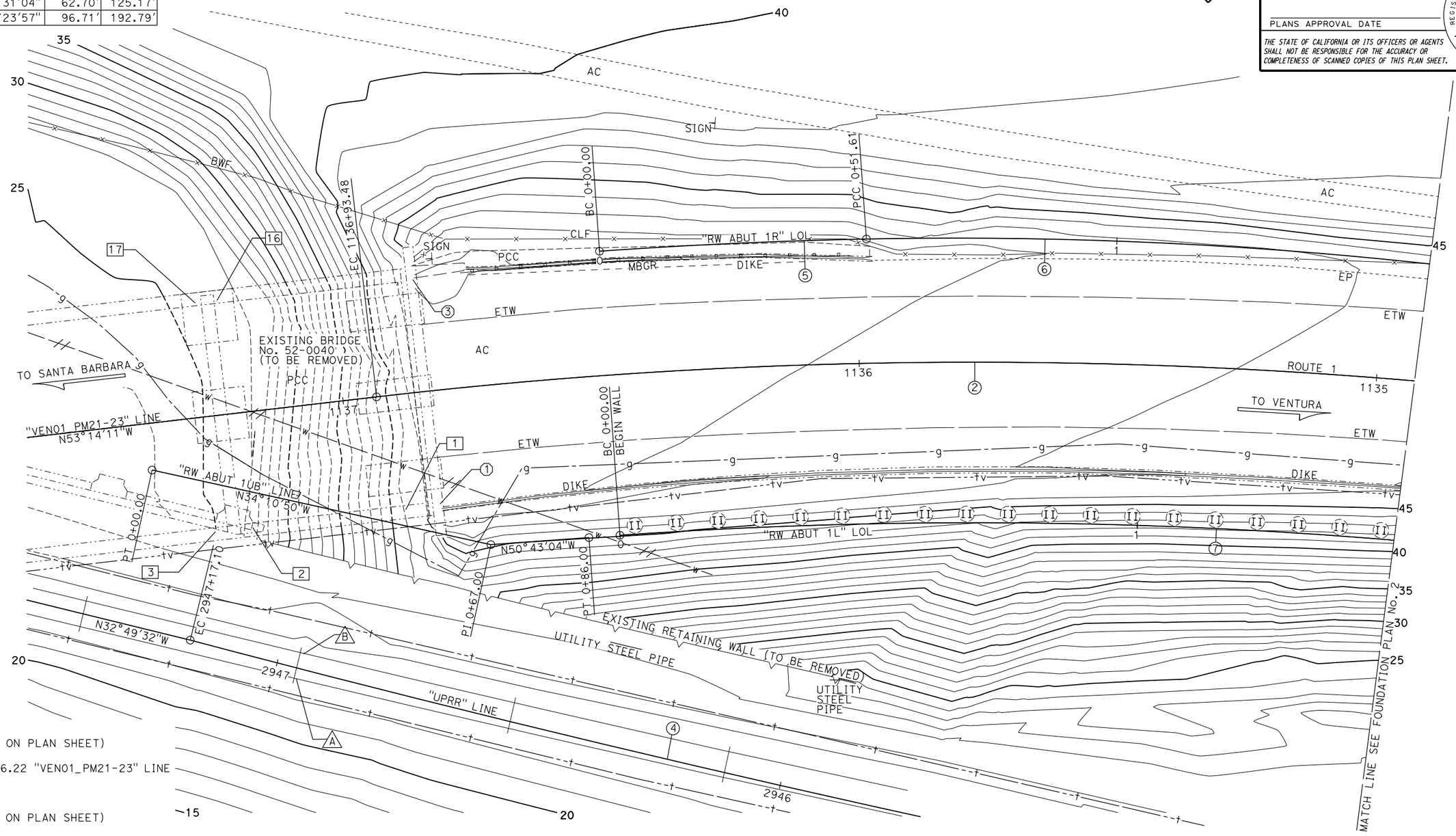
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA



SURVEY CONTROL

PT-64 (NOT SHOWN ON PLAN SHEET)

130_SUHV
102.41′ Lt 1137+36.22 "VEN01_PM21-23" LINE
N 1,931452.93
E 6,157,378.64
Elev = 14.87

PT-65 (NOT SHOWN ON PLAN SHEET)

130_SUHV
54.85′ Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1,931,821.09
E 6,157,165.13
Elev = 16.53

SURVEY MONUMENTS SHOWN ON THE FOUNDATION PLAN ARE FOR DESIGN PURPOSES ONLY.
FOR COMPLETE LIST OF SURVEY MONUMENTS FOR THIS PROJECT, SEE ROADWAY PLANS.

LEGEND:

◯ 36"ø Drilled Hole
II 2-W18x50 Steel Piles

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PRELIMINARY INVESTIGATIONS BRANCH							
SCALE: 1" = 10′	VERT. DATUM: NAVD88	SURVEYED	BY DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY N. VADIRAJ/T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE
					QUANTITIES	BY A. QUIROZ	CHECKED I. GHNEAM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52E0029
POST MILE 21.52

RETAINING WALL ABUTMENT 1 LEFT

FOUNDATION PLAN No. 1

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:35
FILE => 52e0029-e-fdp101.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-6-22	2-16-23	4-4-23	6-9-23	5	13

CURVE DATA				
No.	R	Δ	T	L
②	1000.00′	13°58′43"	122.59′	243.97′
④	3366.12′	08°02′03"	236.39′	472.01′
⑦	969.00′	11°23′57"	96.71′	192.79′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

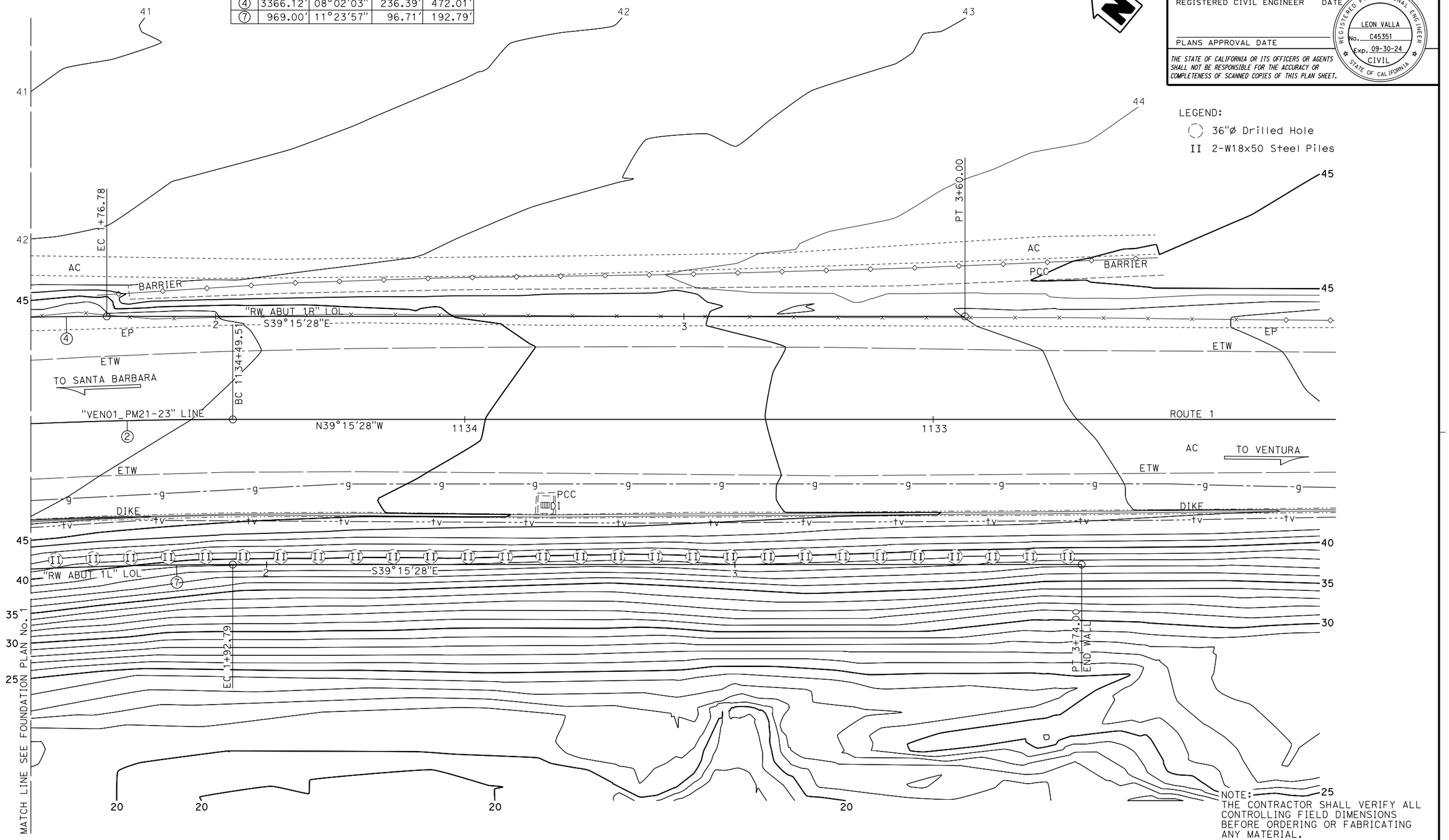
REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:
- ◌ 36"Ø Drilled Hole
- II 2-W18x50 Steel Piles



PRELIMINARY INVESTIGATIONS BRANCH								
SCALE: 1" = 10′	VERT. DATUM: NAVD88	SURVEYED	BY DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE
					QUANTITIES	BY A. QUIROZ	CHECKED I. GHNEAM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0029
POST MILE 21.52

RETAINING WALL ABUTMENT 1 LEFT
FOUNDATION PLAN No. 2

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:35
FILE => 52e0029-e-fdp102.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-6-22	2-15-23	3-8-23	6-9-23	6	13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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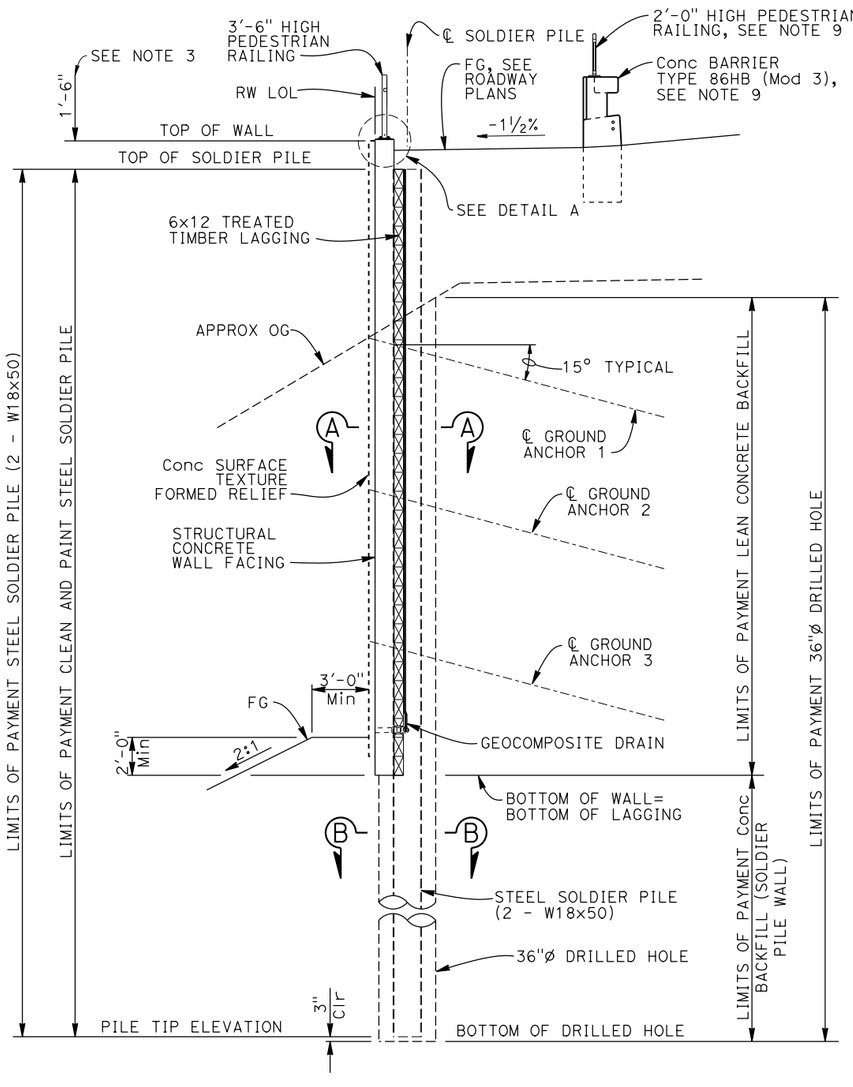
LEGEND:

- Limits of Cored Hole
- Limits of 2" Expanded Polystyrene

UNDERCOAT ON ALL PILE SURFACES

LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE

NO SCALE

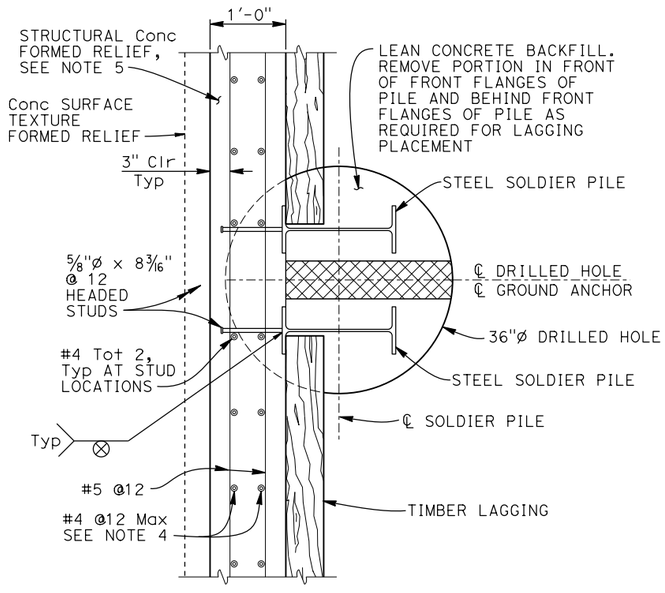


TYPICAL SECTION

1/4" = 1'-0"

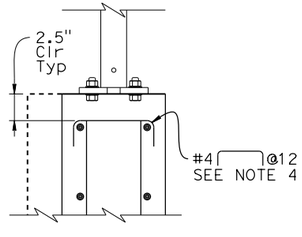
NOTES:

1. For Conc Surface Texture Formed Relief see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1 & 2" sheets.
2. For Approach Slab details, see "VENTURA OH (REPLACEMENT)" Structure Plans.
3. Within limits of Approach Slab, Steel Soldier Pile shall be cut 2" below the bottom of the Approach Slab.
4. #4 ⌐ ¬ @6 under 3'-6" high Pedestrian Railing with Chain Link Railing Type 7 (Mod 1). For "SECTION A-A", service splice only from top of wall to ℄ GROUND ANCHOR 2 Elev. No lap splices allowed at these locations.
5. Structural Concrete Wall Facing shall extend to begin and end of wall.
6. For Stay Plate Details, see "TYPICAL SECTION No. 2" sheet.
7. All reinforcing steel in the Structural Conc Wall Facing shall be Post-fabricated Epoxy Coated Rebar for bottom of wall elevations 30' and higher.
8. All reinforcing steel in the Structural Conc Wall Facing shall be Pre-fabricated Epoxy Coated Rebar for bottom of wall elevations below 30'.
9. For Concrete Barrier Type 86HB (Mod 3) section with 2'-0" high Pedestrian Railing, see ROADWAY PLANS.



SECTION A-A

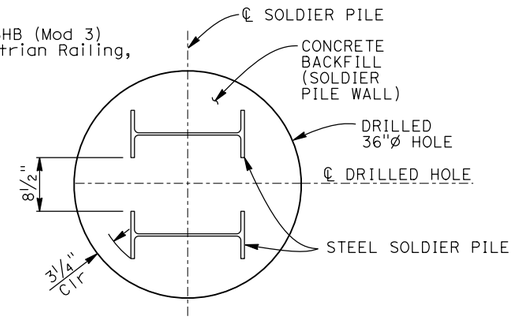
1" = 1'-0"



NOTE: FOR INFORMATION NOT SHOWN SEE SECTION A-A

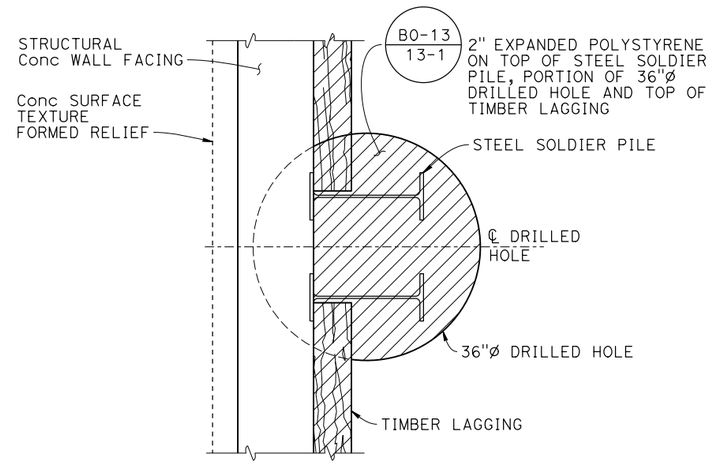
DETAIL A

NO SCALE



SECTION B-B

1" = 1'-0"



NOTE: FOR INFORMATION NOT SHOWN SEE SECTION A-A

PLAN VIEW AT BOTTOM OF APPROACH SLAB

1" = 1'-0"

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0029
DETAILS	BY A. Onodera/T. Bradshaw	CHECKED X. Carrillo/T. Sayre			POST MILE 21.52
QUANTITIES	BY A. Quiroz	CHECKED I. Ghneam			

RETAINING WALL ABUTMENT 1 LEFT

TYPICAL SECTION No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 15:56
FILE => 52e0029-k-ts01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

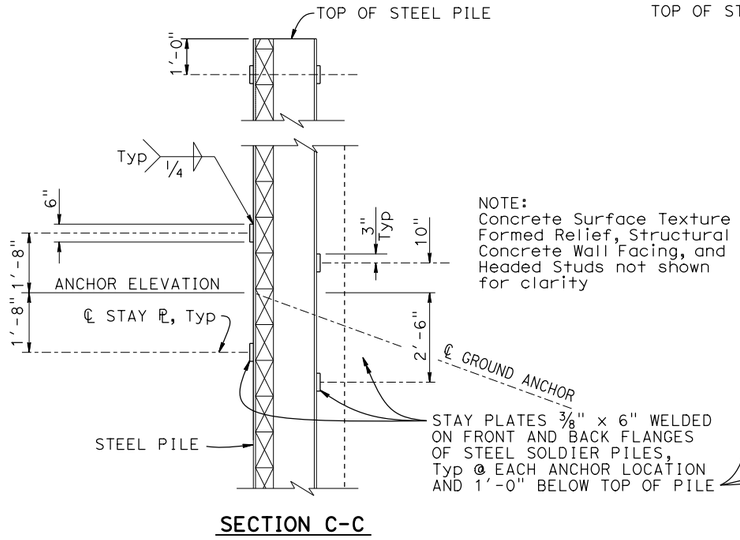
UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

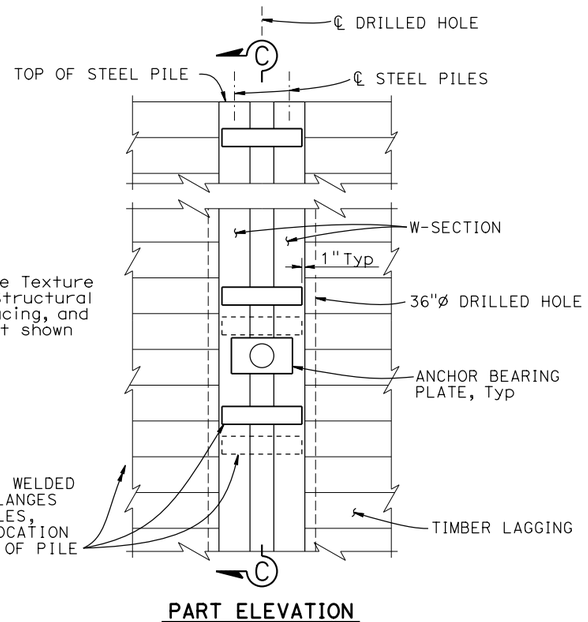
REVISION DATES			SHEET	OF
4-20-23		7-27-23 09-21-23	7	13

NOTES:

1. For Typical Section and other notes, see "TYPICAL SECTION No. 1" sheet



SECTION C-C



PART ELEVATION

STAY PLATE DETAILS

NO SCALE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	A. Onodera/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Quiroz	I. Ghneam

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0029
POST MILE 21.52

RETAINING WALL ABUTMENT 1 LEFT
TYPICAL SECTION No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:35
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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-11-23	7-21-23			8	13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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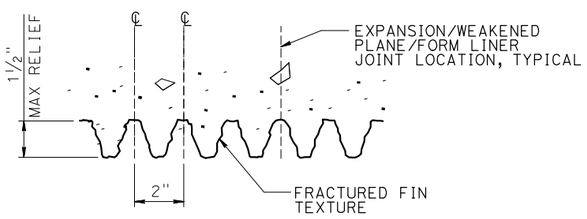
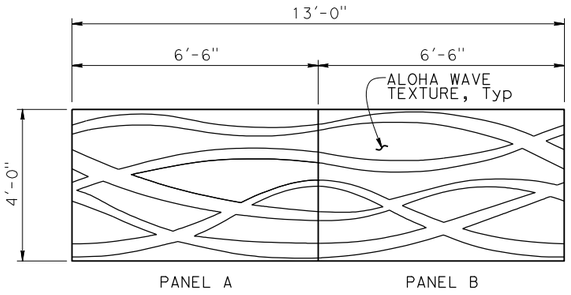


FRACTURED FIN TEXTURE

NO SCALE

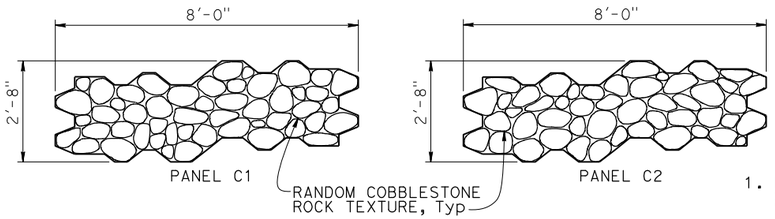


PATTERN ELEVATION

ALOHA WAVE TEXTURE

½" = 1'-0"

NOTE: See Notes 1



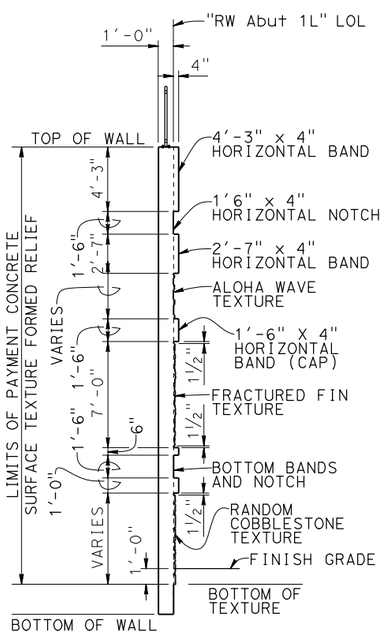
PATTERN ELEVATION

RANDOM COBBLESTONE ROCK TEXTURE

½" = 1'-0"

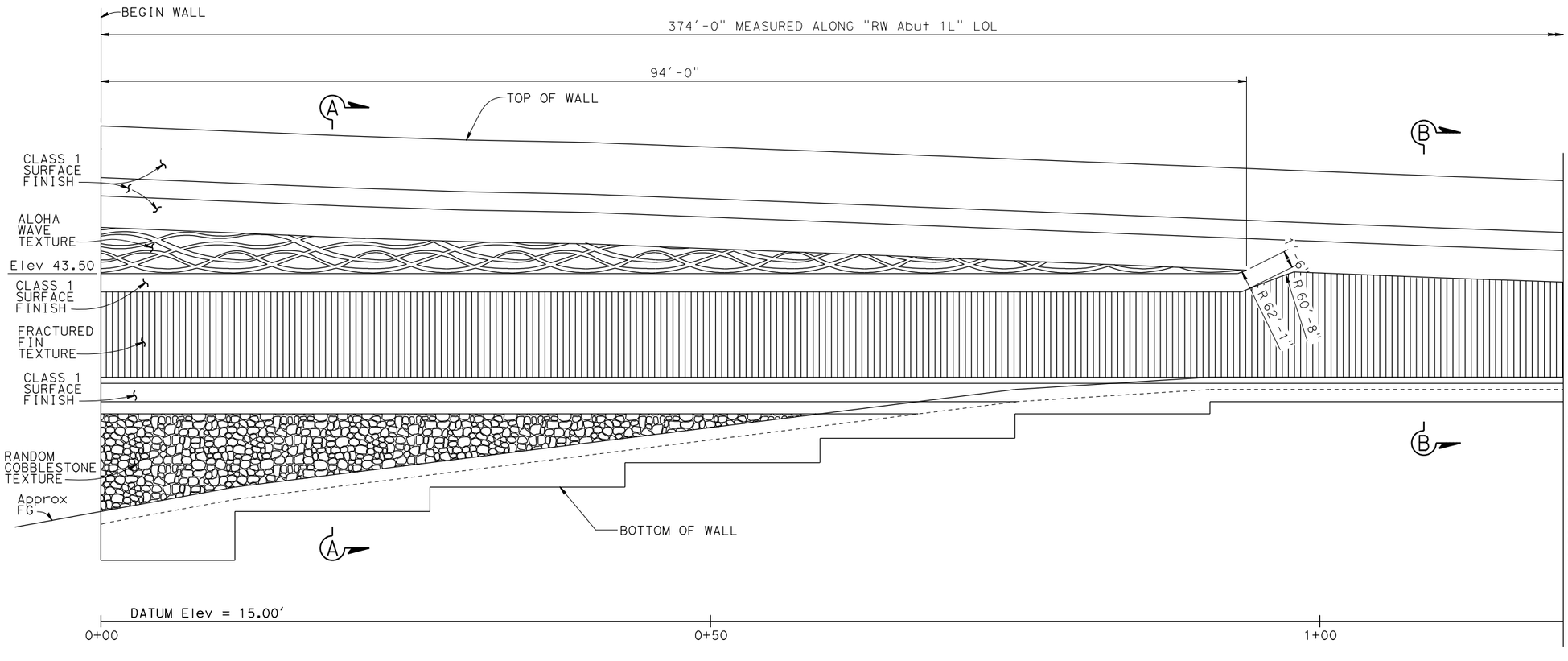
NOTE: See Notes 1 and 2

1. For additional details see "CONCRETE SURFACE TEXTURE DETAILS No. 3" sheet in Ventura OH (Replacement) Structure Plans.
2. Prepare and Stain Concrete.
3. For SECTION B-B, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 2" sheet.



TYPICAL SECTION A-A

1" = 5'



NOTE: RAILING AND PILES NOT SHOWN FOR CLARITY

DEVELOPED ELEVATION

1" = 5'

	BY	CHECKED
DESIGN	A. MALLA	X. CARRILLO/T. SAYRE
DETAILS	T. DOAN/T. BRADSHAW	X. CARRILLO/T. SAYRE
QUANTITIES	A. QUIROZ	I. GHNEAM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0029
POST MILE 21.54

RETAINING WALL ABUTMENT 1 LEFT
CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 11-SEP-2023 TIME PLOTTED => 08:42
FILE => 52e0029-u-arch-det01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
4-20-23		09-11-23	09-01-23	9	13

NOTE:
For Fractured Fin Texture Details, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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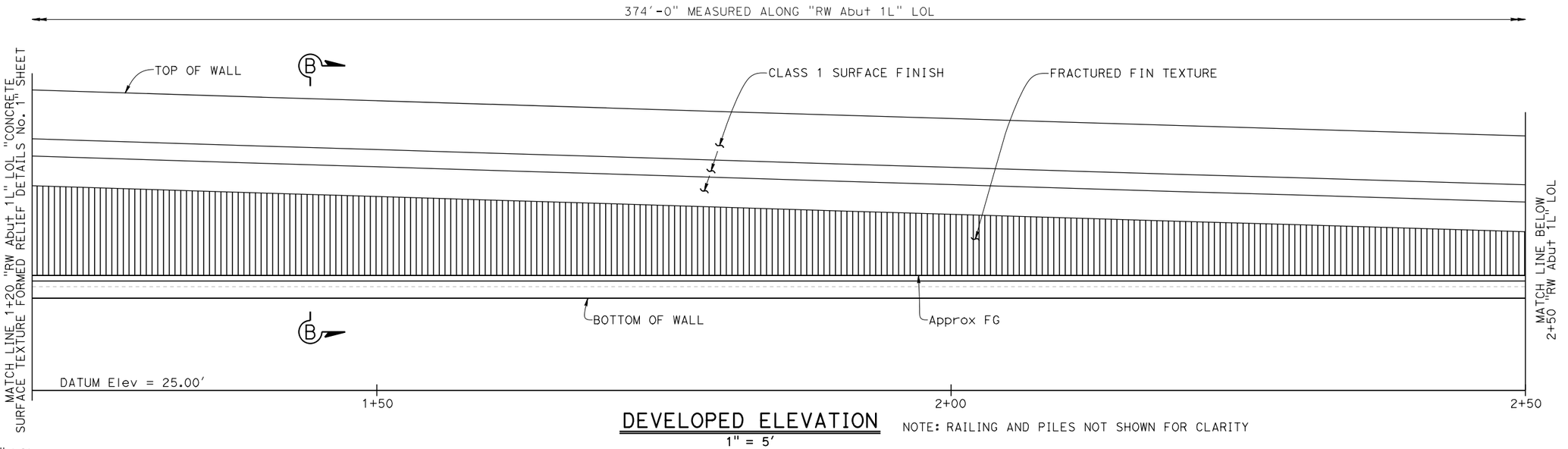
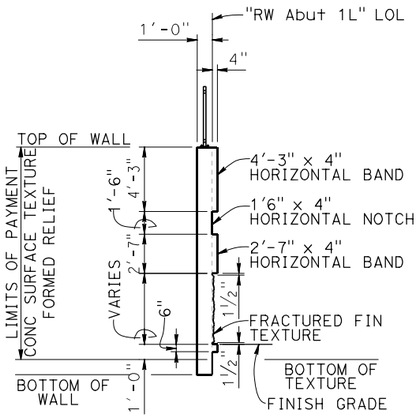
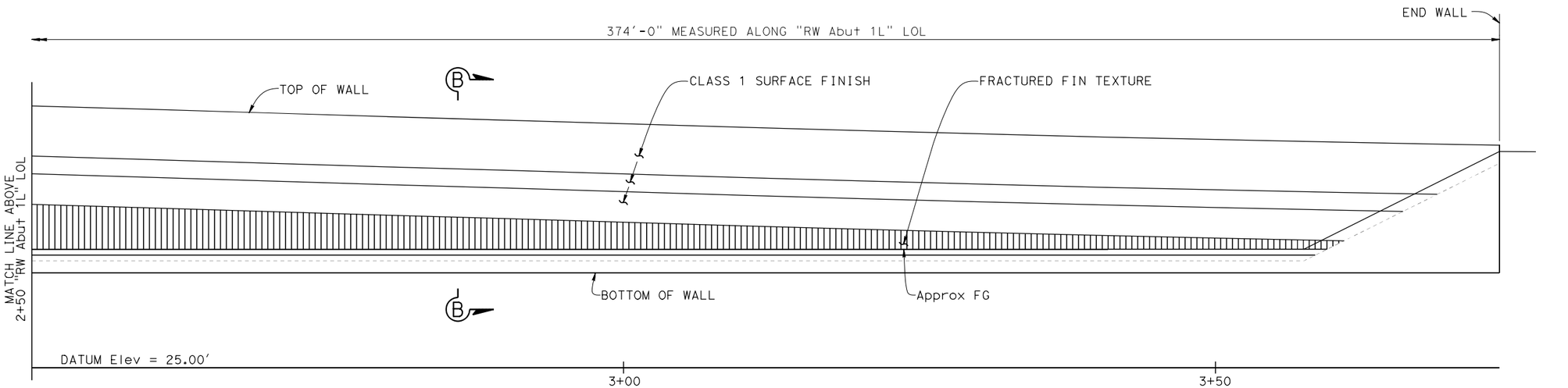


DEVELOPED ELEVATION
1" = 5'

NOTE: RAILING AND PILES NOT SHOWN FOR CLARITY



TYPICAL SECTION B-B
1" = 5'



DEVELOPED ELEVATION
1" = 5'

NOTE: RAILING AND PILES NOT SHOWN FOR CLARITY

DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE	
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE	
QUANTITIES	BY A. QUIROZ	CHECKED I. GHNEAM	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52E0029
POST MILE 21.54

RETAINING WALL ABUTMENT 1 LEFT
CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 8-SEP-2023 TIME PLOTTED => 15:28
FILE => 52e0029-u-arch-det02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~4-20-23~~		7-27-23	~~5-5-23~~	10	13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.

GENERAL NOTES (1)

~~DESIGN:~~
~~AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.~~

PRESTRESSING STEEL:

Bars - ASTM Designation: A722 Type II (150 ksi)

Strand Tendons-ASTM Designation: A416 (270 Ksi Low Relaxation steel)

FTL = Factored Test Load per anchor (Kips)

fpu = Minimum tensile strength of prestressing steel

As = Minimum cross sectional area of prestressing steel in ground anchor (square inch)

$As(Min) = \frac{1.0\ FTL}{0.75\ fpu}$ (Strands)

$As(Min) = \frac{1.0\ FTL}{0.80\ fpu}$ (Bars)

NOTES:

(A) Level of initial grouting for drilled hole 6" in diameter or smaller

(B) Level of secondary grouting

(C) Level of initial grouting inside corrugated sheathing

(D) Bonded length shall be determined by the contractor

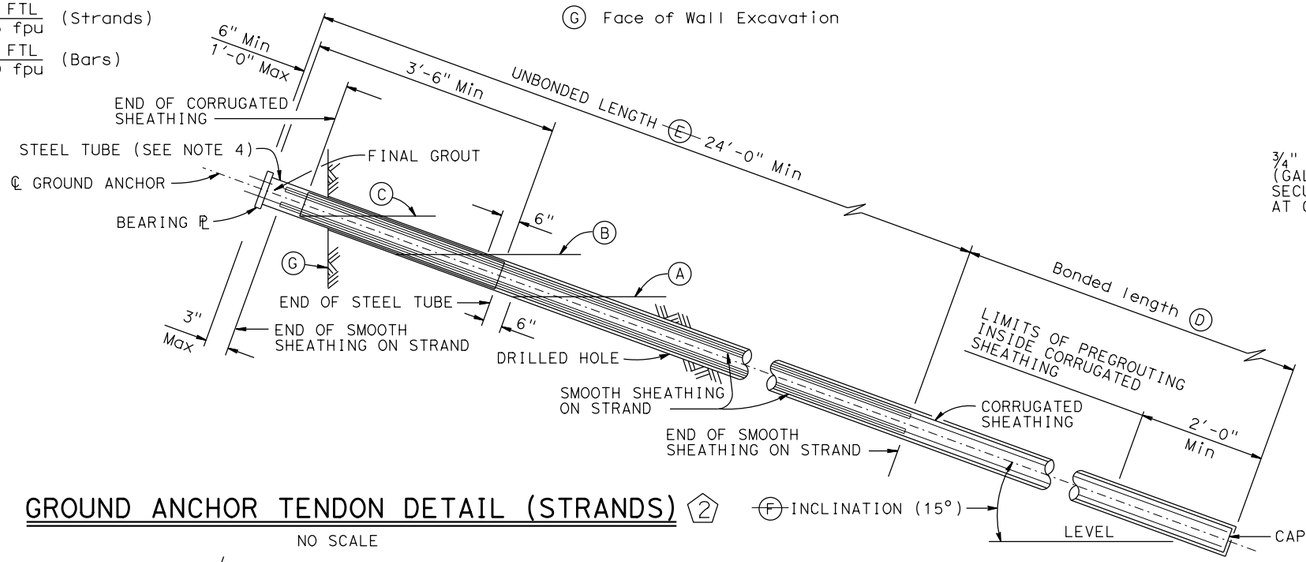
(1) ~~(E) For unbonded length, see PROJECT PLANS~~

~~(F) For inclination, see PROJECT PLANS~~

(G) Face of Wall Excavation

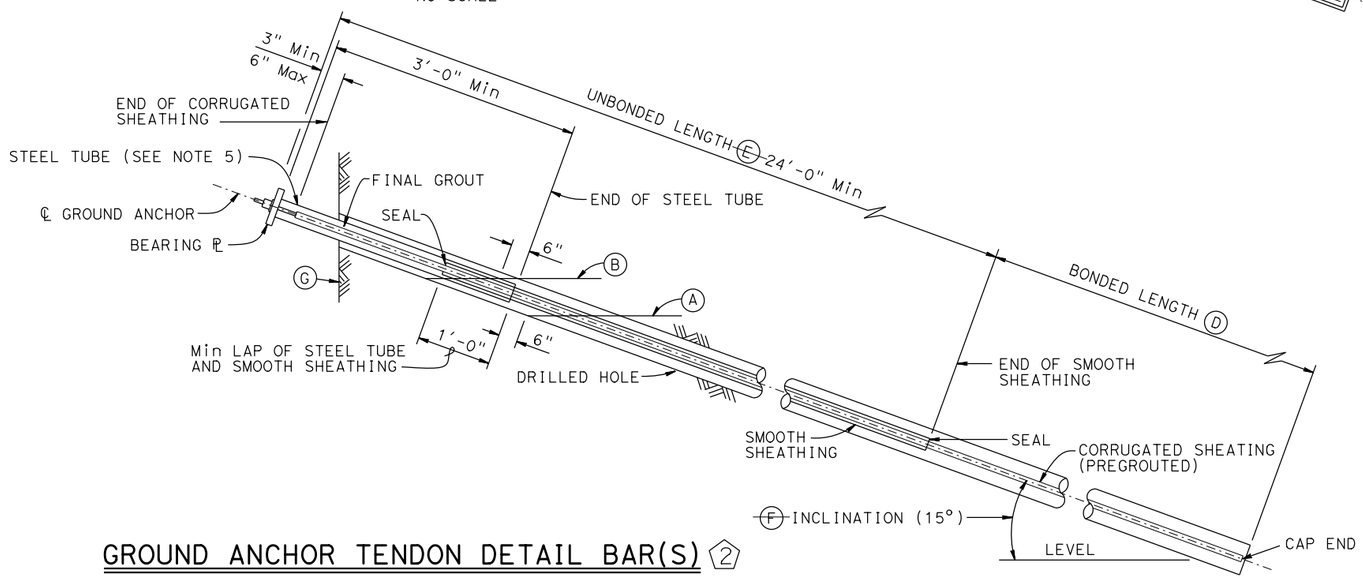
NOTES:

1. Anchorage enclosure shall only be used when anchor head assembly is not enclosed in concrete.
2. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize after fabrication.
3. Silicone sealant to cover full width of flange.
4. Steel tube (Min thickness = 1/4") welded to bearing plate. Galvanize assembly after fabrication
5. Steel tube welded to bearing plate. Inside diameter of steel tube (Min thickness = 1/4") to be 1" greater than outside diameter of smooth sheathing.
6. Galvanize assembly after fabrication.
7. For other wall details, see PROJECT PLANS.



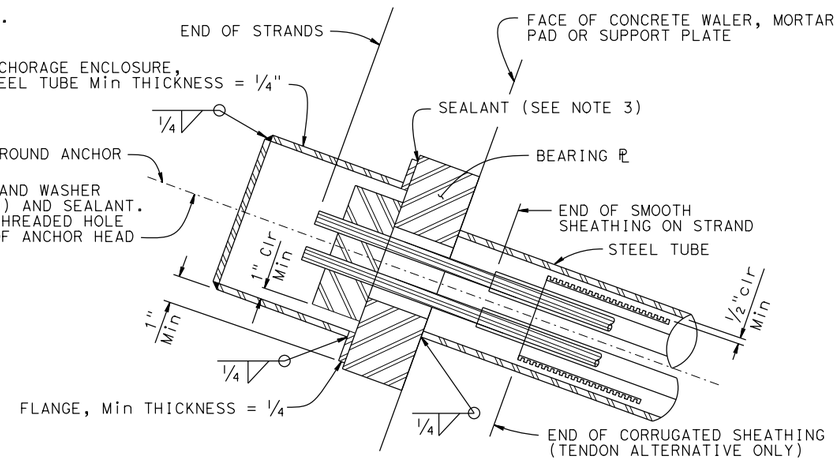
GROUND ANCHOR TENDON DETAIL (STRANDS) (2)

NO SCALE

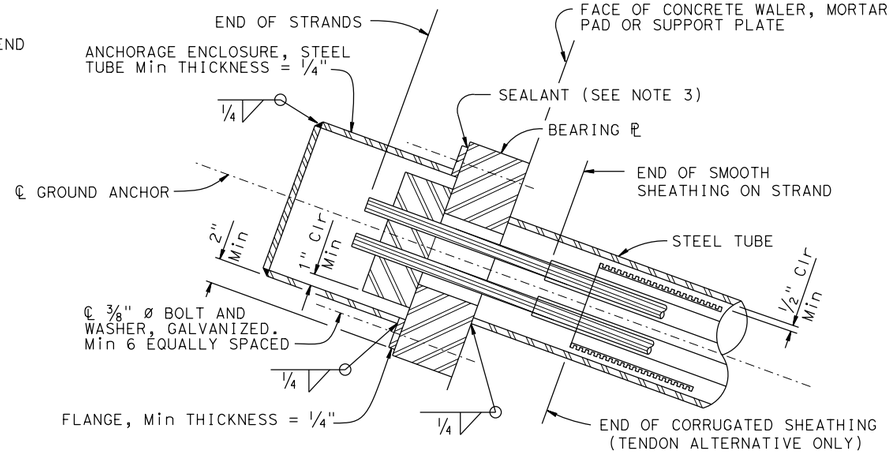


GROUND ANCHOR TENDON DETAIL BAR(S) (2)

NO SCALE



ALTERNATIVE X



ALTERNATIVE Y

ANCHORAGE ENCLOSURE DETAILS

NO SCALE

REVISED BRIDGE STANDARD DETAILS			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 52E0029	RETAINING WALL ABUTMENT 1 LEFT
xs12-040 FILE NO.	July 2014 APPROVAL DATE	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California	(1) – Modified Notes (2) – Modified Detail		POST MILE 21.52	SUB HORIZONTAL GROUND ANCHOR DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52e0029-u-b-xs12-040.dgn
USERNAME => s156654 TIME PLOTTED => 09:35 DATE PLOTTED => 23-AUG-2023

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT NO.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-22-22	2-17-23	5-1-23	6-9-23	11	13

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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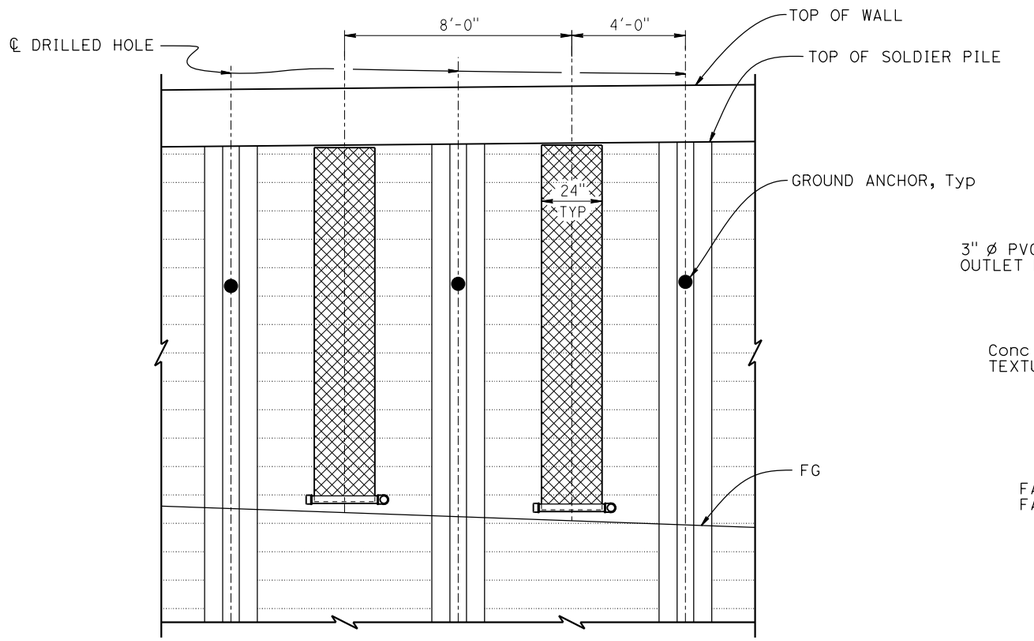
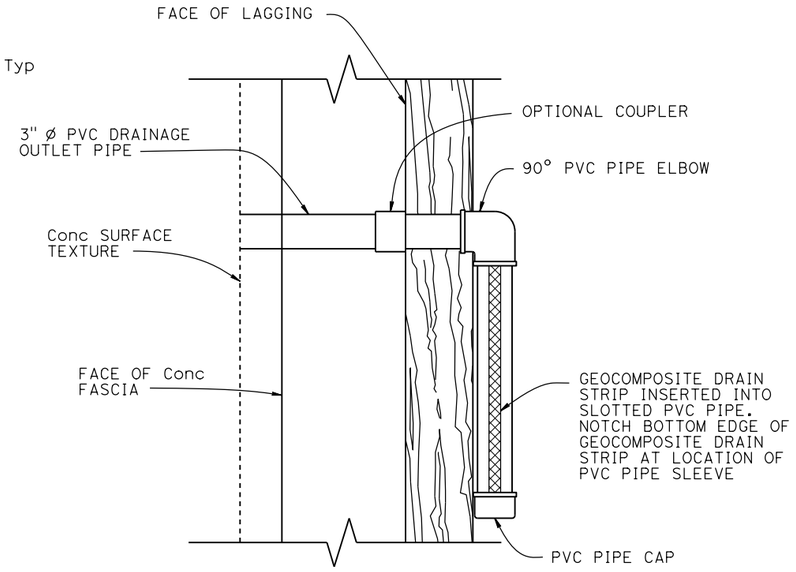


PART ELEVATION - GEOCOMPOSITE DRAIN

NO SCALE

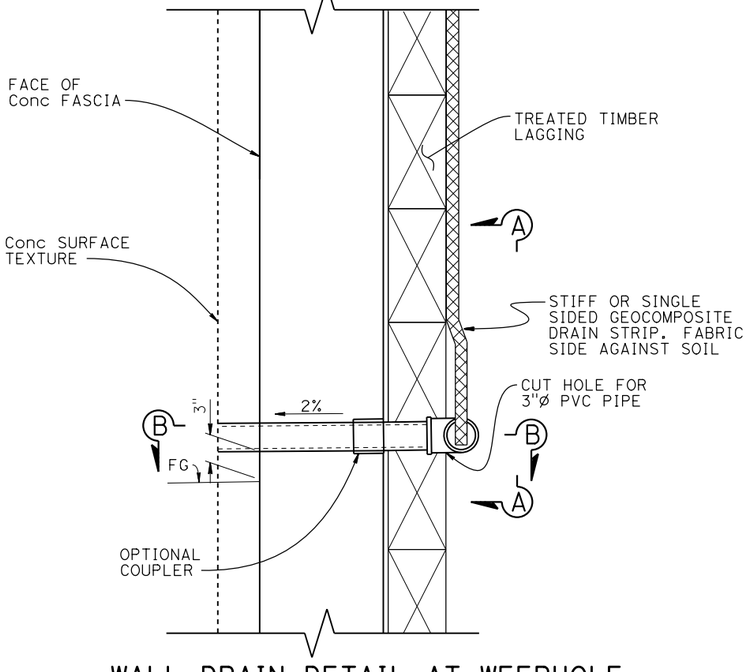


SECTION B-B

NO SCALE

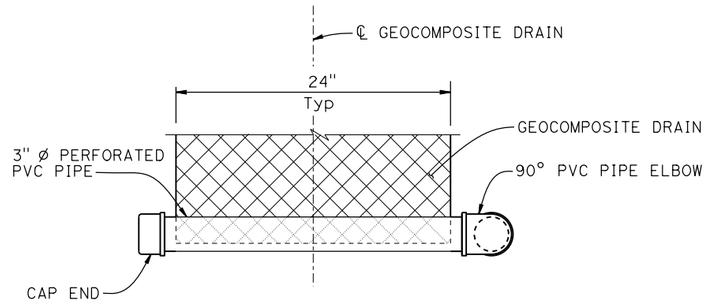
NOTE:

For details and dimensions not shown, see "TYPICAL SECTION" sheet.



WALL DRAIN DETAIL AT WEEPHOLE

NO SCALE



VIEW A-A

NO SCALE

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0029	RETAINING WALL ABUTMENT 1 LEFT	
DETAILS	BY A. Onodera/ T. Bradshaw	CHECKED X. CARRILLO/T. SAYRE			POST MILE 21.52	MISCELLANEOUS DETAILS	
QUANTITIES	BY A. Quiroz	CHECKED I. Ghneam					

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:35
FILE => 52e0029-u-miscdt01.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~12-20-22~~	~~1-27-23~~	~~3-1-23~~	4-14-23	12	13

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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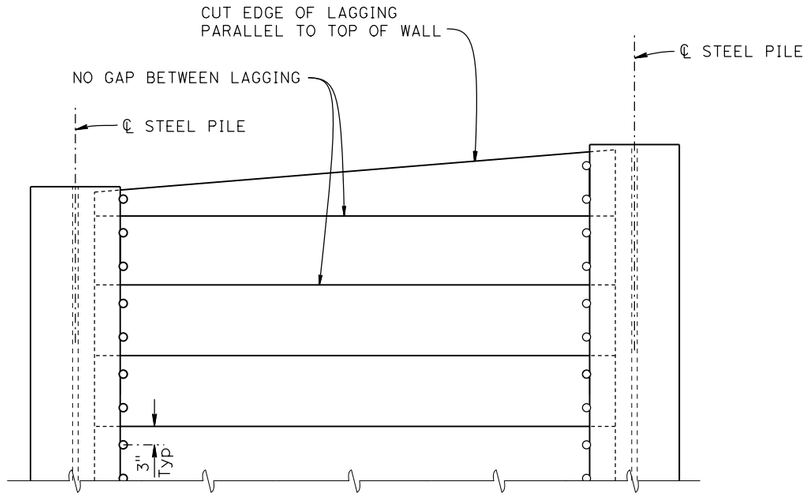
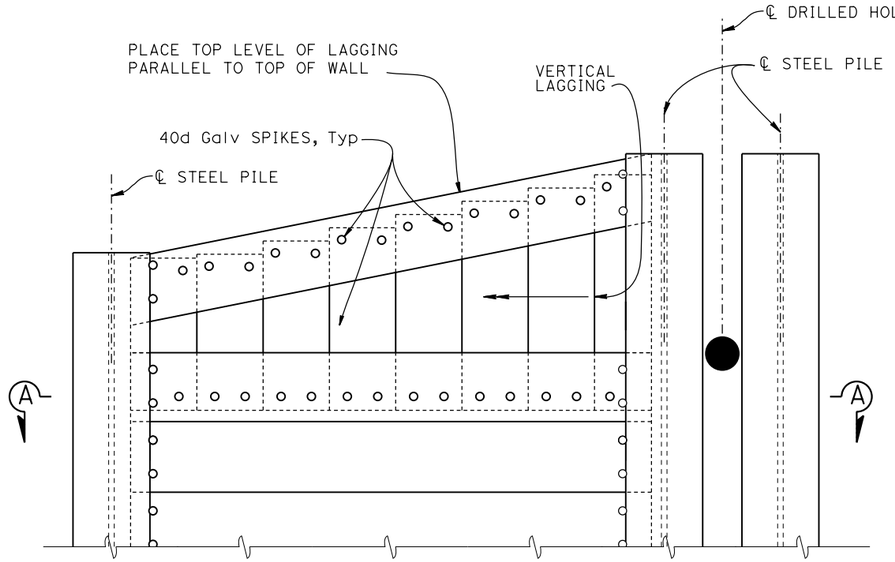
The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.



PART ELEVATION

LAGGING DETAILS (ALTERNATIVE 1) (1)

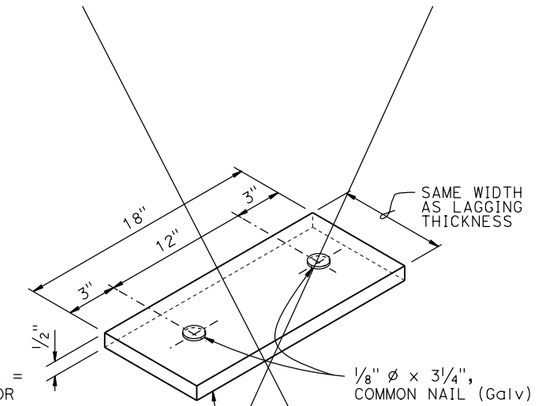
NO SCALE



PART ELEVATION

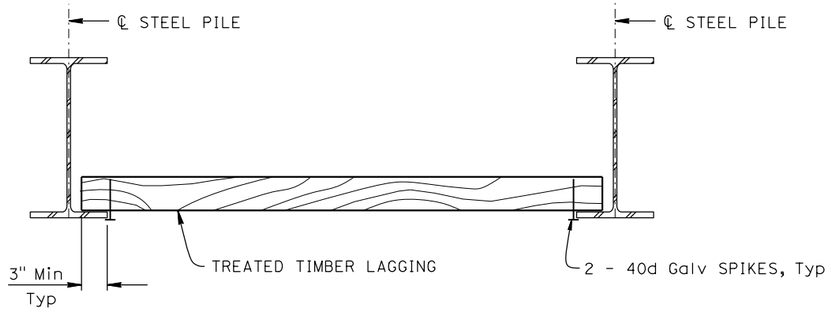
LAGGING DETAILS (ALTERNATIVE 2) (1)

NO SCALE



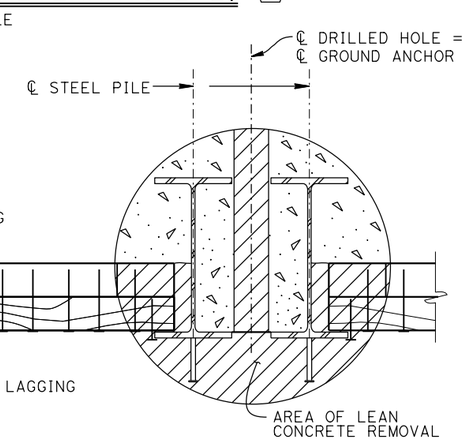
SHIM DETAIL (3)

NO SCALE



PART PLAN (1)

NO SCALE



SECTION A-A (1)

NO SCALE

NOTES:

(2)
1. No clipping of timber lagging corners allowed
2. Spikes shall not be bent

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS			(1) — Modified Detail (3) — Detail not used	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 52E0029	RETAINING WALL ABUTMENT 1 LEFT
xs12-080 FILE NO.	July 2014 APPROVAL DATE	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California	(2) — Modified Note			POST MILE 21.52	SOLDIER PILE WALL LAGGING DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52e0029-x-xs12-080.dgn
USERNAME => s156654 TIME PLOTTED => 09:35 DATE PLOTTED => 23-AUG-2023

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT NO.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-4-23	2-1-23	3-3-23	4-14-23	13	13

EXPEDITE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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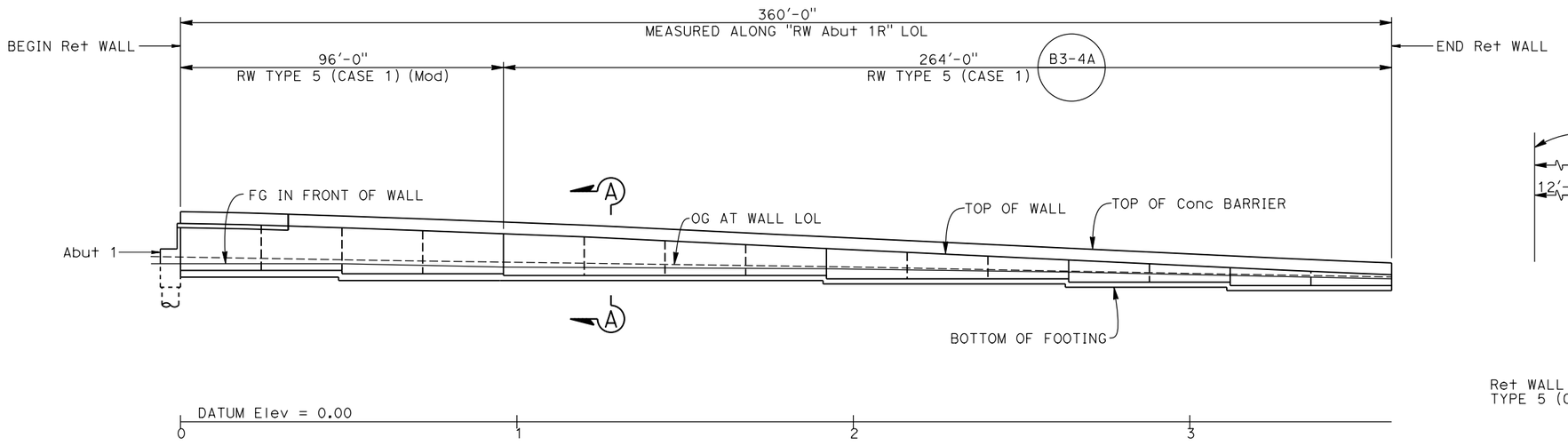
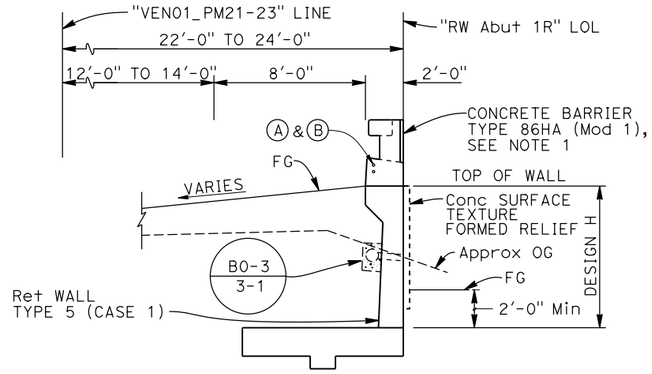
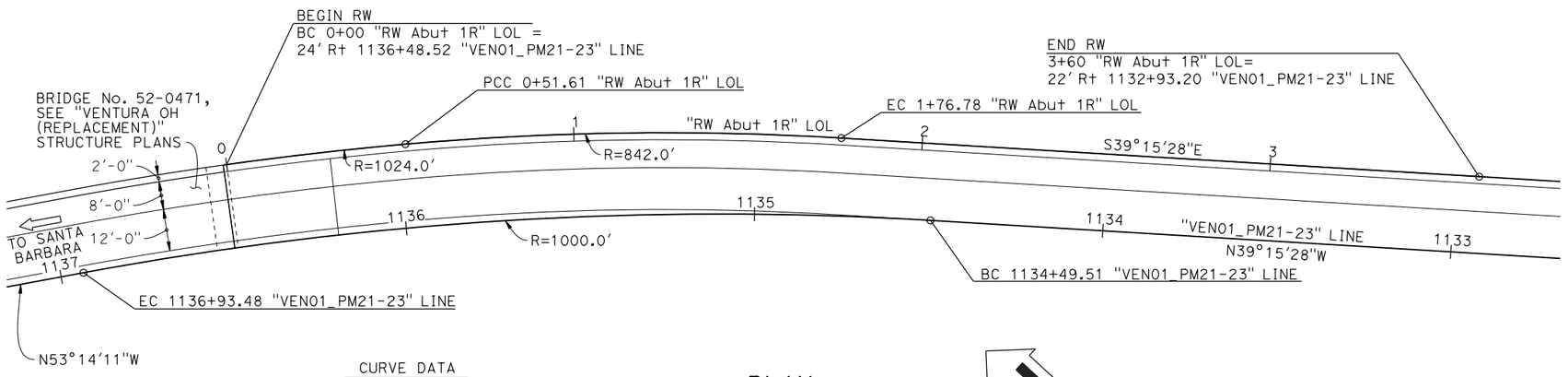


DEVELOPED MIRRORED ELEVATION
1" = 20'



TYPICAL SECTION A-A
1/4" = 1'-0"

NOTES: A) For Limits of Payment for earthwork see A62B
B) For Roadway Section, see ROADWAY PLANS



CURVE DATA

"RW Abut 1R" LINE		"VEN01_PM21-23" LINE
R = 1024.00'	R = 842.00'	R = 1000.00'
Δ = 2°53'16"	Δ = 8°31'04"	Δ = 13°58'43"
T = 25.81'	T = 62.70'	T = 122.59'
L = 51.61'	L = 125.17'	L = 234.97'

PLAN
1" = 20'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

INDEX TO PLANS

SHEET No.	TITLE
1	GENERAL PLAN
2	STRUCTURE PLAN
3	FOUNDATION PLAN No. 1
4	FOUNDATION PLAN No. 2
5	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1
6	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 2
7	RETAINING WALL TYPE 5 (CASE 1)

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

"DESIGN DATA" on "RETAINING WALL TYPE 5 (CASE 1) (Mod)" sheet. "DESIGN DATA" per revised Standard Plan RSP B3-4A

Standards Plans and Specifications, 2023 Edition

NOTES:

1. For Abut 1 Details and Concrete Barrier Type 86HA (Mod 1), see "VENTURA OH (REPLACEMENT)" Structure Plans.
2. For Conc Surface Texture Formed Relief, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1 and No. 2" sheets.
3. Ⓐ & Ⓑ 1½"ø Electrical and Sprinkler Control Conduits. For locations and limits see ROADWAY ELECTRICAL AND IRRIGATION PLANS.

John Peterson
BRANCH CHIEF

	BY	CHECKED		BY	CHECKED
DESIGN	A. Malla	S. Anam/A. Quiroz	SEISMIC ANALYSIS	X	X
DETAILS	A. Onodera/T. Bradshaw	S. Anam/A. Quiroz	LAYOUT	A. Malla	S. Anam/A. Quiroz
QUANTITIES	A. Quiroz	S. Anam	SPECIFICATIONS	X	PLANS AND SPECS COMPARED X

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0030
POST MILE 21.52

RETAINING WALL ABUTMENT 1 RIGHT
GENERAL PLAN

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 16:41
FILE => 52e0030-a-gp.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/1
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
~~4-20-23~~		~~09-27-23~~ ~~8-18-23~~	1	7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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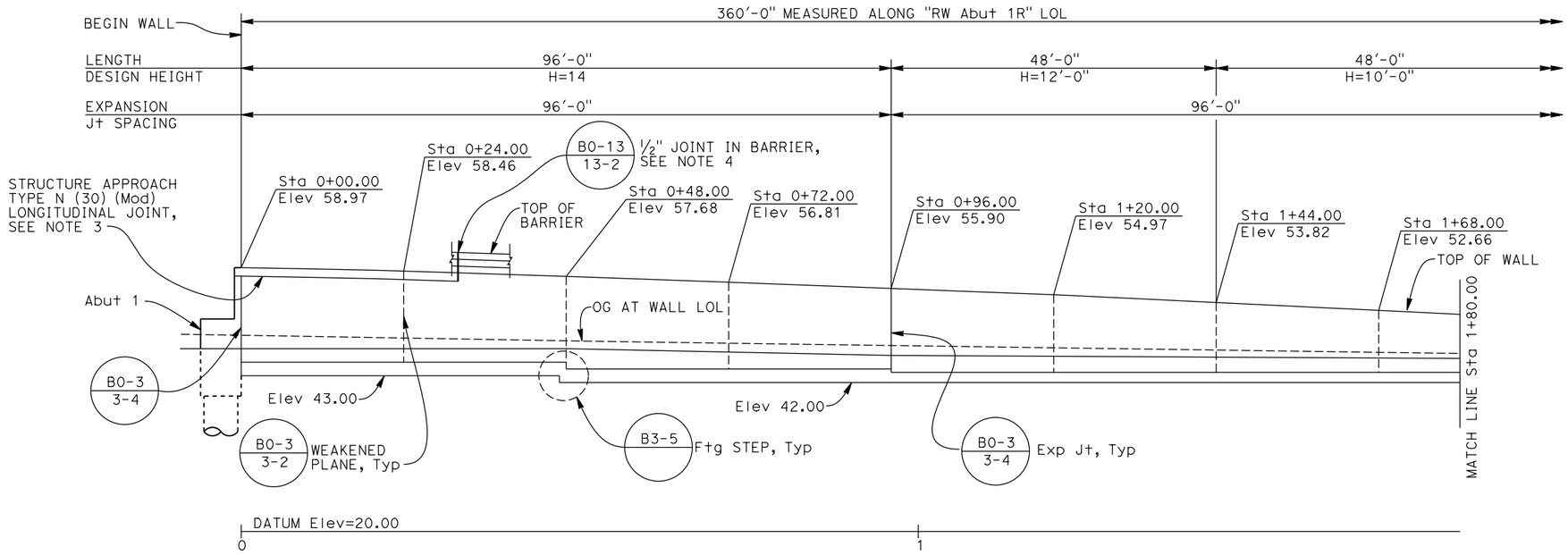
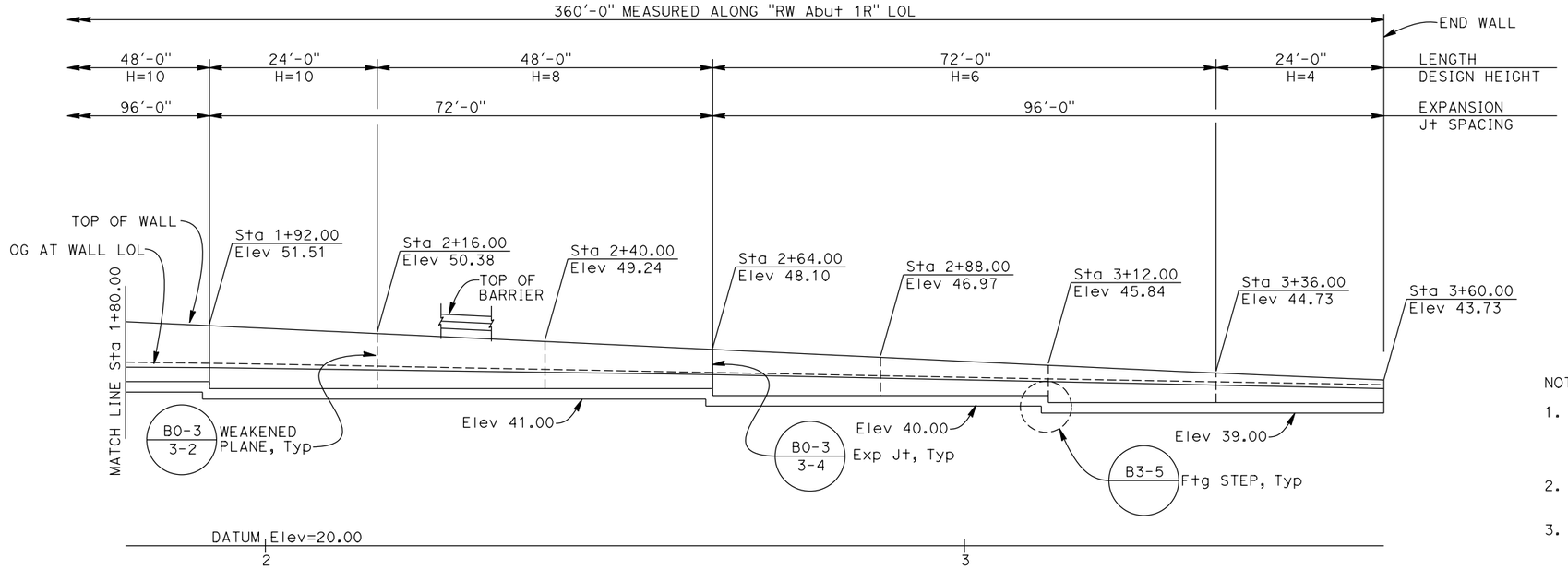


DEVELOPED MIRRORED ELEVATION

1" = 10'



DEVELOPED MIRRORED ELEVATION

1" = 10'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NOTES:

1. For Retaining Wall details, see "RETAINING WALL TYPE 5 (CASE 1) (Mod)" sheet and B3-4A. Horizontal clearance to reinforcement in the wall stem shall be 3".
2. All reinforcing steel shall be Post-fabricated Epoxy Coated Rebar.
3. See "STRUCTURE APPROACH TYPE N (30) (Mod)" and "STRUCTURE APPROACH DETAILS (Mod)" on "VENTURA OH (REPLACEMENT)" Structure Plans.
4. Joint requires double post condition, one post attached to Structure Approach Slab and the other post attached to the top of Retaining Wall.

DESIGN	BY A. Malla	CHECKED S. Anam/A. Quiroz	
DETAILS	BY A. Onodera/T. Bradshaw	CHECKED S. Anam/A. Quiroz	
QUANTITIES	BY A. Quiroz	CHECKED S. Anam	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0030
POST MILE 21.52

RETAINING WALL ABUTMENT 1 RIGHT
STRUCTURE PLAN

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:36
FILE => 52e0030-c-sp01.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES: 5-30-23 | 7-26-23 | 6-12-23

SHEET 2 OF 7

CURVE DATA				
No.	R	Δ	T	L
②	1000.00′	13°58′43"	122.59′	243.97′
④	3366.12′	08°02′03"	236.39′	472.01′
⑤	1024.00′	02°53′16"	25.81′	51.61′
⑥	842.00′	08°31′04"	62.70′	125.17′
⑦	969.00′	11°23′57"	96.71′	192.79′

RAIL ELEVATION (TOP)

Ⓐ - 23.02 Ⓑ - 22.99

SOFFIT ELEVATIONS

1 - 44.33 16 - 44.99
2 - 44.52 17 - 43.66
3 - 44.53

EXISTING BRIDGE LOCATION

① - 21.94 Ft Lt "VEN01_PM21-23" LINE, Sta 1136+83.48, Elev = 48.30±
③ - 21.73 Ft Rt "VEN01_PM21-23" LINE, Sta 1136+84.12, Elev = 48.98±

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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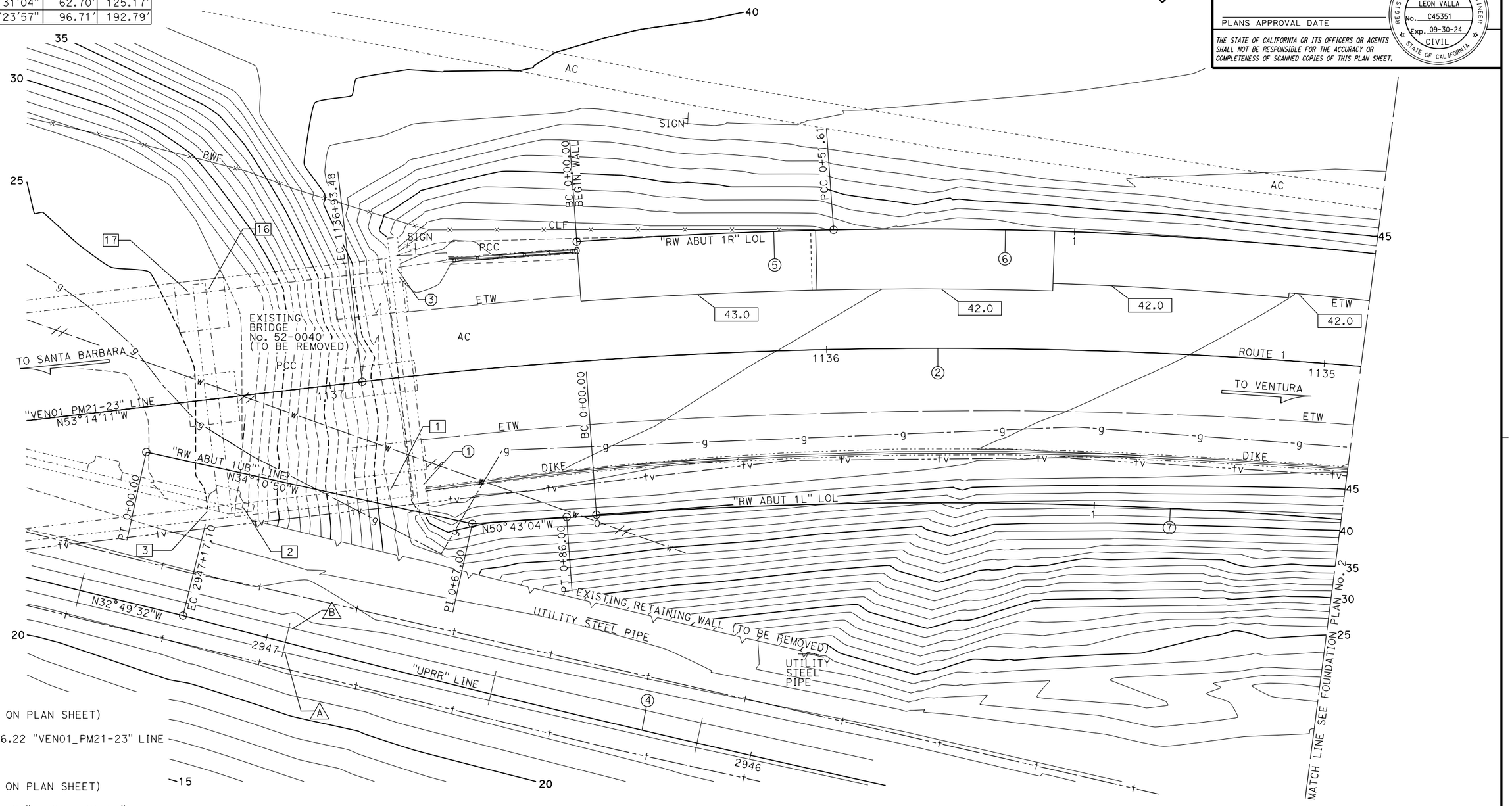

SURVEY CONTROL

PT-64 (NOT SHOWN ON PLAN SHEET)

130_SUHV
102.41′ Lt 1137+36.22 "VEN01_PM21-23" LINE
N 1,931452.93
E 6,157,378.64
Elev = 14.87

PT-65 (NOT SHOWN ON PLAN SHEET)

130_SUHV
54.85′ Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1,931,821.09
E 6,157,165.13
Elev = 16.53

SURVEY MONUMENTS SHOWN ON THE FOUNDATION PLAN ARE FOR DESIGN PURPOSES ONLY.
FOR COMPLETE LIST OF SURVEY MONUMENTS FOR THIS PROJECT, SEE ROADWAY PLANS.

LEGEND:

XX.X Bottom of footing elevation

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PRELIMINARY INVESTIGATIONS BRANCH							
SCALE: 1" = 10′	VERT. DATUM: NAVD88	SURVEYED	BY DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED S. ANAM/A. QUIROZ
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY A. ONODERA/T. BRADSHAW	CHECKED S. ANAM/A. QUIROZ
					QUANTITIES	BY A. QUIROZ	CHECKED S. ANAM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO.	RETAINING WALL ABUTMENT 1 RIGHT
52E0030	
POST MILE 21.52	FOUNDATION PLAN No. 1

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:36
FILE => 52e0030-e-fdp101.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-17-23	2-22-23	3-17-23	4-4-23	3	7

CURVE DATA				
No.	R	Δ	T	L
②	1000.00′	13°58′43"	122.59′	243.97′
④	3366.12′	08°02′03"	236.39′	472.01′
⑦	969.00′	11°23′57"	96.71′	192.79′

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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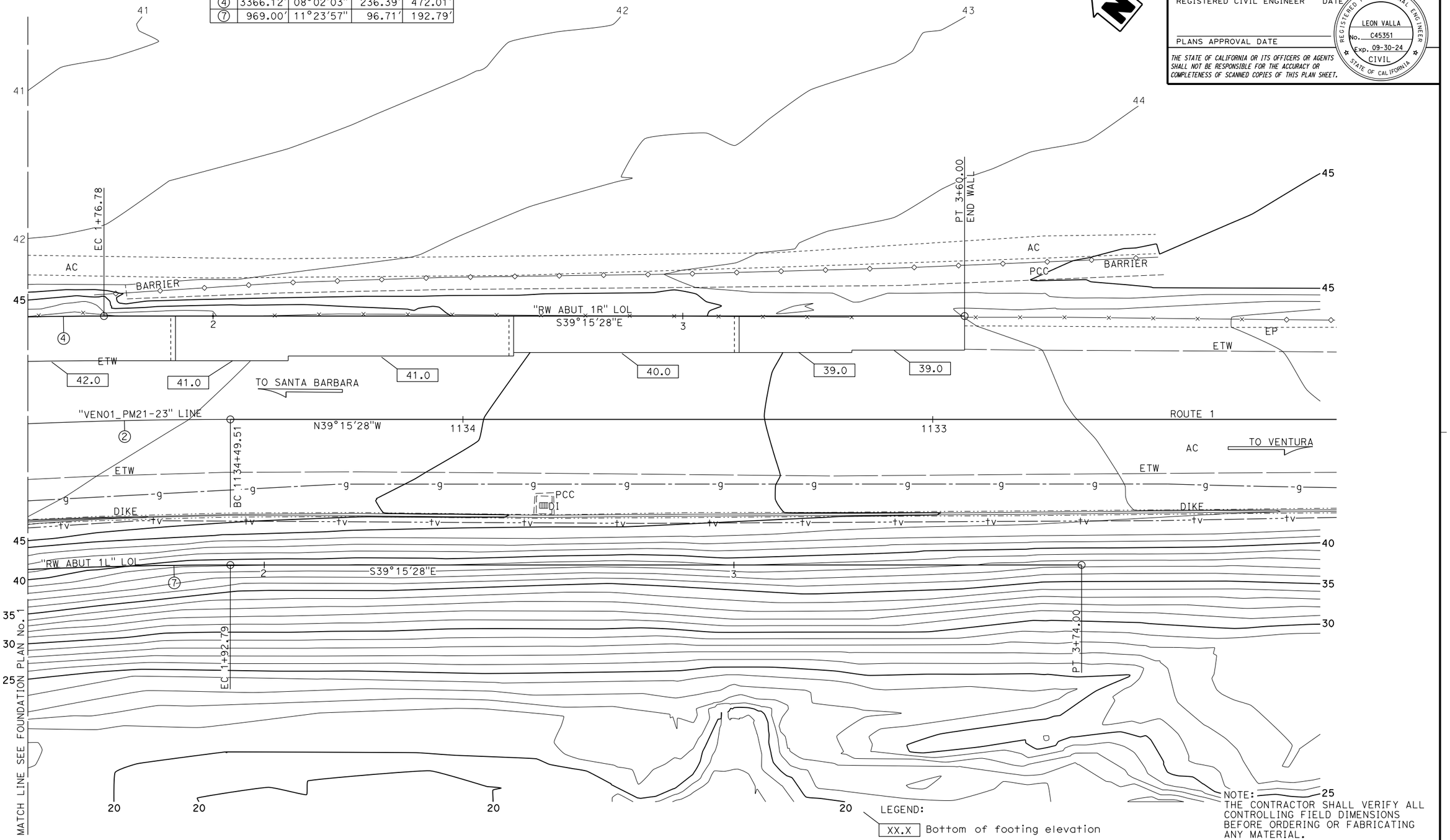

LEGEND:

XX.X Bottom of footing elevation

NOTE: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PRELIMINARY INVESTIGATIONS BRANCH							
SCALE: 1" = 10′	VERT. DATUM: NAVD88	SURVEYED	BY DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED S. ANAM/A. QUIROZ
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY A. ONODERA/T. BRADSHAW	CHECKED S. ANAM/A. QUIROZ
					QUANTITIES	BY A. QUIROZ	CHECKED S. ANAM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0030
POST MILE 21.52

RETAINING WALL ABUTMENT 1 RIGHT
FOUNDATION PLAN No. 2

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:36
FILE => 52e0030-e-fdp102.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-5-22	12-22-22	2-15-23	3-8-23	4	7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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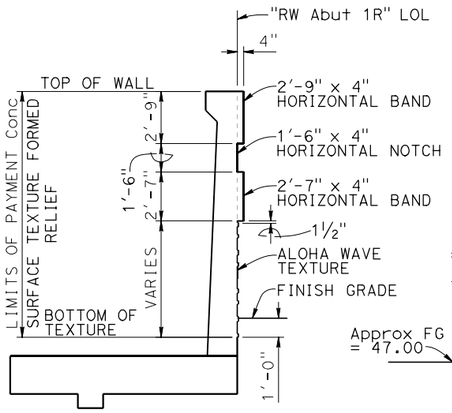
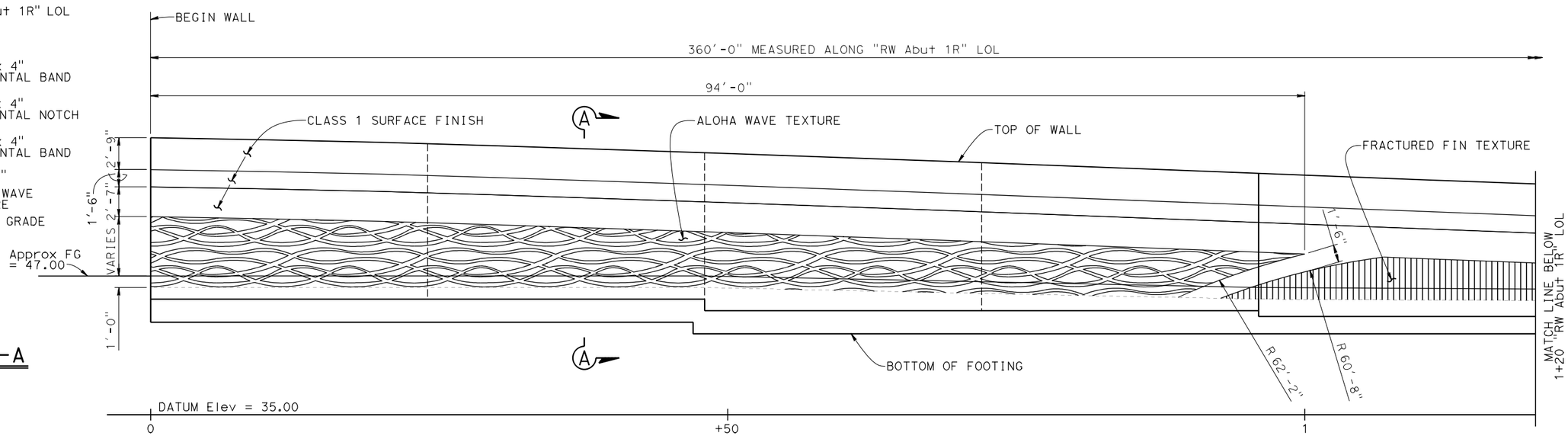
NOTES:

1. For TYPICAL SECTION C-C, see "CONCRETE SURFACE TEXTURE DETAILS No. 2" sheet.
2. For Aloha Wave Texture and Fractured Fin Texture Details, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 2" sheet.



TYPICAL SECTION A-A

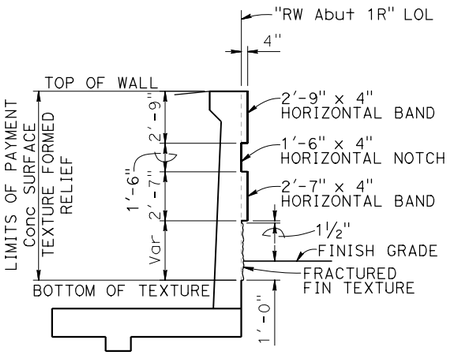
1/4" = 1'-0"



DEVELOPED ELEVATION

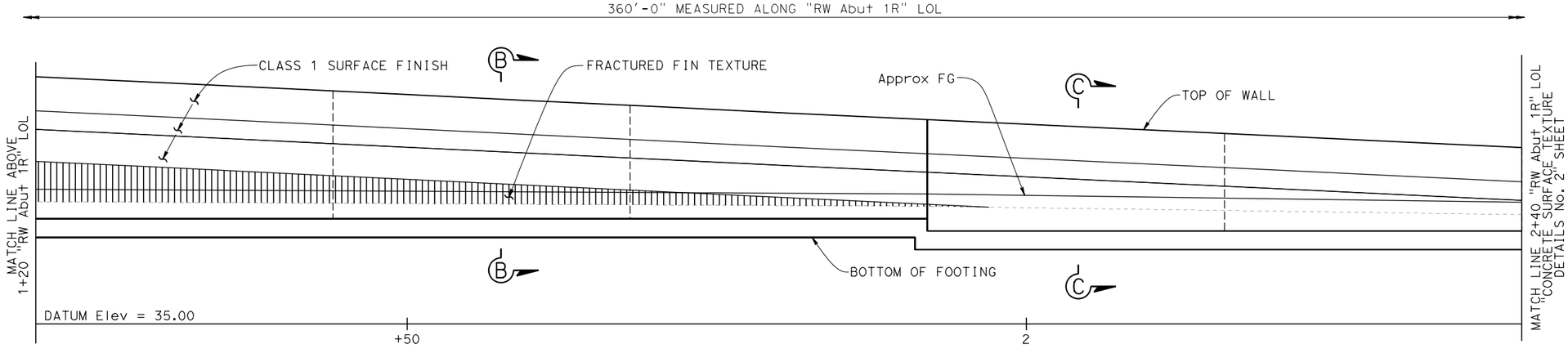
1" = 5'

NOTE: BARRIER NOT SHOWN FOR CLARITY



TYPICAL SECTION B-B

1/4" = 1'-0"



DEVELOPED ELEVATION

1" = 5'

NOTE: BARRIER NOT SHOWN FOR CLARITY

DESIGN	BY A. MALLA	CHECKED S. ANAM/A. QUIROZ	
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED S. ANAM/A. QUIROZ	
QUANTITIES	BY A. QUIROZ	CHECKED S. ANAM	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0030
POST MILE 21.52

RETAINING WALL ABUTMENT 1 RIGHT
CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 8-SEP-2023 TIME PLOTTED => 15:28
FILE => 52e0030-u-arch-det01.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-7-23		7-26-23	5-5-23	5	7

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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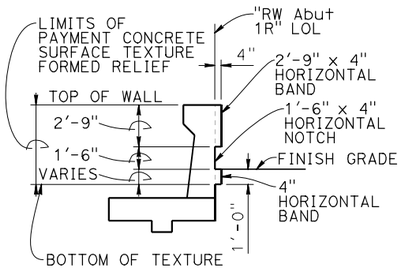
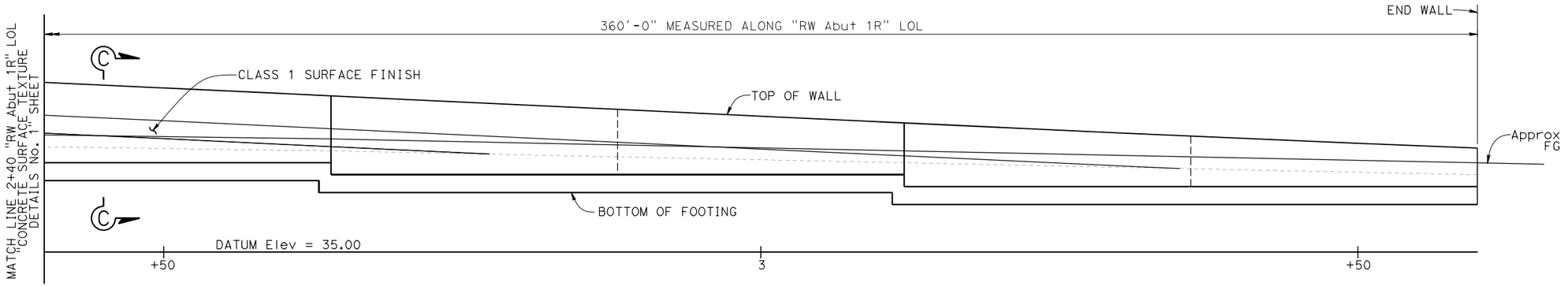


TYPICAL SECTION C-C

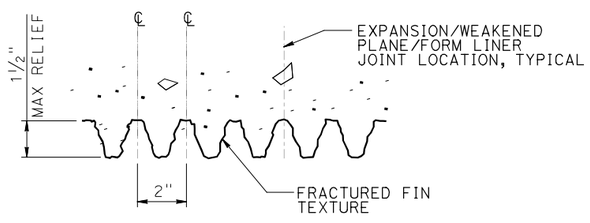
1/4" = 1'-0"



DEVELOPED ELEVATION

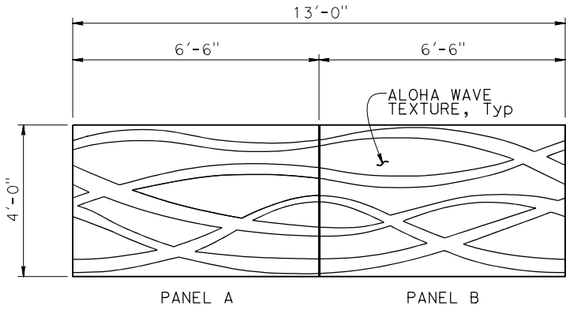
1" = 5'

NOTE: BARRIER NOT SHOWN FOR CLARITY



FRACTURED FIN TEXTURE

NO SCALE



PATTERN ELEVATION

ALOHA WAVE TEXTURE

1/2" = 1'-0"

NOTE: For additional details see "CONCRETE SURFACE TEXTURE DETAILS No. 3" sheet in Ventura OH (Replacement) Structure Plans.

DESIGN	BY A. MALLA	CHECKED S. ANAM/A. QUIROZ	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0030
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED S. ANAM/A. QUIROZ			POST MILE 21.52
QUANTITIES	BY A. QUIROZ	CHECKED S. ANAM			

RETAINING WALL ABUTMENT 1 RIGHT

CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 11-SEP-2023 TIME PLOTTED => 08:42
FILE => 52e0030-u-arch-det02.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
6-7-23		08-11-23 09-01-23	6	7

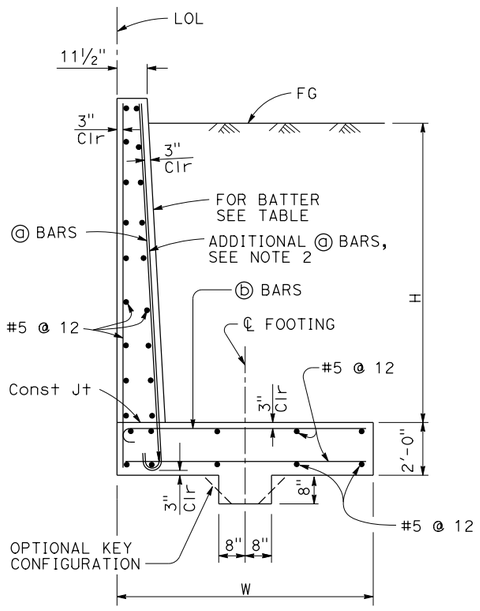
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

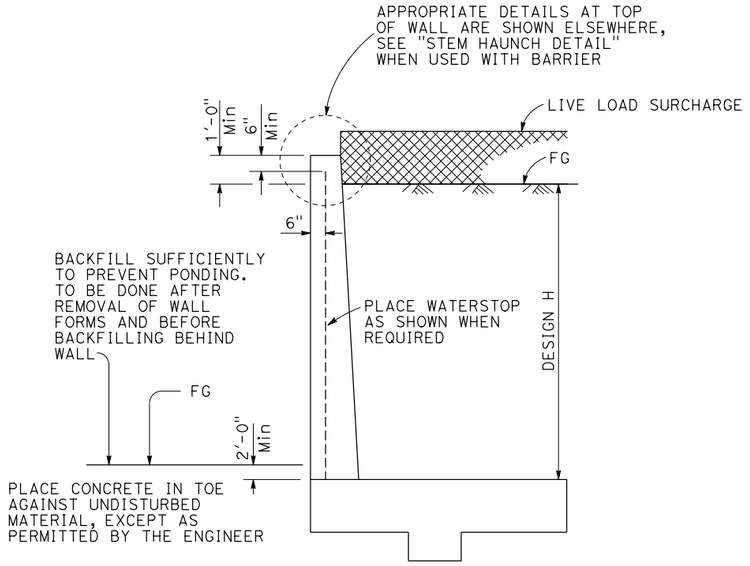
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA



SPREAD FOOTING SECTION

NO SCALE

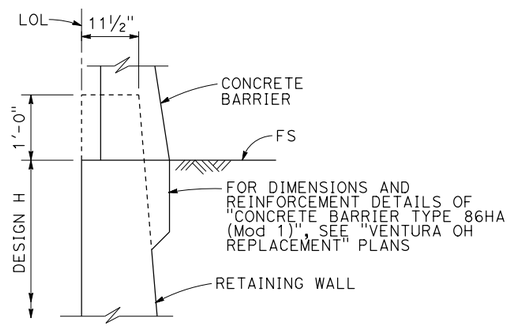


FOR DRAINAGE NOTES AND OTHER DETAILS, SEE B3-5

DESIGN SECTION

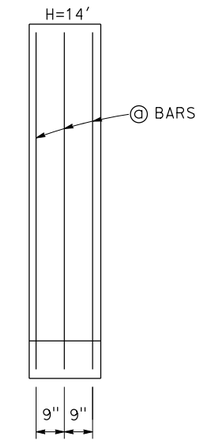
NO SCALE

FOR LIMITS OF PAYMENT FOR EARTHWORK SEE A62B



STEM HAUNCH DETAIL

NO SCALE



ELEVATION

NO SCALE

SYMBOLS:

Ser - service limit state I
Str - strength limit state I
Ext I - extreme event limit state I
Ext II - extreme event limit state II
B′ - effective footing width (ft)
q'_o - net bearing stress (ksf), OG assumed to be FG at toe
q_o - gross uniform bearing stress (ksf)

TABLE OF REINFORCING STEEL, DIMENSIONS AND DATA

DESIGN H	14
W	10′-6"
BATTER	100 : 5
ⓐ BARS	#7 @ 9
ⓑ BARS	#7 @ 9
Ser: B′, q'_o	7.7, 2.6
Str: B′, q_o	7.4, 4.4
Ext I: B′, q_o	6.1, 4.1
Ext II: B′, q_o	5.8, 3.7

DESIGN NOTES:

DESIGN: AASHTO LFRD Bridge Design Specifications, 8th Edition with California Amendments, preface dated April 2019

LS: 240 PSF equivalent to 2′ soil weight

CT: 54 kip transverse force applied at He = 32", distributed over 10′ at the top of wall and 1:1 distribution down and outward. Distribution below footing taken no less than 40′.

SEISMIC: k = 0.24
k - 0.0

SOIL: ø = 34°
γ = 120 pcf

REINFORCED CONCRETE: f′c = 3,600 psi
fy = 60,000 psi

LOAD COMBINATIONS AND LIMIT STATES:

Service I	Q =	1.00DC+1.00EV+1.00EH+1.00LS
Strength I	Q =	DC+ EV+ EH+1.75LS
Extreme I	Q =	1.00DC+1.00EV+1.00EH+1.00EQD+1.00EQE
Extreme II	Q =	1.00DC+1.00EV+1.00EH+1.00CT

Where:

Q:	Force Effects
α:	1.25 or 0.90, Whichever Controls Design
ø:	1.35 or 1.00, Whichever Controls Design
η:	1.50 or 0.90, Whichever Controls Design
DC:	Dead Load of Structure Components
EH:	Horizontal Earth Fill Pressure
EV:	Vertical Earth Pressure from Earth Fill Weight
LS:	Live Load Surcharge
EQE:	Seismic Earth Pressure
EQD:	Soil and Structural and Nonstructural Components Inertia
CT:	Vehicular Collision Force

NOTES:

1. At ⓐ bars:
   No splices are allowed within H/4 above the top of footing.
2. Provide #6 @ 8" ⓐ bars in addition to tabulated ⓐ bars over a distance of 8′-0" measured from all expansion joints, begin wall and end wall locations.

	BY	CHECKED
DESIGN	A. Malla	S. Anam/A. Quiroz
DETAILS	A. Onodera\T. Bradshaw	S. Anam/A. Quiroz
QUANTITIES	A. Quiroz	S. Anam

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0030
POST MILE 21.52

RETAINING WALL ABUTMENT 1 RIGHT

RETAINING WALL TYPE 5 (CASE 1) (Mod)

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 11:27
FILE => 52e0030-x-b3-4a.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
3-28-23		7-26-23	8-23-23	7	7

EXPEDITE

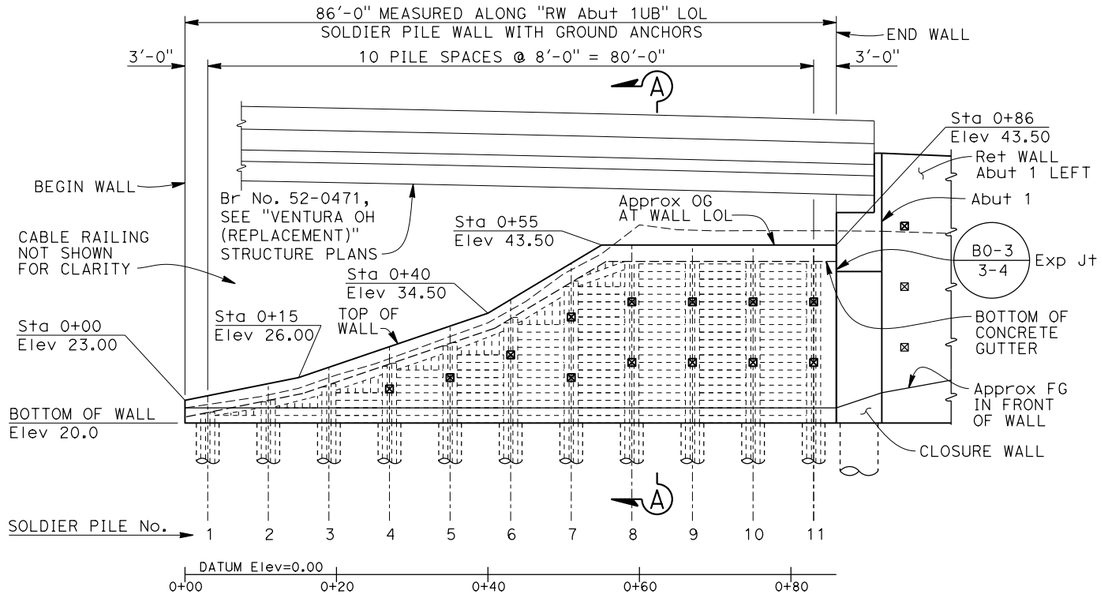
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



LEGEND:
⊠ Ground anchor

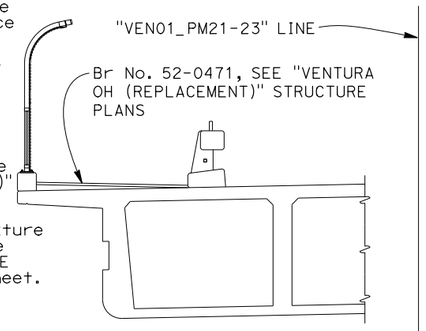
DEVELOPED ELEVATION
1" = 10'

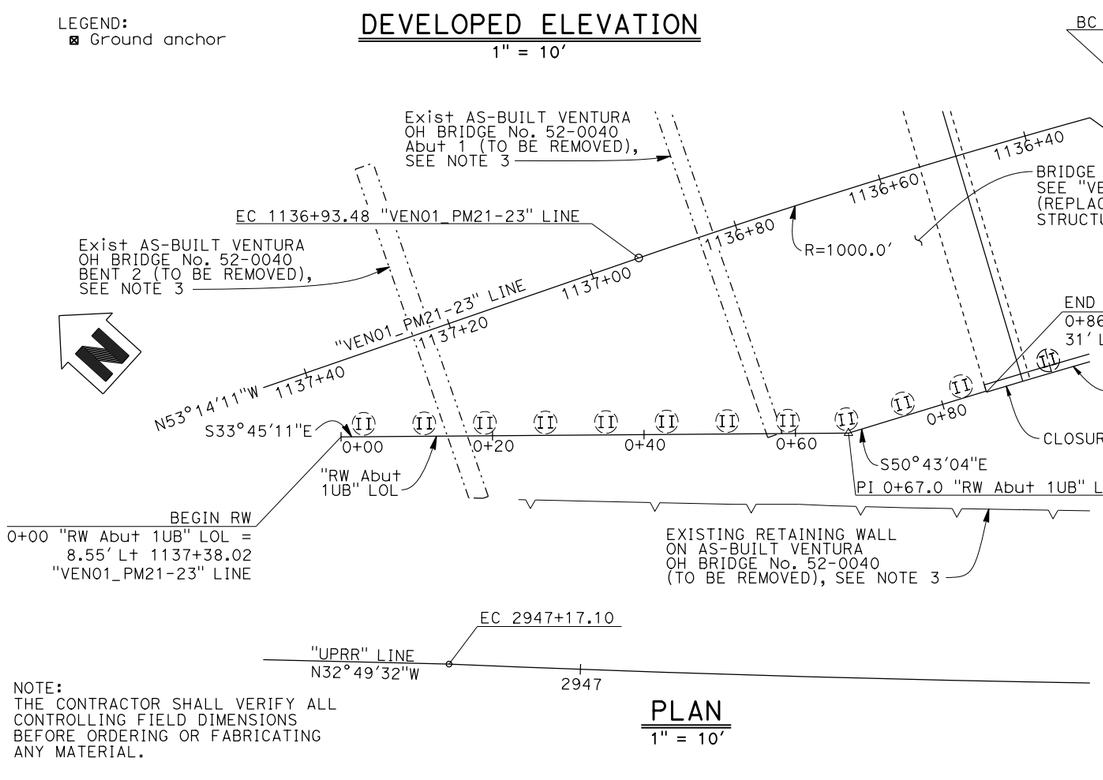
PILE AND GROUND ANCHOR DATA TABLE

SOLDIER PILE NUMBER	STATION	TOP OF WALL ELEVATION (ft)	PILE TIP ELEVATION (ft)	ELEVATION (ft)	
				ANCHOR 1	ANCHOR 2
1	0+03.0	23.60	15.0	-	-
2	0+11.0	25.20		-	-
3	0+19.0	27.36	12.0	-	-
4	0+27.0	30.08	15.0	24.5	-
5	0+35.0	32.80	15.0	26.0	-
6	0+43.0	36.30	15.0	29.0	-
7	0+51.0	41.10	15.0	34.0	26.0
8	0+59.0	43.5	14.0	36.0	28.0
9	0+67.0				
10	0+75.0				
11	0+83.0				

LEGEND:
-·-·-·- Existing Structure
▨ Limits of Existing Retaining Wall Removal for Br No. 52-0040

NOTES:
1. For "INDEX TO PLANS" and "GENERAL NOTES", see "INDEX TO PLANS" sheet.
2. For Abut 1 details, see "VENTURA OH (REPLACEMENT)" Structure Plans.
3. Remove existing structure required in order to place ground anchors.
4. For Ret WALL Abut 1 LEFT details, see "RETAINING WALL ABUTMENT 1 LEFT" Structure Plans.
5. For location of Exist Retaining Wall Removal see "VENTURA OH (REPLACEMENT)" Structure Plans.
6. For Concrete Surface Texture Formed Relief Details see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS" sheet.
7. For "EXISTING RETAINING WALL FOOTING REMOVAL DETAILS" see "INDEX TO PLANS" sheet.

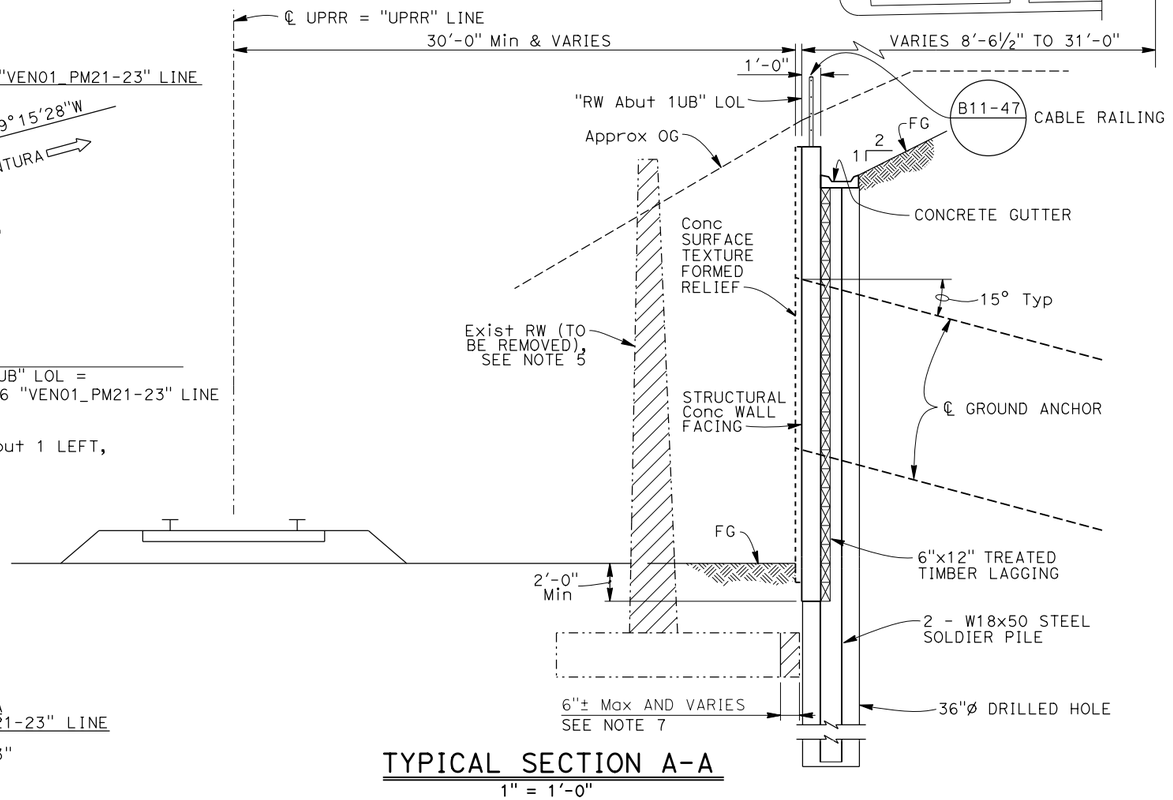




NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PLAN
1" = 10'

CURVE DATA
"VEN01_PM21-23" LINE
R=1000.00'
Δ=13°58'43"
T=122.59'
L=234.97'



TYPICAL SECTION A-A
1" = 1'-0"

John Peterson BRANCH CHIEF	DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	SEISMIC ANALYSIS	BY X	CHECKED X	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
	DETAILS	BY A. Onodera/N. Vadiraj/T. Bradshaw	CHECKED X. Carrillo/T. Sayre	LAYOUT	BY A. Malla	CHECKED X. Carrillo/T. Sayre	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12
	QUANTITIES	BY A. Quiroz	CHECKED H. Terrill	SPECIFICATIONS	BY X	PLANS AND SPECS COMPARED X	

BRIDGE No. 52E0031
POST MILE 21.54

RETAINING WALL ABUTMENT 1 UNDER BRIDGE
GENERAL PLAN

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:37
FILE => 52e0031-a-gp.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES: 6-9-23 | 7-26-23 | 8-22-23
SHEET 1 OF 9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD BRIDE DESIGN SPECIFICATIONS, 8th EDITION with CALIFORNIA Amendments, preface dated April 2019.

Standards Plans and Specifications, 2023 Edition

SEISMIC DESIGN:
Kh = 0.24. Kv = 0.0

LIVE LOADING:
None

REINFORCED CONCRETE WALL FACING:
f'c = 4000 psi

fy = 60 ksi

STEEL PLATE:
GRADE 50

Fy = 50,000 psi

STEEL SOLDIER PILES:
GRADE 50

Fy = 50,000 psi

fs = 27,500 psi

PRESTRESSING STEEL (GROUND ANCHOR):
See "SUB HORIZONTAL GROUND ANCHOR DETAILS" sheet.

STRUCTURAL TIMBER:
Treated Douglas Fir, Grade No. 1 or better.

Timber to be full sawn.

SOIL PARAMETERS:

Layer	Elevation (ft)		
1	FG TO 18.1	Φ= 34°	γ= 120 pcf
2	18.1 TO 8.1	Φ= 31°	γ= 120 pcf

STANDARD PLAN SHEET No.

DETAIL No.

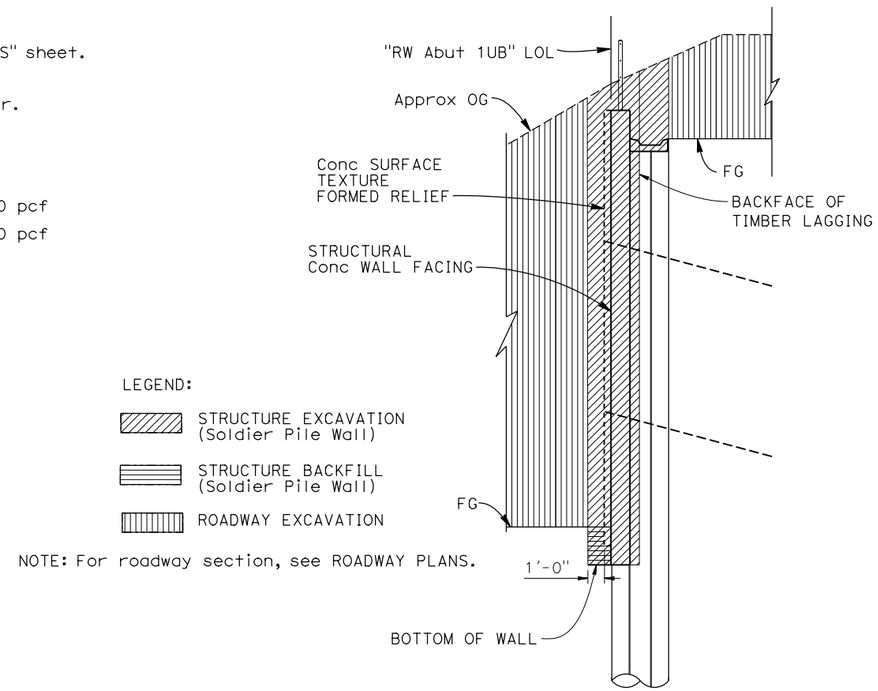
INDEX TO PLANS

SHEET No.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	FOUNDATION PLAN
4	TYPICAL SECTION
5	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS
6	SUB HORIZONTAL GROUND ANCHOR DETAILS
7	MISCELLANEOUS DETAILS
8	SOLDIER PILE WALL LAGGING DETAILS
9	CLOSURE WALL DETAILS

LEGEND:

Existing Structure

Limits of Existing Retaining Wall Footing Removal



NOTE: For roadway section, see ROADWAY PLANS.

LIMITS OF PAYMENT FOR EXCAVATION & BACKFILL

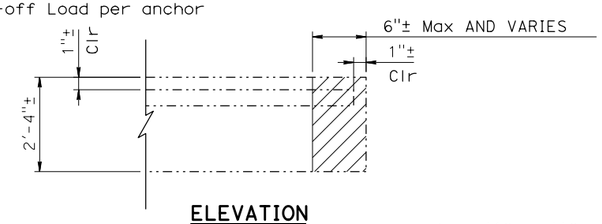
NO SCALE

NOTE: For limits of Roadway Excavation see ROADWAY PLANS.

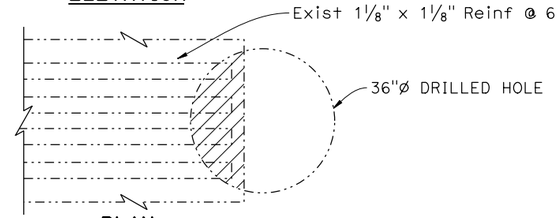
SUB HORIZONTAL GROUND ANCHOR LOAD TABLE

SOLDIER PILE NO.	FDL (kips)		FTL (kips)		LL (kips)	
	ANCHOR 1	ANCHOR 2	ANCHOR 1	ANCHOR 2	ANCHOR 1	ANCHOR 2
1,2	-	-	-	-	-	-
3	-	-	-	-	-	-
4	28	-	28	-	17	-
5	41	-	41	-	25	-
6	68	-	68	-	41	-
7	67	45	67	45	41	27
8,9,10	87	70	87	70	53	42
11	109	87	109	87	66	53

FDL = Factored Design Load per anchor
FTL = Factored Test Load per anchor
LL = Lock-off Load per anchor



ELEVATION



PLAN

EXISTING RETAINING WALL FOOTING REMOVAL DETAILS

NO SCALE

NOTE: Existing Retaining Wall Footing Removal required at Steel Soldier Piles 6, 7, 8, and 9 only.

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0031	RETAINING WALL ABUTMENT 1 UNDER BRIDGE
DETAILS	BY A. Onodera/N. Vadiraj/T. Bradshaw	CHECKED X. Carrillo/T. Sayre			POST MILE 21.54	INDEX TO PLANS
QUANTITIES	BY A. Quiroz	CHECKED H. Terrill				

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:37 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
FILE => 52e0031-a-itp.dgn USERNAME => s156654

UNIT: 3606 COUNTY/ROUTE: Ven/01
PROJECT NUMBER & PHASE: 07160000251 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES → REVISION DATES: 5-2-23, 7-24-23, 8-22-23

SHEET 2 OF 9

CURVE DATA				
No.	R	Δ	T	L
②	1000.00′	13°58′43"	122.59′	243.97′
④	3366.12′	08°02′03"	236.39′	472.01′
⑦	969.00′	11°23′57"	96.71′	192.79′

RAIL ELEVATION (TOP)

Ⓐ - 23.02
Ⓑ - 22.99
Ⓒ - 22.69
Ⓓ - 22.72

SOFFIT ELEVATIONS

[1] - 44.33
[2] - 44.52
[3] - 44.53
[4] - 45.03
[5] - 44.67
[16] - 44.99
[17] - 43.66
[18] - 44.07
[19] - 44.06

EXISTING BRIDGE LOCATION

① - 21.94 Ft Lt "VEN01_PM21-23" LINE, Sta 1136+83.57, Elev = 48.30±
③ - 21.73 Ft Rt "VEN01_PM21-23" LINE, Sta 1136+84.12, Elev = 48.98±

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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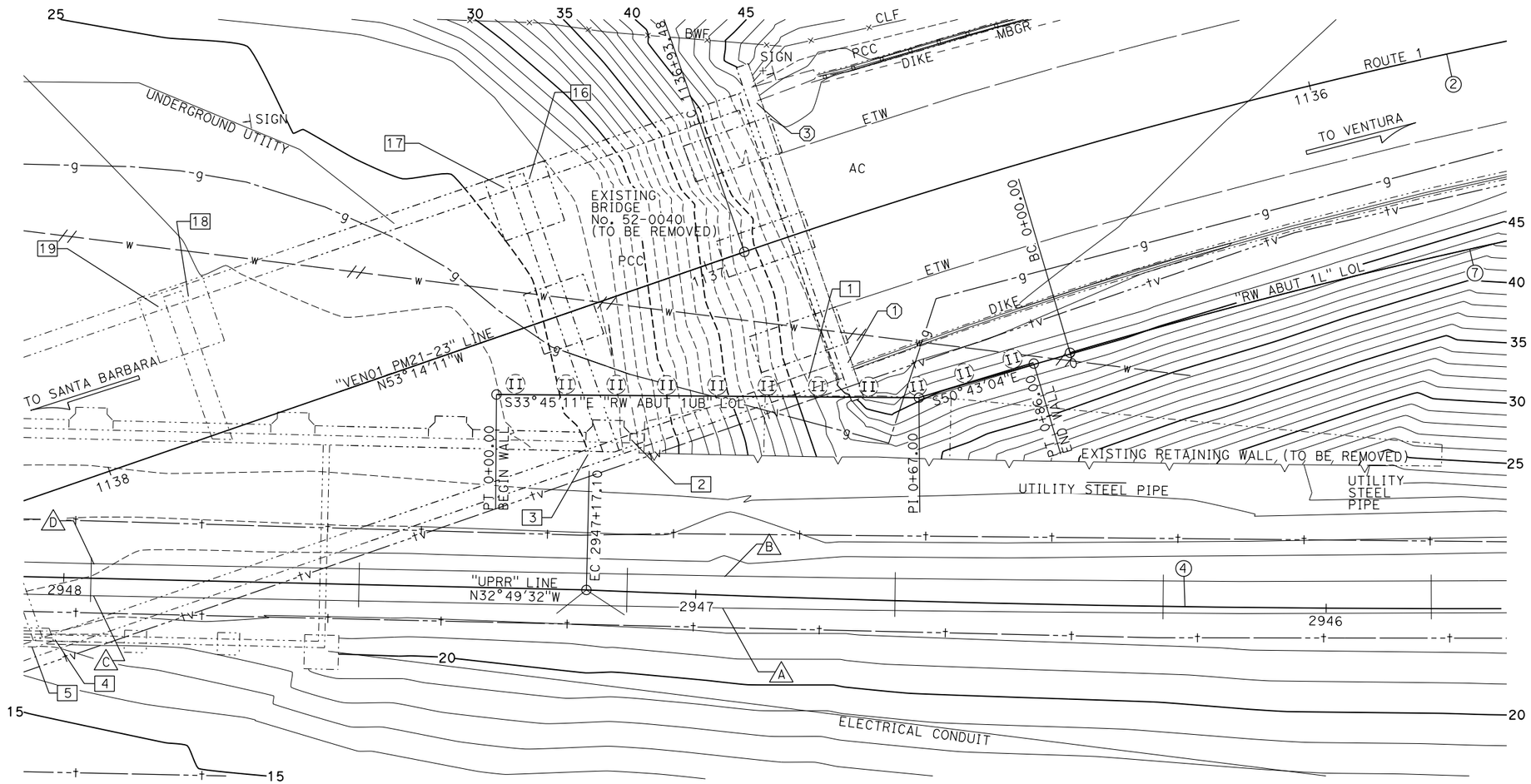


SURVEY CONTROL

PT-64 (NOT SHOWN ON PLAN SHEET)

130_SUHV
102.41′ Lt 1137+36.22 "VEN01_PM21-23" LINE
N 1,931452.93
E 6,157,378.64
Elev = 14.87

PT-65 (NOT SHOWN ON PLAN SHEET)

130_SUHV
54.85′ Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1,931,821.09
E 6,157,165.13
Elev = 16.53

SURVEY MONUMENTS SHOWN ON THE FOUNDATION PLAN ARE FOR DESIGN PURPOSES ONLY.
FOR COMPLETE LIST OF SURVEY MONUMENTS FOR THIS PROJECT, SEE ROADWAY PLANS.

LEGEND:

◌ 36"ø Drilled Hole
II 2-W18x50 Steel Pile

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PRELIMINARY INVESTIGATIONS BRANCH								
SCALE:	VERT. DATUM: NAVD88	SURVEYED	BY DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE
1" = 10′	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE
					QUANTITIES	BY A. QUIROZ	CHECKED H. TERRILL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0031
POST MILE 21.54

RETAINING WALL ABUTMENT 1 UNDER BRIDGE
FOUNDATION PLAN

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:37
FILE => 52e0031-e-fdp101.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-17-23		8-21-23	6-9-23	3	9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

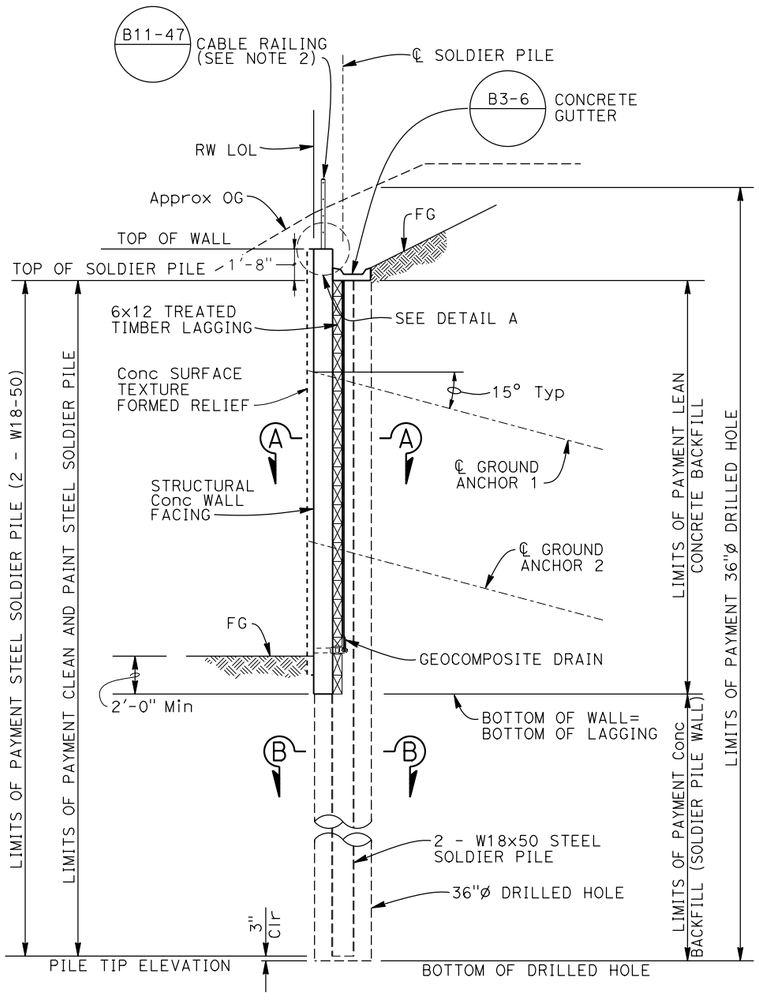
NOTE:

1. For Conc Surface Texture see "CONCRETE SURFACE TEXTURE DETAILS" sheet.
2. Reinforcement for Post Pocket shall be Prefabricated Epoxy Coated Reinf.
3. All reinforcing steel in the concrete fascia shall be Pre-fabricated Epoxy Coated Rebar.

UNDERCOAT ON ALL PILE SURFACES

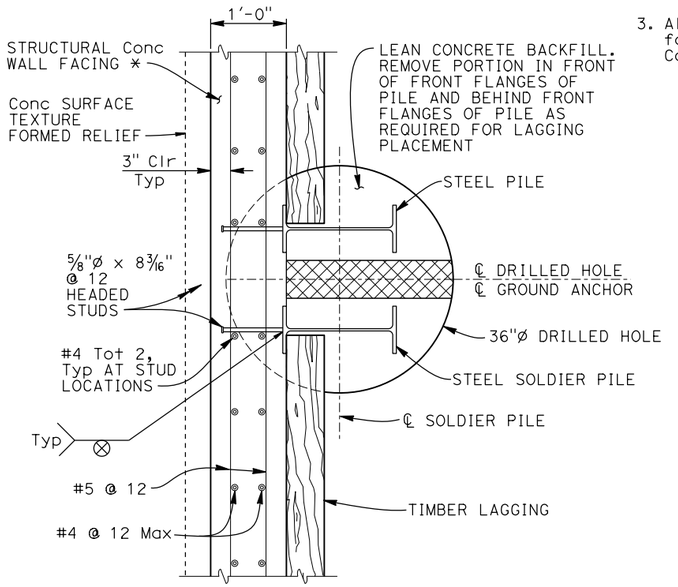
LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE

NO SCALE



TYPICAL SECTION

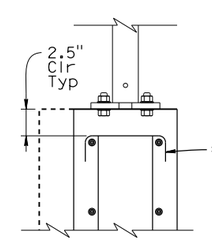
1/4" = 1'-0"



* STRUCTURAL CONCRETE WALL FACING SHALL EXTEND TO BEGIN AND END OF WALL

SECTION A-A

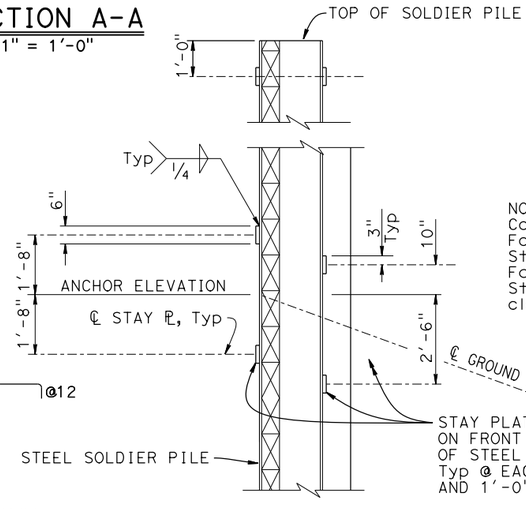
1" = 1'-0"



NOTE: FOR INFORMATION NOT SHOWN SEE SECTION A-A

DETAIL A

NO SCALE

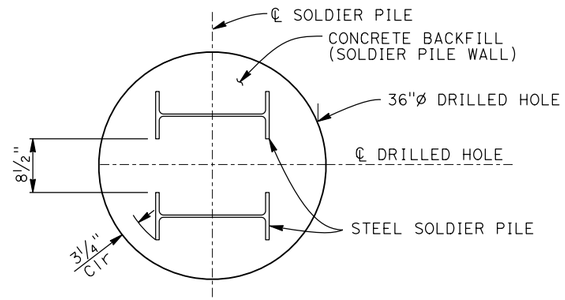


NOTE:
Conc Surface Texture Formed Relief, Structural Conc Wall Facing, and Headed Studs not shown for clarity

SECTION C-C

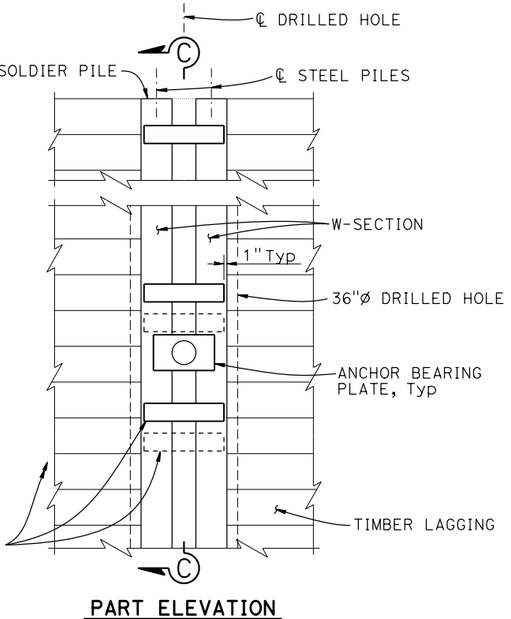
LEGEND:

Limits of Cored Hole



SECTION B-B

1" = 1'-0"



PART ELEVATION

STAY PLATE DETAILS

NO SCALE

NOTE:
EXCAVATION MUST NOT EXTEND MORE THAN 2'-0" BELOW GROUND ANCHOR UNTIL GROUND ANCHORS ARE COMPLETELY GROUTED AND STRESSED

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE NO. 52E0031
DETAILS	BY A. Onodera/N. Vadiraj/T. Bradshaw	CHECKED X. Carrillo/T. Sayre			POST MILE 21.54
QUANTITIES	BY A. Quiroz	CHECKED H. Terrill			

RETAINING WALL ABUTMENT 1 UNDER BRIDGE

TYPICAL SECTION

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:37
FILE => 52e0031-k-ts01.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-12-23		7-28-23	8-14-23	4	9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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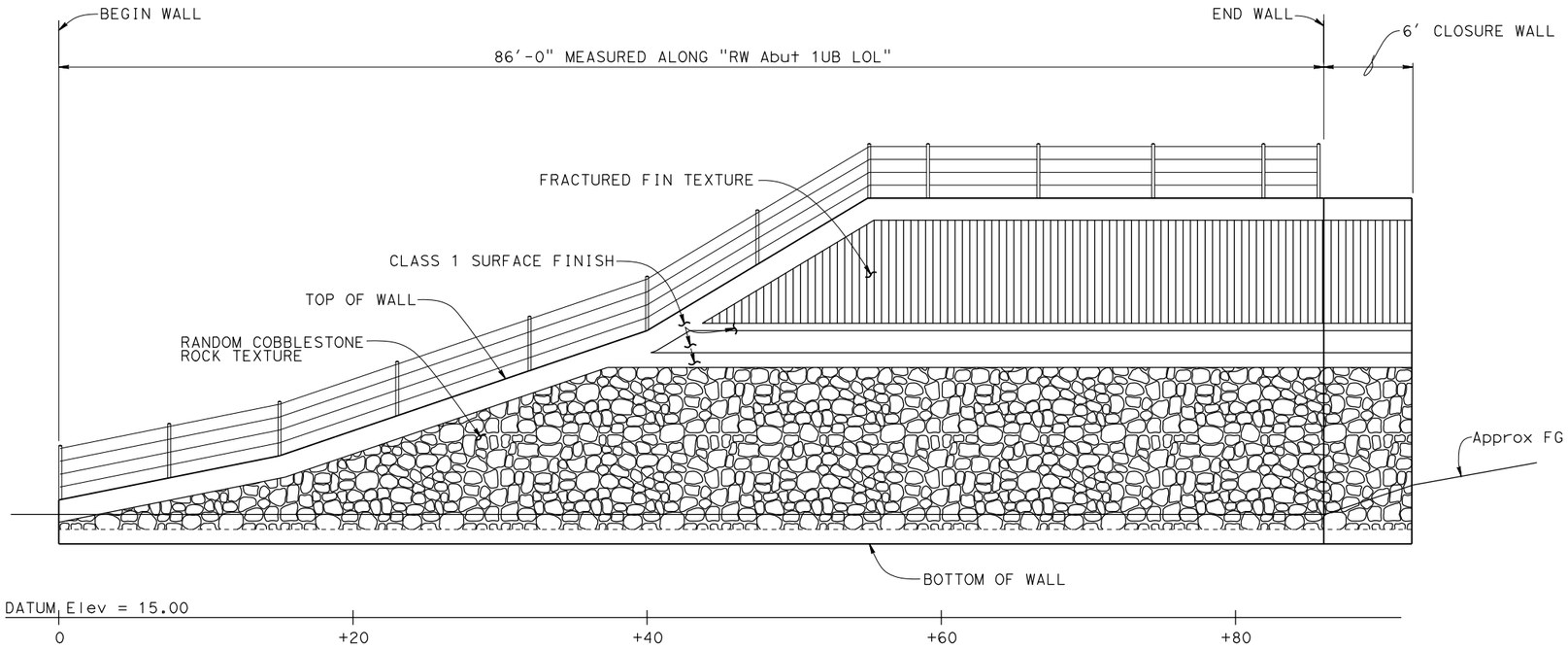


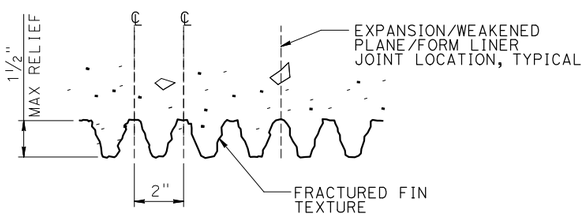
DEVELOPED ELEVATION

1" = 5'

NOTE: PILES NOT SHOWN

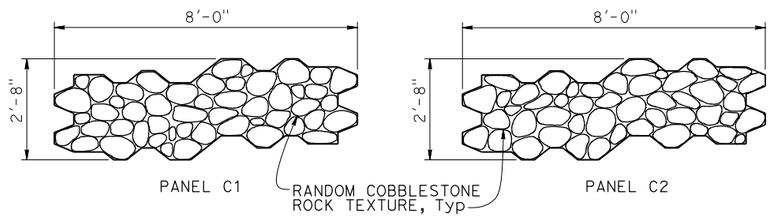
NOTES:

1. For additional details see "CONCRETE SURFACE TEXTURE DETAILS No. 3" sheet in Ventura OH (Replacement) Structure Plans.
2. Prepare and Stain Concrete



FRACTURED FIN TEXTURE

NO SCALE

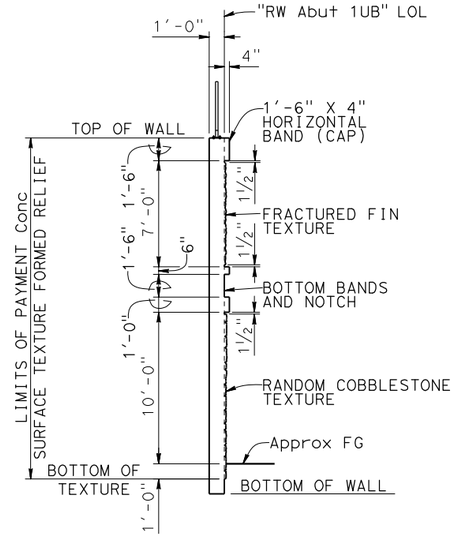


PATTERN ELEVATION

RANDOM COBBLESTONE ROCK TEXTURE

½" = 1'-0"

NOTE: See NOTE 1 and NOTE 2



TYPICAL SECTION

1" = 5'

DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0031	RETAINING WALL ABUTMENT 1 UNDER BRIDGE	
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE			POST MILE 21.54	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS	
QUANTITIES	BY A. QUIROZ	CHECKED H. TERRILL					

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 8-SEP-2023 TIME PLOTTED => 15:28
FILE => 52e0031-u-arch-det.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-2-23		7-28-23	09-07-23	5	9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.

GENERAL NOTES (1)

~~DESIGN:~~
~~AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.~~

PRESTRESSING STEEL:

Bars - ASTM Designation: A722 Type II (150 ksi)

Strand Tendons-ASTM Designation: A416 (270 Ksi Low Relaxation steel)

FTL = Factored Test Load per anchor (Kips)

fpu = Minimum tensile strength of prestressing steel

As = Minimum cross sectional area of prestressing steel in ground anchor (square inch)

$As(Min) = \frac{1.0\ FTL}{0.75\ fpu}$ (Strands)

$As(Min) = \frac{1.0\ FTL}{0.80\ fpu}$ (Bars)

NOTES:

(A) Level of initial grouting for drilled hole 6" in diameter or smaller

(B) Level of secondary grouting

(C) Level of initial grouting inside corrugated sheathing

(D) Bonded length shall be determined by the contractor

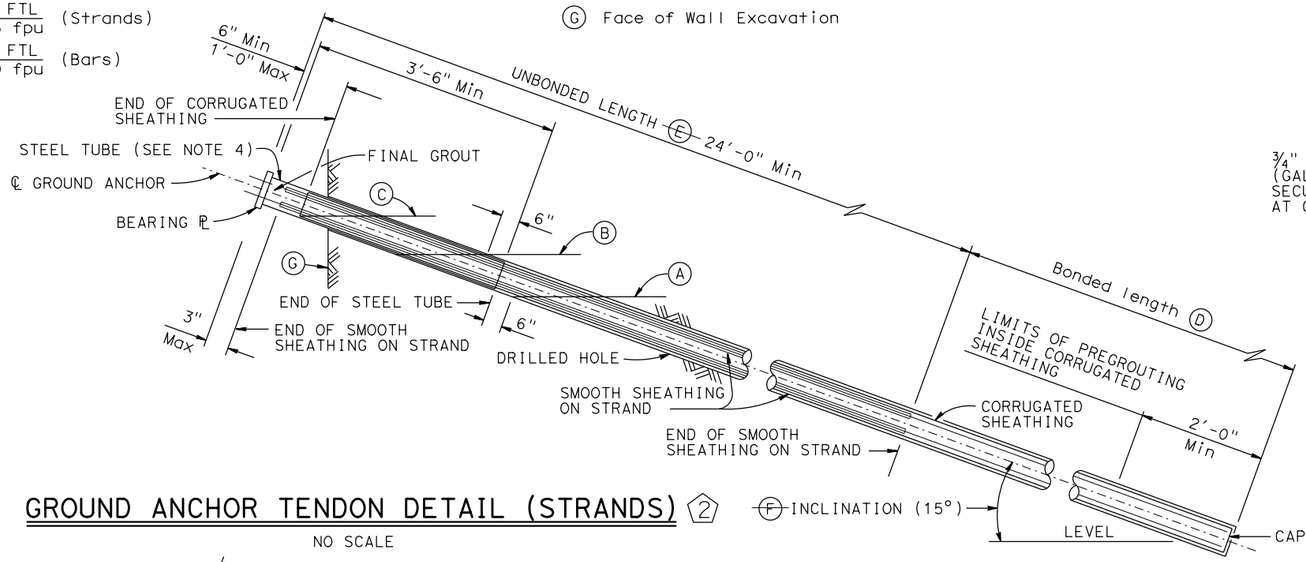
(1) ~~(E) For unbonded length, see PROJECT PLANS~~

~~(F) For inclination, see PROJECT PLANS~~

(G) Face of Wall Excavation

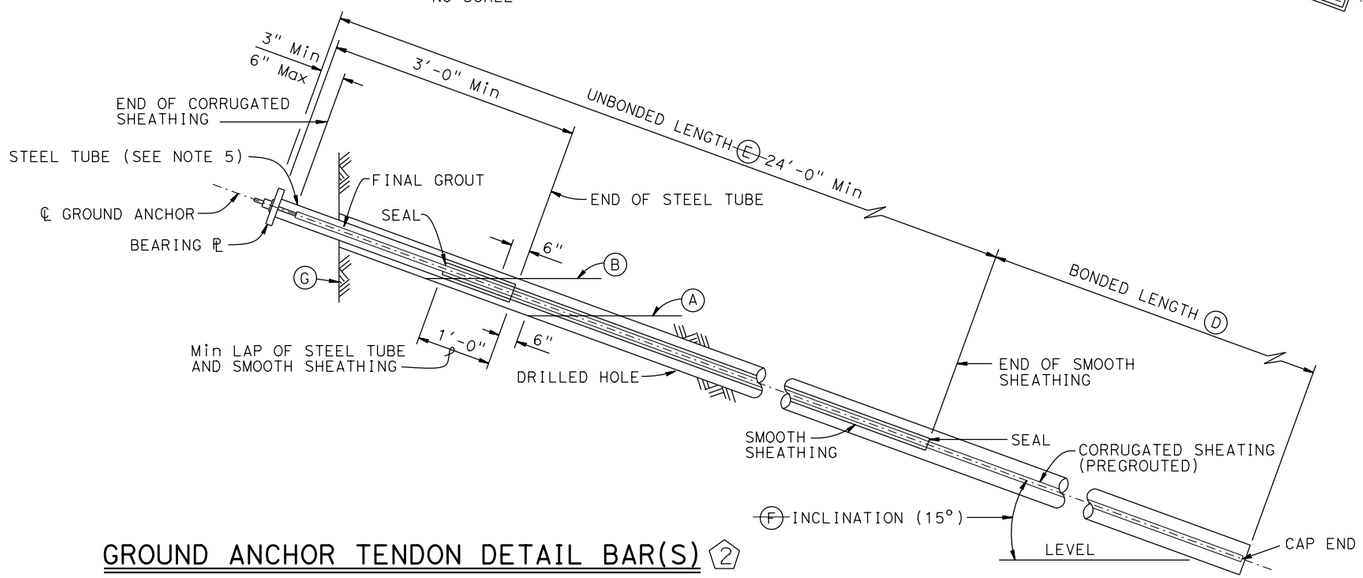
NOTES:

1. Anchorage enclosure shall only be used when anchor head assembly is not enclosed in concrete.
2. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize after fabrication.
3. Silicone sealant to cover full width of flange.
4. Steel tube (Min thickness = 1/4") welded to bearing plate. Galvanize assembly after fabrication
5. Steel tube welded to bearing plate. Inside diameter of steel tube (Min thickness = 1/4") to be 1" greater than outside diameter of smooth sheathing.
6. Galvanize assembly after fabrication.
7. For other wall details, see PROJECT PLANS.



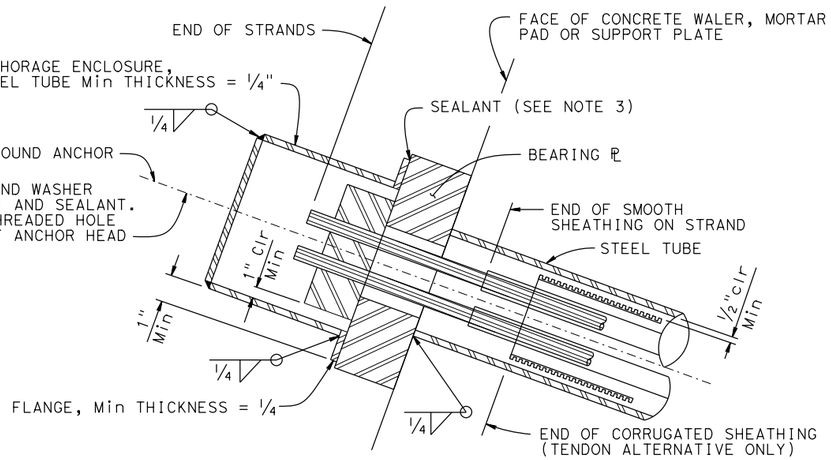
GROUND ANCHOR TENDON DETAIL (STRANDS) (2)

NO SCALE

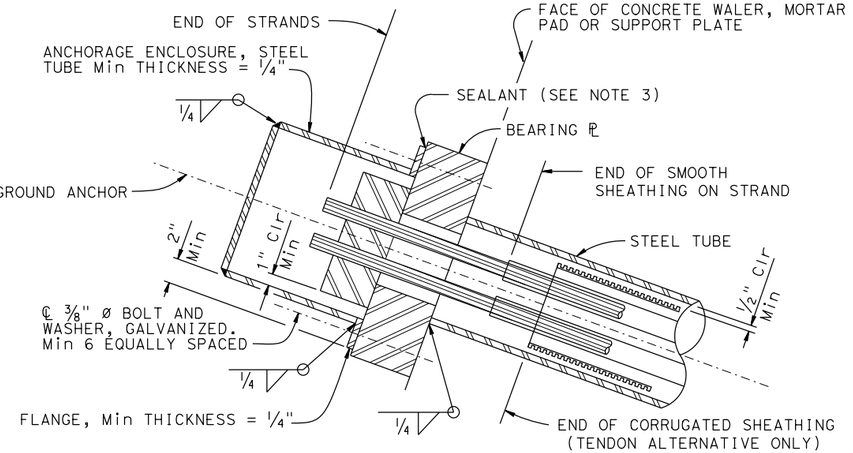


GROUND ANCHOR TENDON DETAIL BAR(S) (2)

NO SCALE



ALTERNATIVE X



ALTERNATIVE Y

ANCHORAGE ENCLOSURE DETAILS

NO SCALE

REVISED BRIDGE STANDARD DETAILS			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 52E0031	RETAINING WALL ABUTMENT 1 UNDER BRIDGE
xs12-040 FILE NO.	July 2014 APPROVAL DATE	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California	(1) — Modified Notes (2) — Modified Detail		POST MILE 21.54	SUB HORIZONTAL GROUND ANCHOR DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52e0031-x-xs12-040.dgn
USERNAME => s156654 TIME PLOTTED => 09:37 DATE PLOTTED => 23-AUG-2023

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT NO.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
~~12-22-22~~	6-9-23	~~5-2-23~~	6	9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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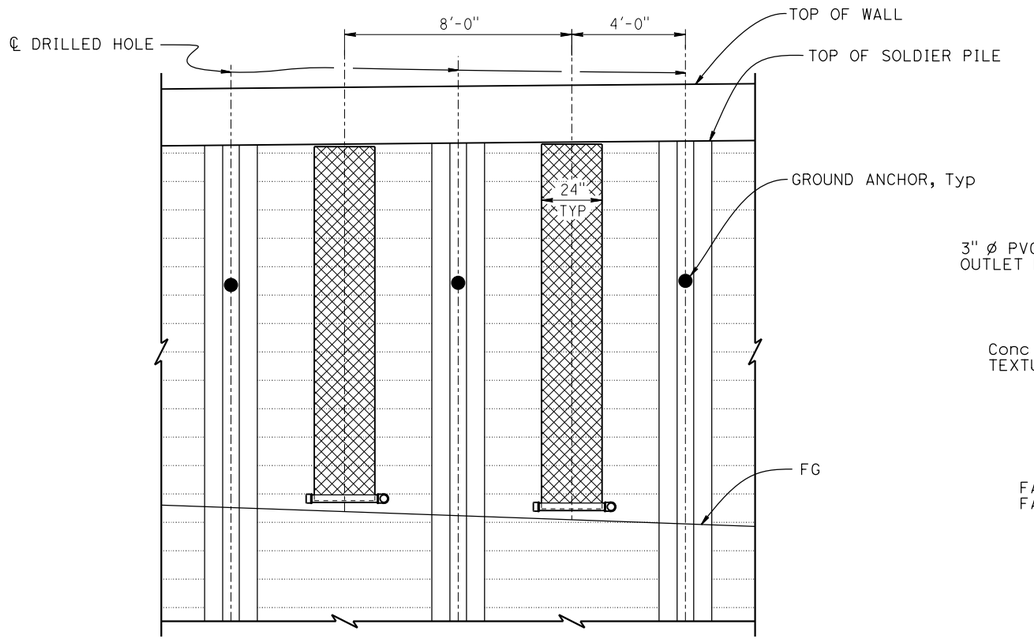
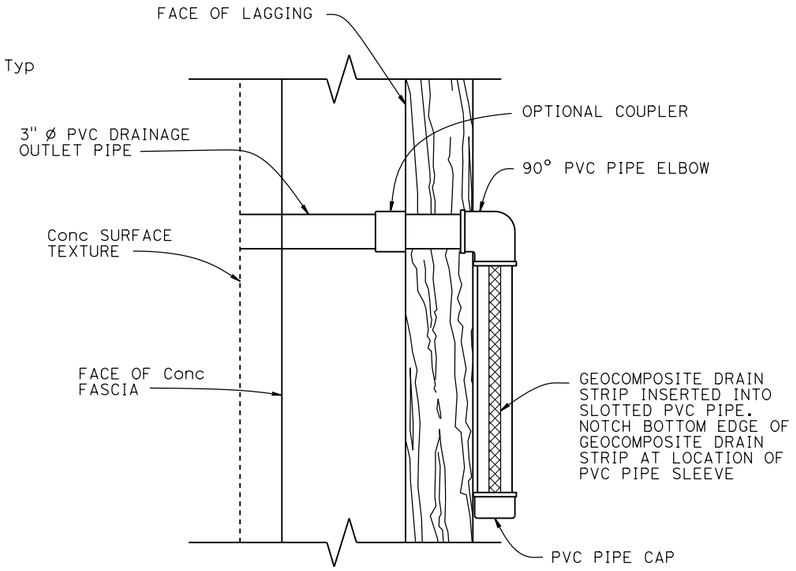


PART ELEVATION - GEOCOMPOSITE DRAIN

NO SCALE

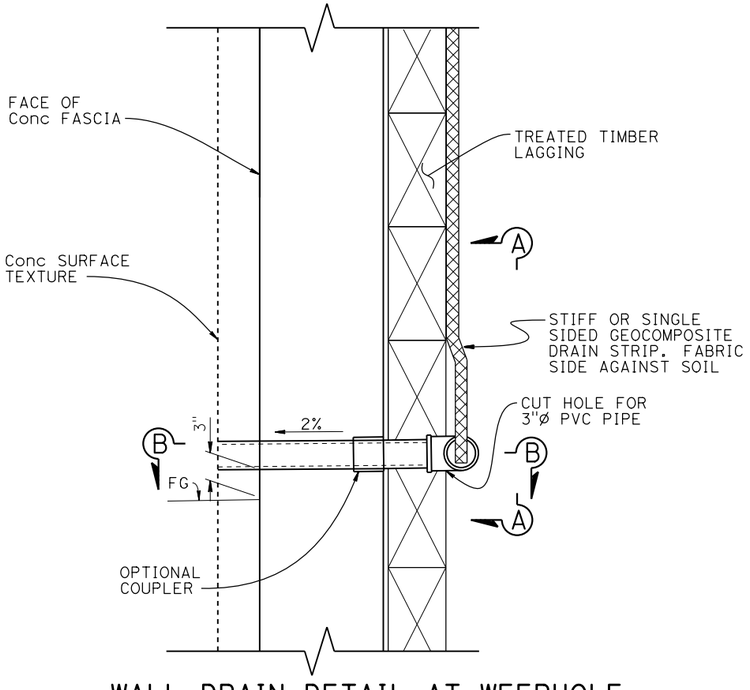


SECTION B-B

NO SCALE

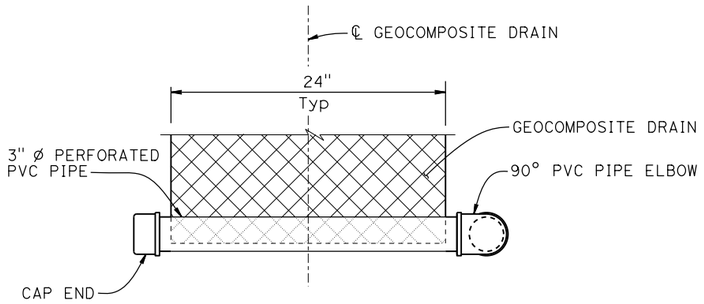
NOTE:

For details and dimensions not shown, see "TYPICAL SECTION" sheet.



WALL DRAIN DETAIL AT WEEPHOLE

NO SCALE



VIEW A-A

NO SCALE

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0031	RETAINING WALL ABUTMENT 5 LEFT
DETAILS	BY A. Onodera/ T. Bradshaw	CHECKED X. Carrillo/T. Sayre			POST MILE 21.54	MISCELLANEOUS DETAILS
QUANTITIES	BY A. Quiroz	CHECKED H. Terrill				

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:37
FILE => 52e0031-y-miscd101.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~2-10-23~~		4-14-23	~~3-3-23~~	7	9

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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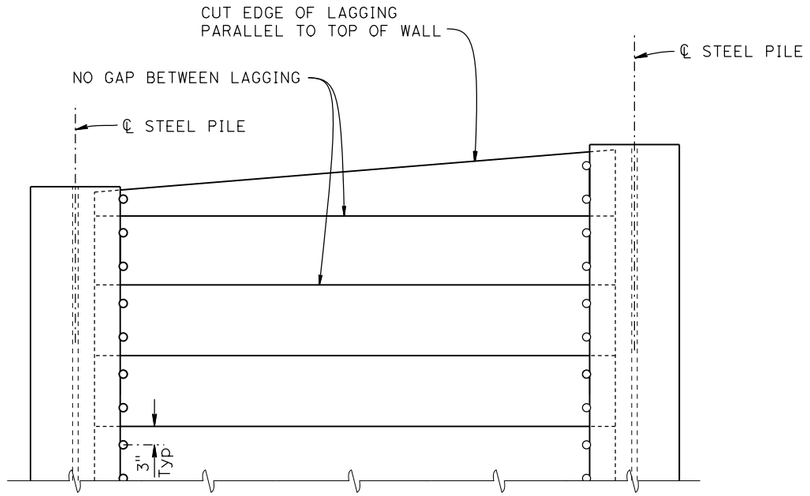
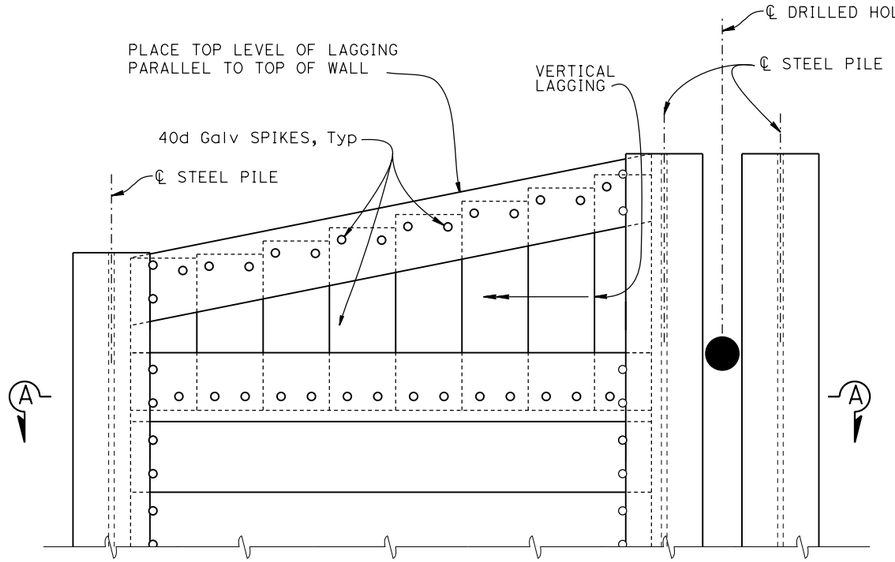


PART ELEVATION

LAGGING DETAILS (ALTERNATIVE 1) (1)

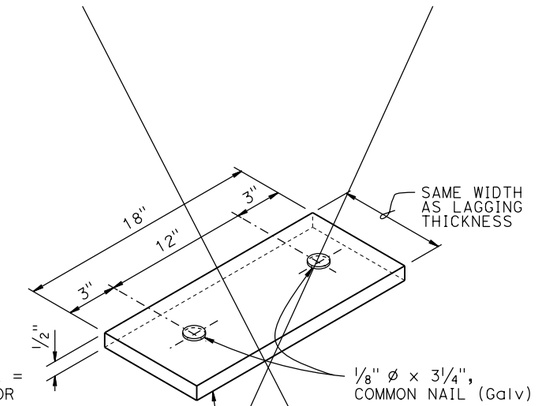
NO SCALE



PART ELEVATION

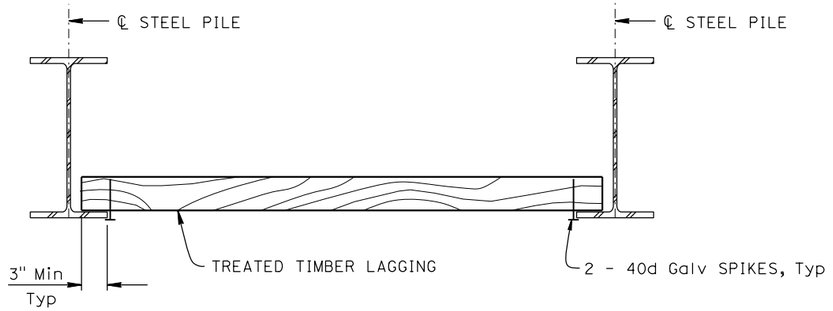
LAGGING DETAILS (ALTERNATIVE 2) (1)

NO SCALE



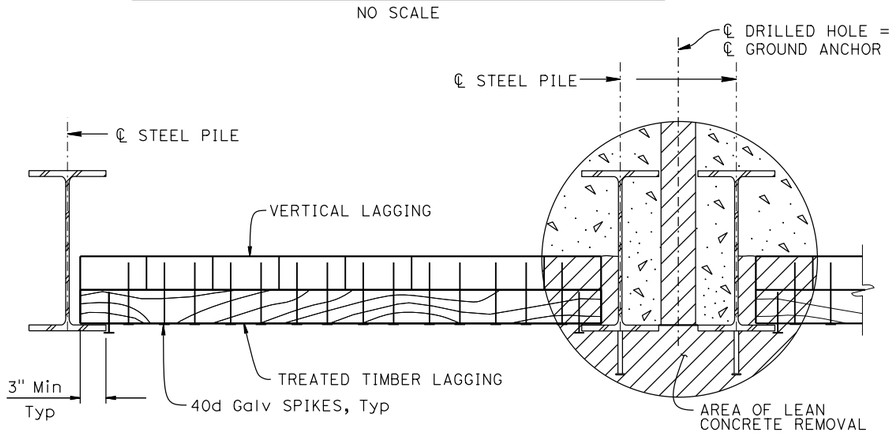
SHIM DETAIL (3)

NO SCALE



PART PLAN (1)

NO SCALE



SECTION A-A (1)

NO SCALE

NOTES:

(2)
1. No clipping of timber lagging corners allowed
2. Spikes shall not be bent

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS					
xs12-080 FILE NO.	July 2014 APPROVAL DATE	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*	(1) — Modified Detail (3) — Detail not used (2) — Modified Note	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES

BRIDGE NO.	RETAINING WALL ABUTMENT 1 UNDER BRIDGE
52E0031	
POST MILE	SOLDIER PILE WALL LAGGING DETAILS
21.54	

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52e0031-y-xs12-080.dgn
USERNAME => s156654 *TIME PLOTTED => 09:37* *DATE PLOTTED => 23-AUG-2023*

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT NO.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-3-23		4-14-23	3-28-23	8	9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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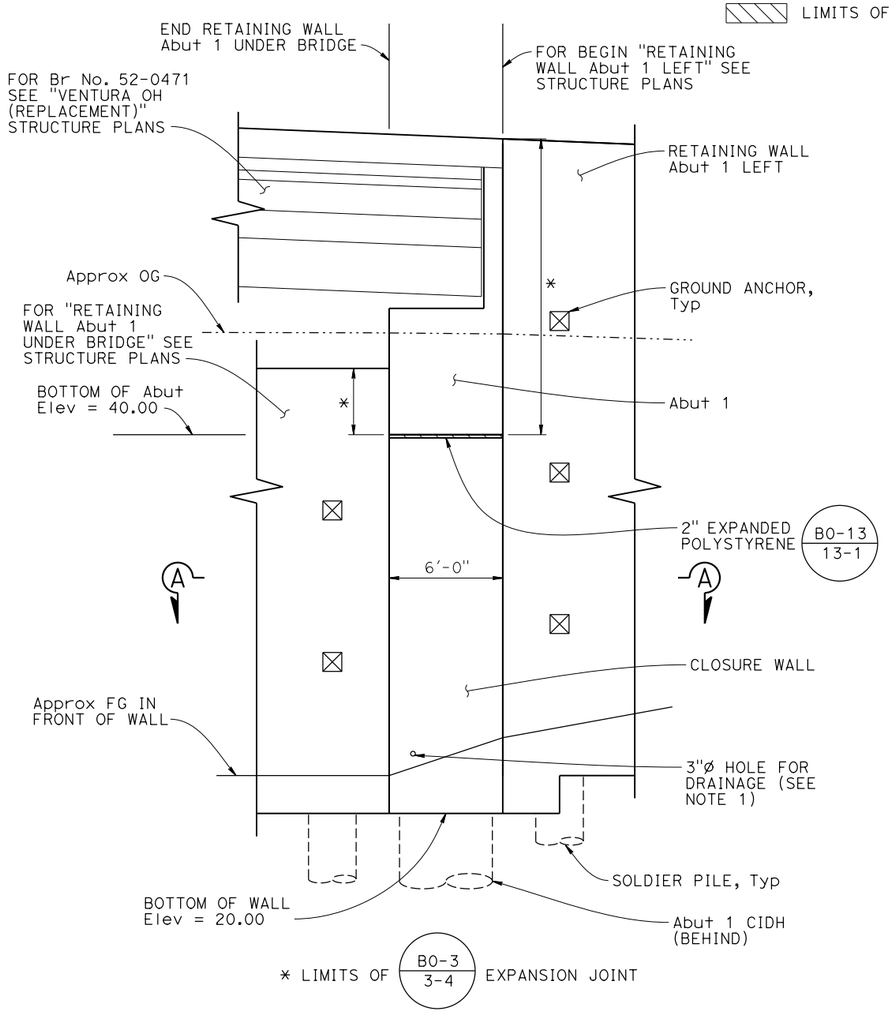
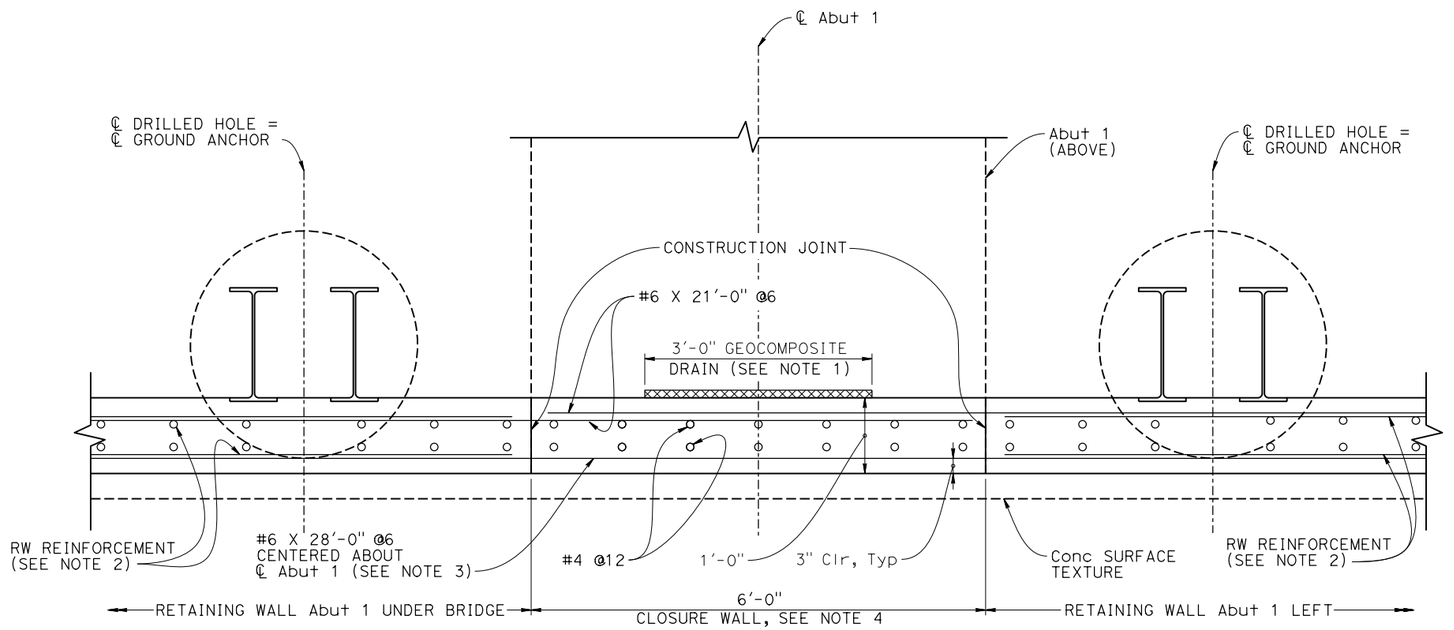
LEGEND:

▨ LIMITS OF EXPANDED POLYSTYRENE



ELEVATION
1/4" = 1'-0"



SECTION A-A
1" = 1'-0"

NOTE:
For Closure Wall drainage, provide drains as shown in "MISCELLANEOUS DETAILS" sheet, without timber lagging.

NOTES:

1. For drainage details, see "MISCELLANEOUS DETAILS" sheet.
2. For RW Reinforcement size and spacing, see "SECTION A-A" on "TYPICAL SECTION" sheet.
3. Use service splices staggered 4'-0" on centers about ℄ Abut 1 if #6 bars cannot be placed continuously as one piece of Reinforcement.
4. CLOSURE WALL is paid under RETAINING WALL Abut 1 UNDER BRIDGE.

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Quiroz	H. Terrill

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0031
POST MILE 21.54

RETAINING WALL ABUTMENT 1 UNDER BRIDGE
CLOSURE WALL DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:38
FILE => 52e0031-z-miscd+02.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-5-23		7-28-23	8-18-23	9	9

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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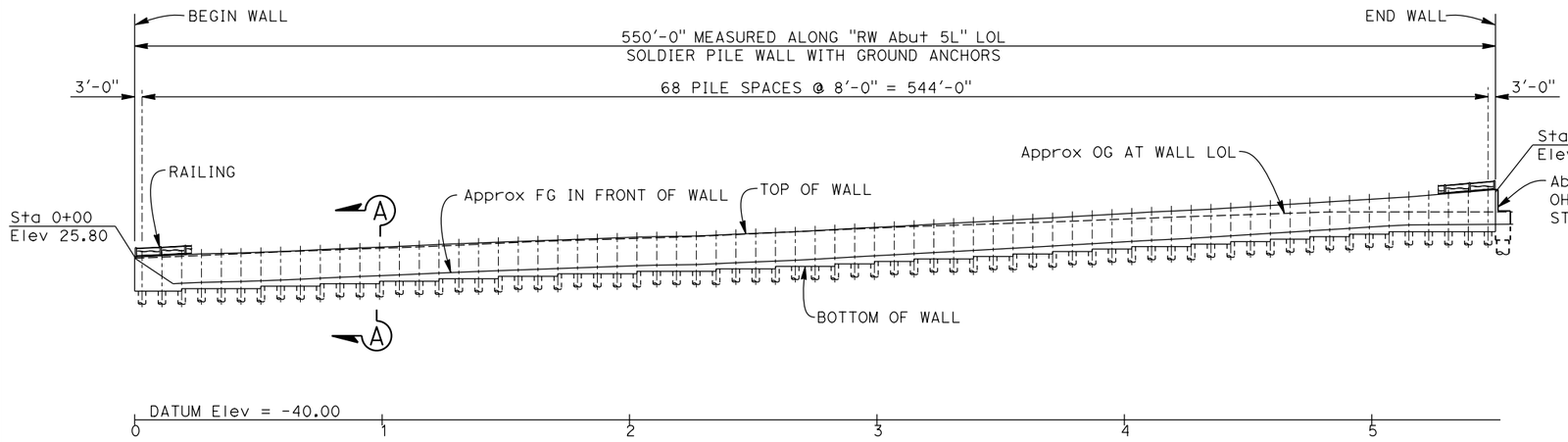
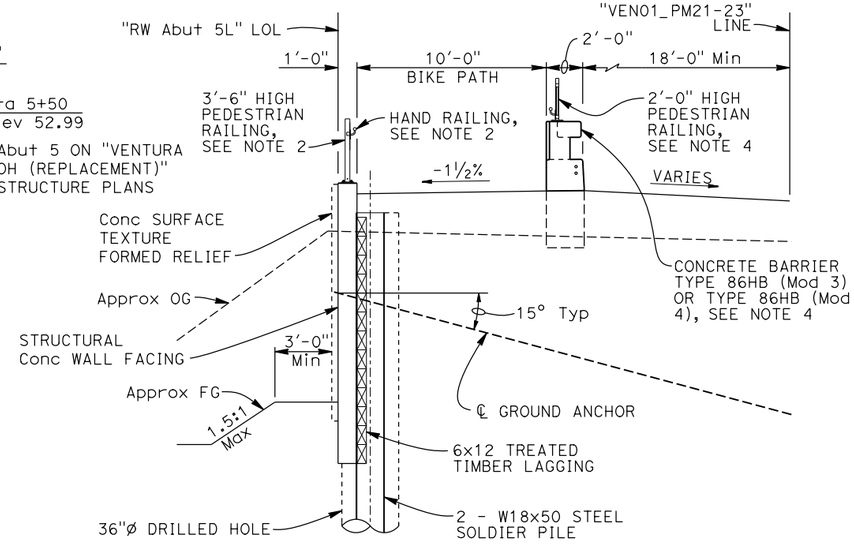
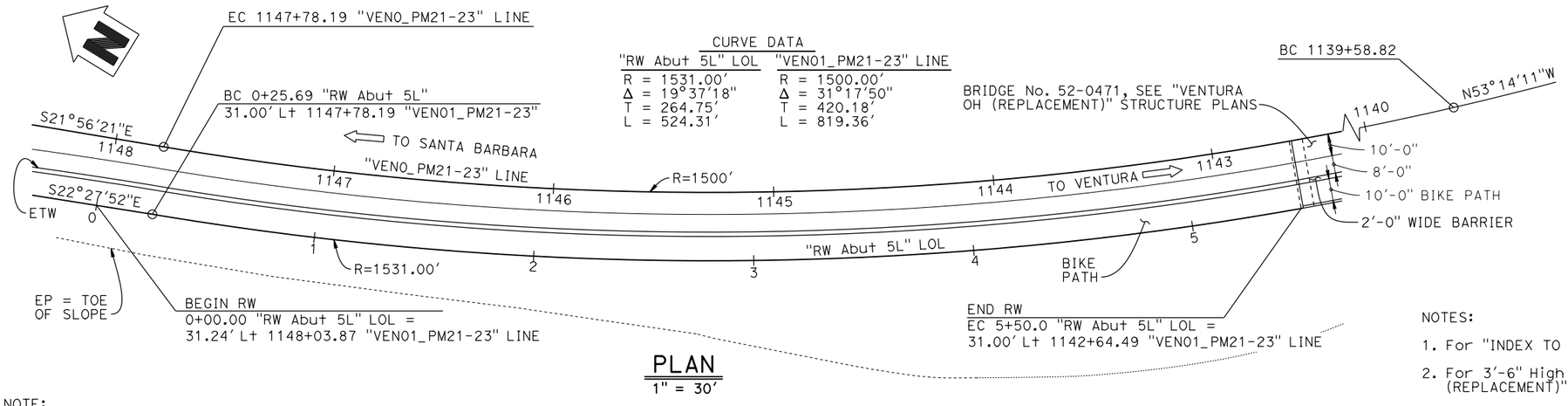
EXPEDITE



DEVELOPED ELEVATION
1" = 30'



TYPICAL SECTION A-A
¼" = 1'-0"



PLAN
1" = 30'

NOTES:

1. For "INDEX TO PLANS" and "GENERAL NOTES", see "INDEX TO PLANS" sheet.
2. For 3'-6" High Pedestrian Railing and Hand Railing, see "VENTURA OH (REPLACEMENT)" Structure Plans.
3. For Conc Surface Texture Formed Relief see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS Nos. 1-3" sheets.
4. For Concrete Barrier Type 86HB (Mod 3) or (Mod 4) sections with 2'-0" High Pedestrian Railing, see ROADWAY PLANS.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	SEISMIC ANALYSIS	BY N/A	CHECKED N/A	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12
DETAILS	BY A. Onodera/T. Bradshaw	CHECKED X. Carrillo/T. Sayre	LAYOUT	BY A. Malla	CHECKED X. Carrillo/T. Sayre		
QUANTITIES	BY A. Malla	CHECKED H. Terrill	SPECIFICATIONS	BY X	PLANS AND SPECS COMPARED X		

John Peterson
BRANCH CHIEF

BRIDGE No.	RETAINING WALL ABUTMENT 5 LEFT
52E0032	
POST MILE 21.74	GENERAL PLAN

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 15:56
FILE => 52e0032-a-gp.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-30-23		7-26-23	09-27-23	1	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

SUB HORIZONTAL GROUND ANCHOR LOAD TABLE

SOLDIER PILE NO.	FDL (kips)	FTL (kips)	LL (kips)
	ANCHOR 1	ANCHOR 1	ANCHOR 1
1 thru 36	70	70	42
37 thru 64	58	58	35
65 thru 69	71	71	43

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD BRIDE DESIGN SPECIFICATIONS, 8th EDITION with CALIFORNIA Amendments, preface dated April 2019.

Standards Plans and Specifications, 2023 Edition

SEISMIC DESIGN:
Kh = 0.24. Kv = 0.0

LIVE LOADING:
240 PSF equivalent to 2 feet soil weight.

REINFORCED CONCRETE FASCIA:
f'c = 4000 psi

fy = 60 ksi

STEEL PLATE:
GRADE 50

Fy = 50,000 psi

STEEL SOLDIER PILES:
GRADE 50

Fy = 50,000 psi

fs = 27,500 psi

PRESTRESSING STEEL (GROUND AHCNOR):
See "SUB HORIZONTAL GROUND ANCHOR DETAILS" sheet

STRUCTURAL TIMBER:
Treated Douglas Fir, Grade No. 1 or better.

Timber to be full sawn.

SOIL PARAMETERS:
(For Determination of Design Lateral Earth Pressure)

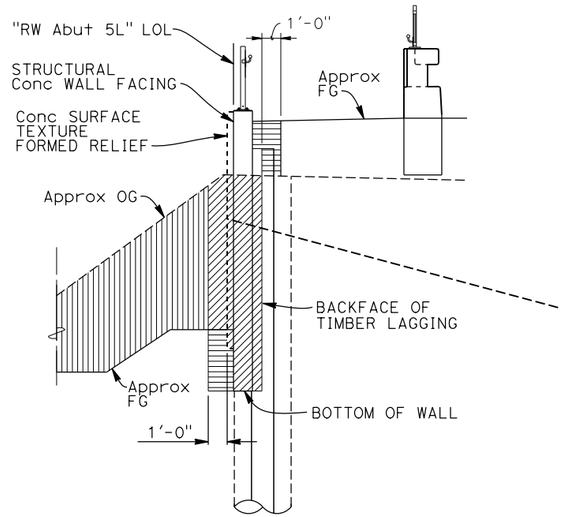
Layer	Elevation (ft)		
1	FG TO 21.2	Φ= 34°	γ= 120 pcf
2	21.2 TO 6.2	Φ= 31°	γ= 120 pcf
3	6.2 TO -3.8	Φ= 35°	γ= 120 pcf

INDEX TO PLANS

SHEET No.	TITLE
1	GENERAL PLAN
2	INDEX TO PLANS
3	STRUCTURE PLAN No. 1
4	STRUCTURE PLAN No. 2
5	STRUCTURE PLAN No. 3
6	FOUNDATION PLAN No. 1
7	FOUNDATION PLAN No. 2
8	TYPICAL SECTION No. 1
9	TYPICAL SECTION No. 2
10	CONCRETE TEXTURE FORMED RELIEF DETAILS No. 1
11	CONCRETE TEXTURE FORMED RELIEF DETAILS No. 2
12	CONCRETE TEXTURE FORMED RELIEF DETAILS No. 3
13	MISCELLANEOUS DETAILS
14	SUB HORIZONTAL GROUND ANCHOR DETAILS
15	SOLDIER PILE WALL LAGGING DETAILS

STANDARD PLAN SHEET No.

DETAIL No.



LIMITS OF PAYMENT FOR EXCAVATION & BACKFILL

1/4" = 1'-0"

NOTE: For limits of roadway excavation see ROADWAY PLANS.

LEGEND:

STRUCTURE EXCAVATION (Soldier Pile Wall)

STRUCTURE BACKFILL (Soldier Pile Wall)

ROADWAY EXCAVATION

NOTE: For roadway section, see ROADWAY PLANS.

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY N. Vadiraj/A. Onodera/T. Bradshaw	CHECKED X. Carrillo/T. Sayre	
QUANTITIES	BY A. Malla	CHECKED H. Terrill	

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT
INDEX TO PLANS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-a-itp.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
5-11-23		7-26-23 8-18-23	2	15

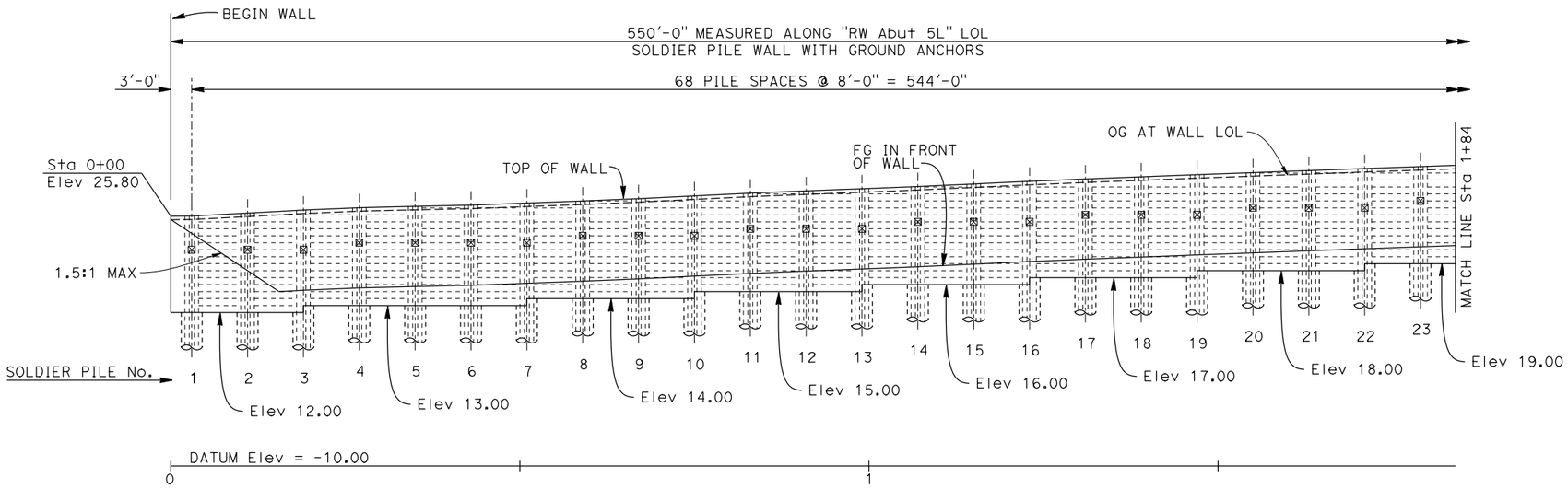
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

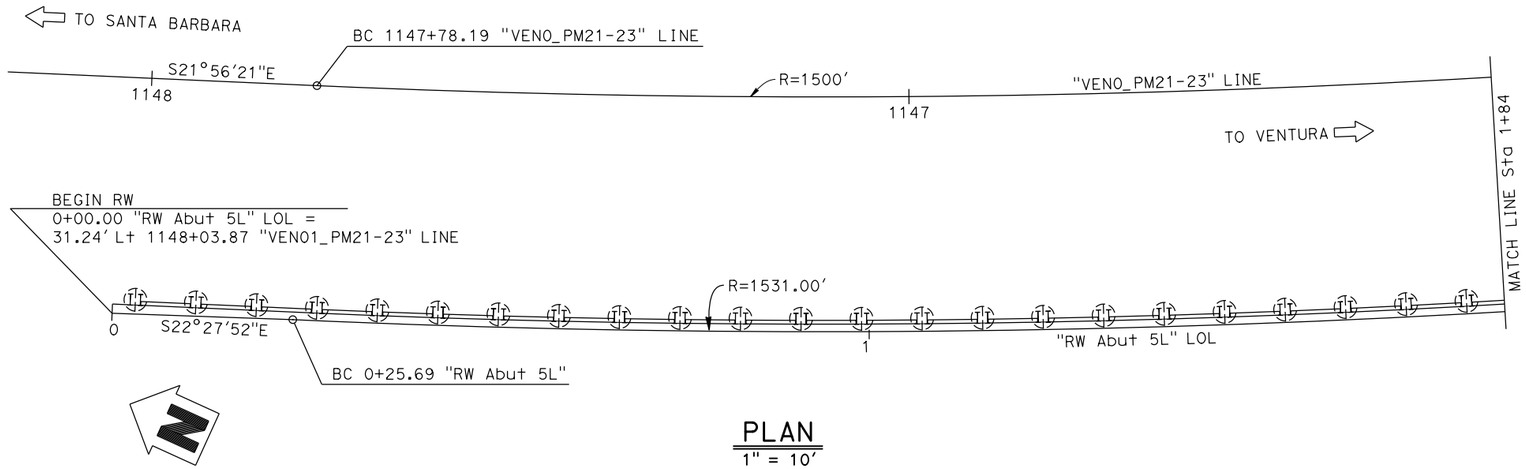
REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA



NOTE: RAILING NOT SHOWN

DEVELOPED ELEVATION
1" = 10'

LEGEND:
⊠ Ground anchor



PLAN
1" = 10'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PILE AND GROUND ANCHOR DATA TABLE

SOLDIER PILE NUMBER	STATION	TOP OF WALL ELEVATION (ft)	PILE TIP ELEVATION (ft)	ANCHOR ELEVATION (ft)
1	0+03.0	25.84	2	21
2	0+11.0	26.25		
3	0+19.0	26.69		
4	0+27.0	27.03	3	22
5	0+35.0	27.22		
6	0+43.0	27.40		
7	0+51.0	27.69		
8	0+59.0	27.99	4	23
9	0+67.0	28.32		
10	0+75.0	28.72		
11	0+83.0	29.11	5	24
12	0+91.0	29.44		
13	0+99.0	29.74		
14	1+07.0	30.06	6	25
15	1+15.0	30.43		
16	1+23.0	30.81		
17	1+31.0	31.14	7	26
18	1+39.0	31.45		
19	1+47.0	31.76		
20	1+55.0	32.05	8	27
21	1+63.0	32.35		
22	1+71.0	32.64		
23	1+79.0	32.92	9	28

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	A. Onodera/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Malla	H. Terrill

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT
STRUCTURE PLAN No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-c-sp01.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-7-23		7-25-23	6-20-23	3	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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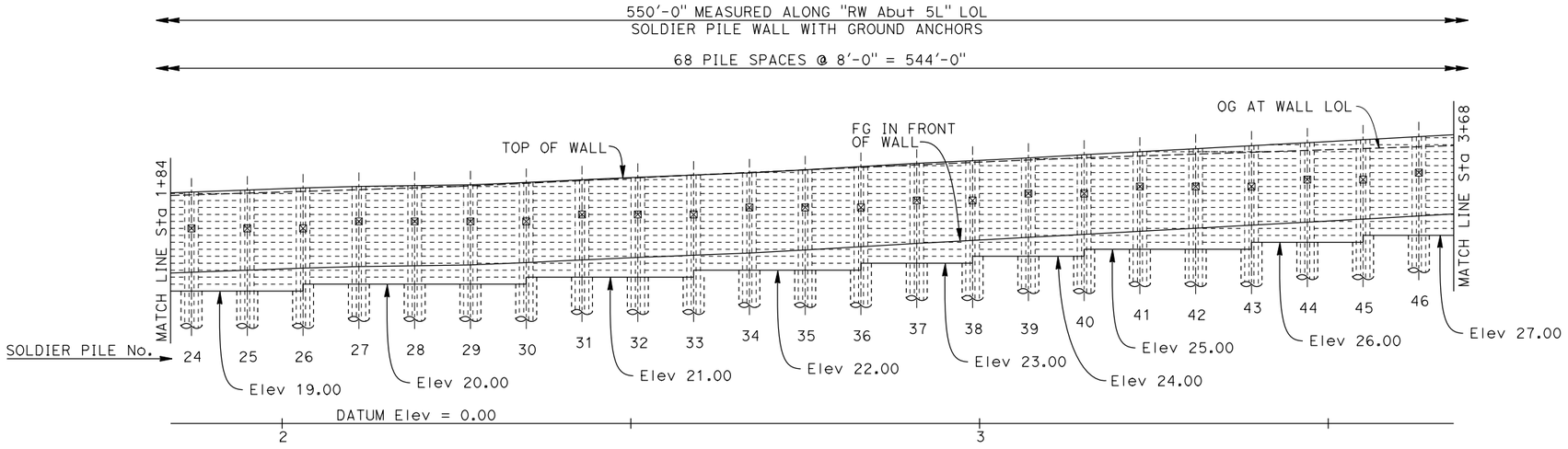
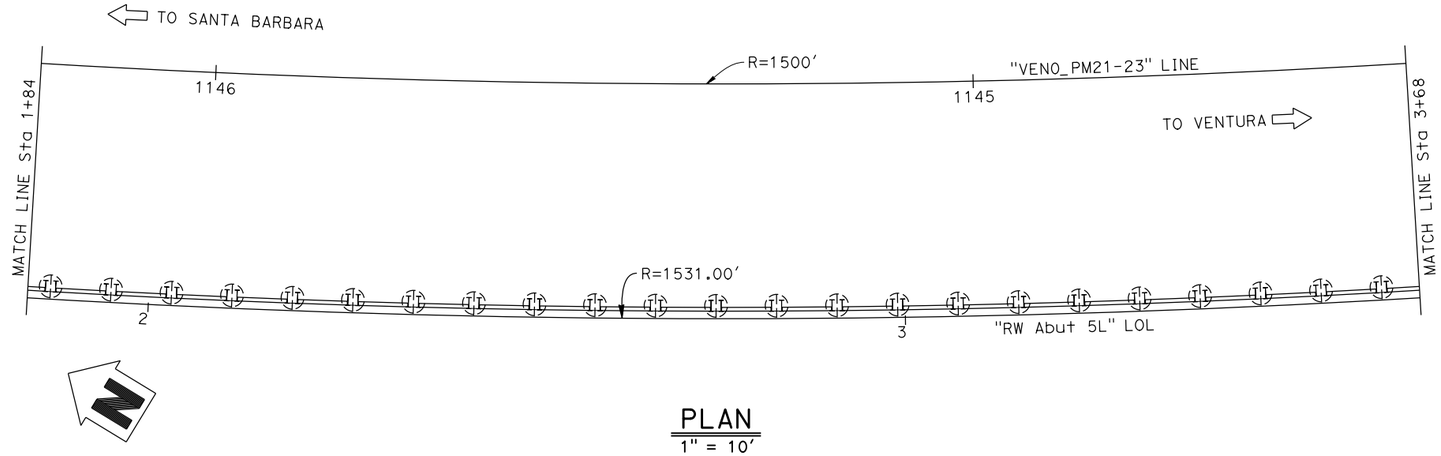


NOTE: RAILING NOT SHOWN

DEVELOPED ELEVATION
1" = 10'

LEGEND:
⊠ Ground anchor



PLAN
1" = 10'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PILE AND GROUND ANCHOR DATA TABLE

SOLDIER PILE NUMBER	STATION	TOP OF WALL ELEVATION (ft)	PILE TIP ELEVATION (ft)	ANCHOR ELEVATION (ft)
24	1+87.00	33.20	9	28
25	1+95.00	33.50		
26	2+03.00	33.80		
27	2+11.00	34.02	10	29
28	2+19.00	34.13		
29	2+27.00	34.25		
30	2+35.00	34.59		
31	2+43.00	34.97	11	30
32	2+51.00	35.33		
33	2+59.00	35.65		
34	2+67.00	35.96	12	31
35	2+75.00	36.40		
36	2+83.00	36.87		
37	2+91.00	37.33	15	32
38	2+99.00	37.71		
39	3+07.00	38.10	16	33
40	3+15.00	38.57		
41	3+23.00	39.00	17	34
42	3+31.00	39.43		
43	3+39.00	39.86		
44	3+47.00	40.29	18	35
45	3+55.00	40.72		
46	3+63.00	41.16	19	36

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	A. Onodera/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Malla	H. Terrill

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT
STRUCTURE PLAN No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-c-sp02.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-7-23		7-25-23	8-18-23	4	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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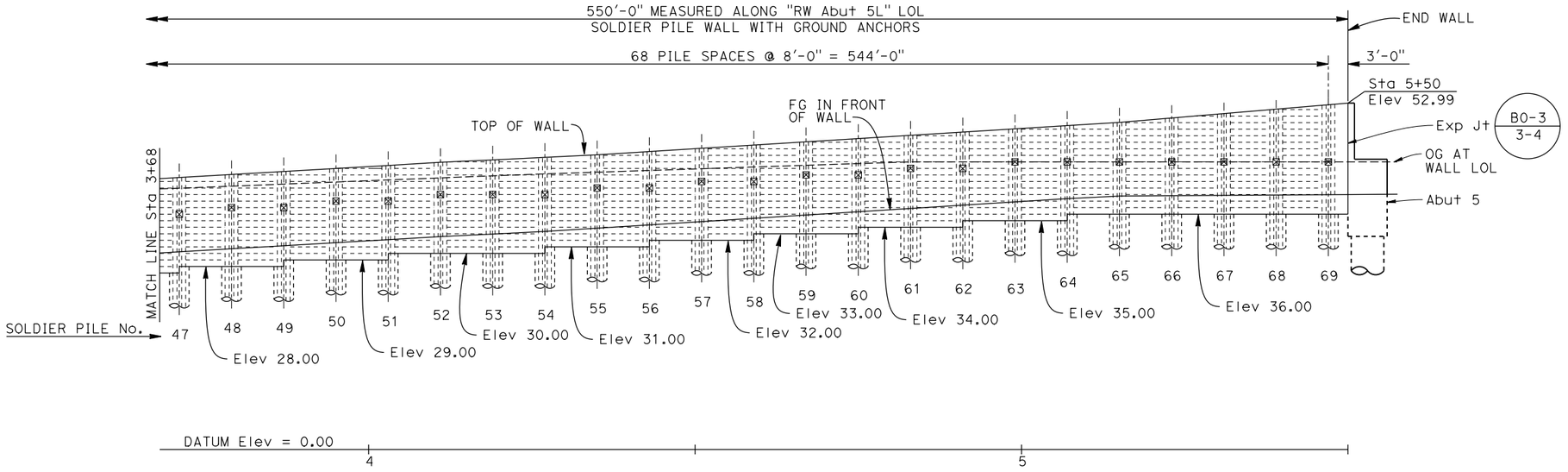


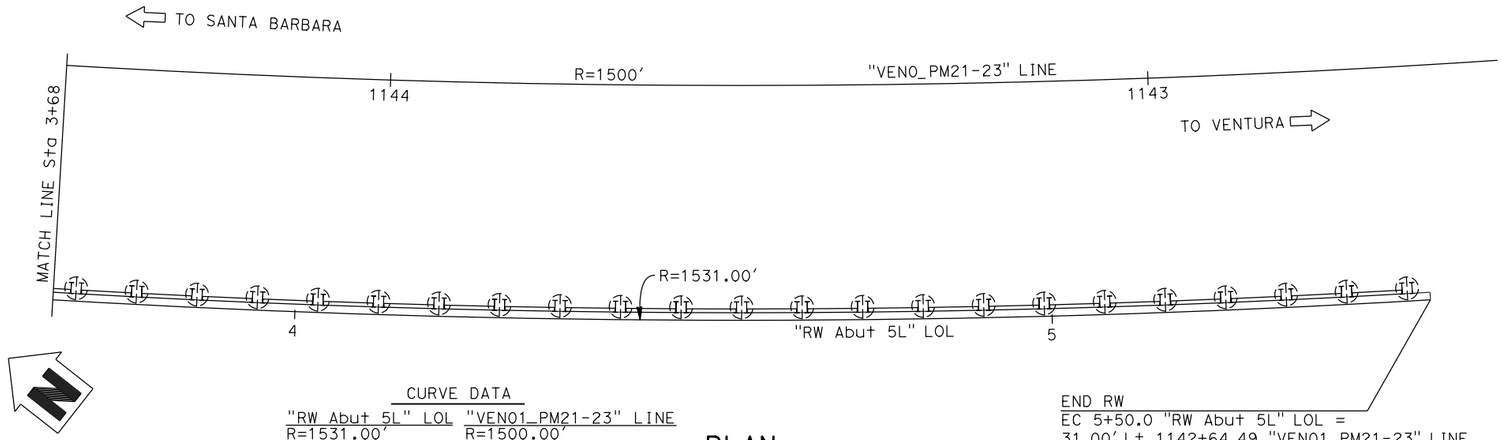
NOTE: RAILING NOT SHOWN

DEVELOPED ELEVATION
1" = 10'

LEGEND:
⊠ Ground anchor

PILE AND GROUND ANCHOR DATA TABLE

SOLDIER PILE NUMBER	STATION	TOP OF WALL ELEVATION (ft)	PILE TIP ELEVATION (ft)	ANCHOR ELEVATION (ft)
47	3+71.00	41.61	19	36
48	3+79.00	42.07	20	37
49	3+87.00	42.53		
50	3+95.00	42.99	21	38
51	4+03.00	43.45		
52	4+11.00	43.94	22	39
53	4+19.00	44.30		
54	4+27.00	44.69		
55	4+35.00	45.08	23	40
56	4+43.00	45.58		
57	4+51.00	46.08	24	41
58	4+59.00	46.57		
59	4+67.00	47.07	25	42
60	4+75.00	47.56		
61	4+83.00	48.06	26	43
62	4+91.00	48.56		
63	4+99.00	49.05	27	
64	5+07.00	49.55		
65	5+15.00	50.04	29	44
66	5+23.00	50.71		
67	5+31.00	51.39		
68	5+39.00	52.06		
69	5+47.00	52.74		



CURVE DATA

"RW Abut 5L" LOL	"VEN01_PM21-23" LINE
R=1531.00'	R=1500.00'
Δ=19°37'18"	Δ=31°17'50"
T=264.75'	T=420.18'
L=524.31'	L=819.36'

END RW
EC 5+50.0 "RW Abut 5L" LOL =
31.00' Lt 1142+64.49 "VEN01_PM21-23" LINE

PLAN
1" = 10'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	A. Onodera/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Malla	H. Terrill

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT
STRUCTURE PLAN No. 3

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-c-sp03.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
4-7-23		7-25-23	4-18-23	5	15

CURVE DATA				
No.	R	Δ	T	L
③	1500.00′	31°17′50"	420.18′	819.36′
⑩	1531.00′	19°37′18"	264.75′	524.31′

SURVEY CONTROL

PT-64 (NOT SHOWN ON PLAN SHEET)
130_SUHV
102.41′ Lt 1137+36.22 "VEN01_PM21-23" LINE
N 1,931452.93
E 6,157,378.64
Elev = 14.87

PT-65 (NOT SHOWN ON PLAN SHEET)
130_SUHV
54.85′ Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1,931,821.09
E 6,157,165.13
Elev = 16.53

SURVEY MONUMENTS SHOWN ON THE FOUNDATION PLAN ARE FOR DESIGN PURPOSES ONLY. FOR COMPLETE LIST OF SURVEY MONUMENTS FOR THIS PROJECT, SEE ROADWAY PLANS.

LEGEND:
◌ 36"ø Drilled Hole
II 2-W18x50 Steel Piles

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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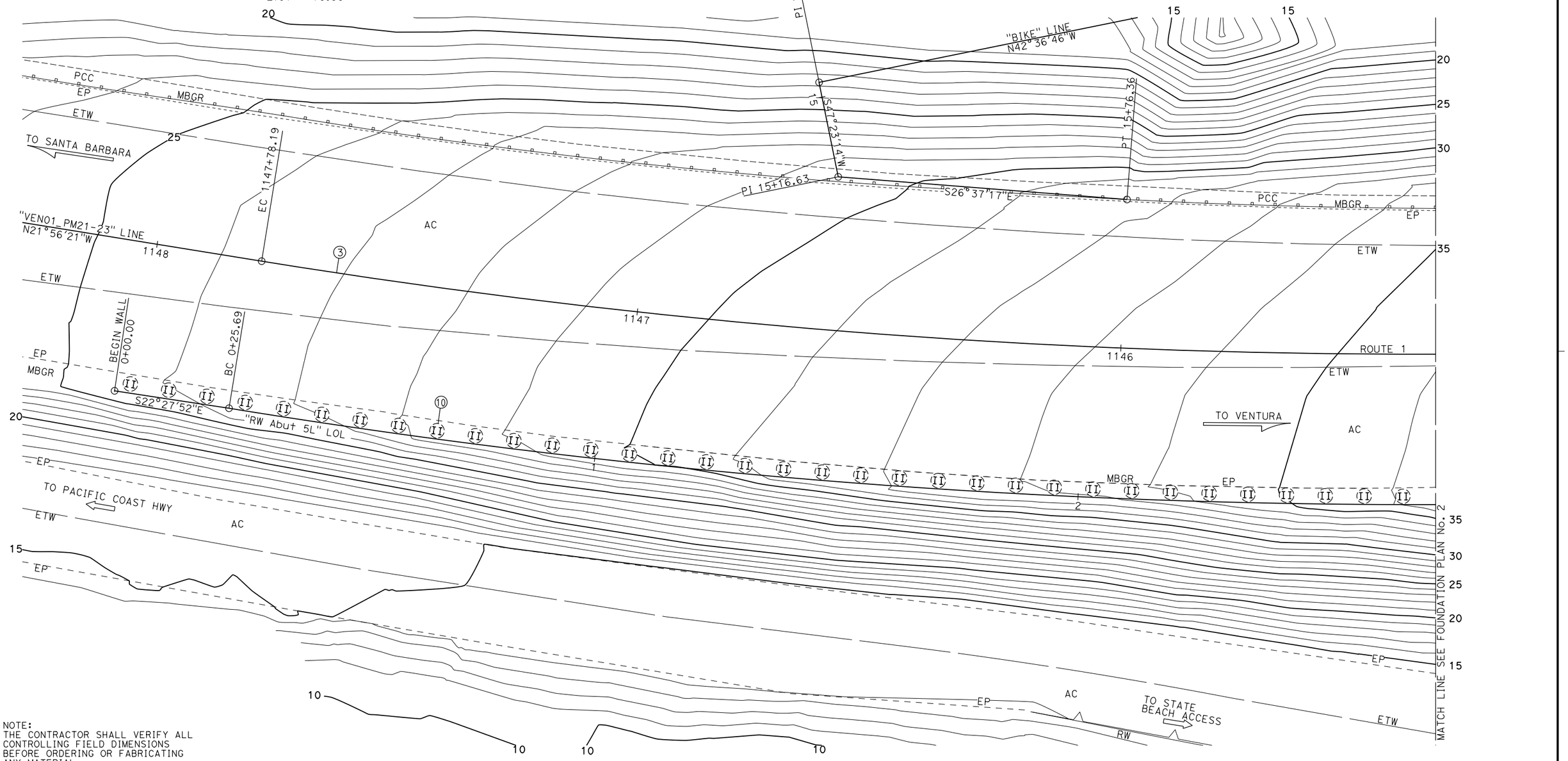

NOTE:
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PRELIMINARY INVESTIGATIONS BRANCH								
SCALE: 1" = 10′	VERT. DATUM: NAVD88	SURVEYED	BY F. WOODS/DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY A. ONODERA/T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE
					QUANTITIES	BY A. QUIROZ	CHECKED H. TERRILL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT
FOUNDATION PLAN No. 1

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-e-fdp101.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-15-22		6-9-23	6-7-23	6	15

CURVE DATA				
No.	R	Δ	T	L
③	1500.00′	31°17′50"	420.18′	819.36′
⑧	1476.00′	01°33′10"	20.00′	40.00′
⑩	1531.00′	19°37′18"	264.45′	524.31′

SOFFIT ELEVATIONS

14 - 42.09 29 - 40.64

EXISTING BRIDGE LOCATION

② - 21.58 Ft Lt "VEN01_PM21-23" LINE, Sta 1142+54.18, Elev = 45.98±
④ - 21.96 Ft Rt "VEN01_PM21-23" LINE, Sta 1142+53.88, Elev = 44.45±

LEGEND:

◌ 36"Ø Drilled Hole
II 2-W18x50 Steel Piles

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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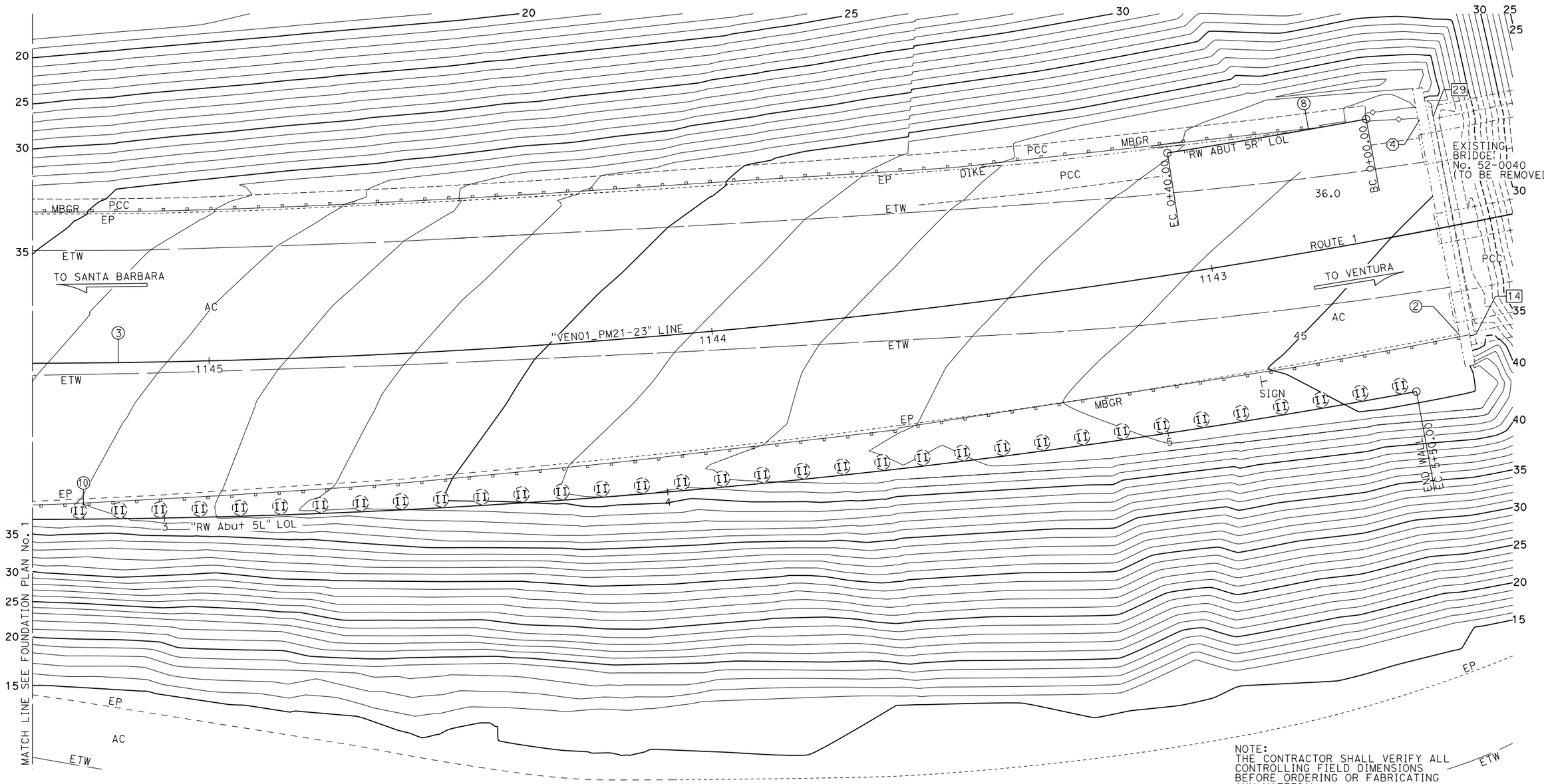

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PRELIMINARY INVESTIGATIONS BRANCH							
SCALE: 1" = 10′	VERT. DATUM: NAVD88	SURVEYED	BY F. WOODS/DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE
					QUANTITIES	BY A. QUIROZ	CHECKED H. TERRILL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT
FOUNDATION PLAN No. 2

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-e-fdp102.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
4-20-23		7-25-23	8-9-23	7	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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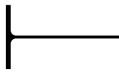
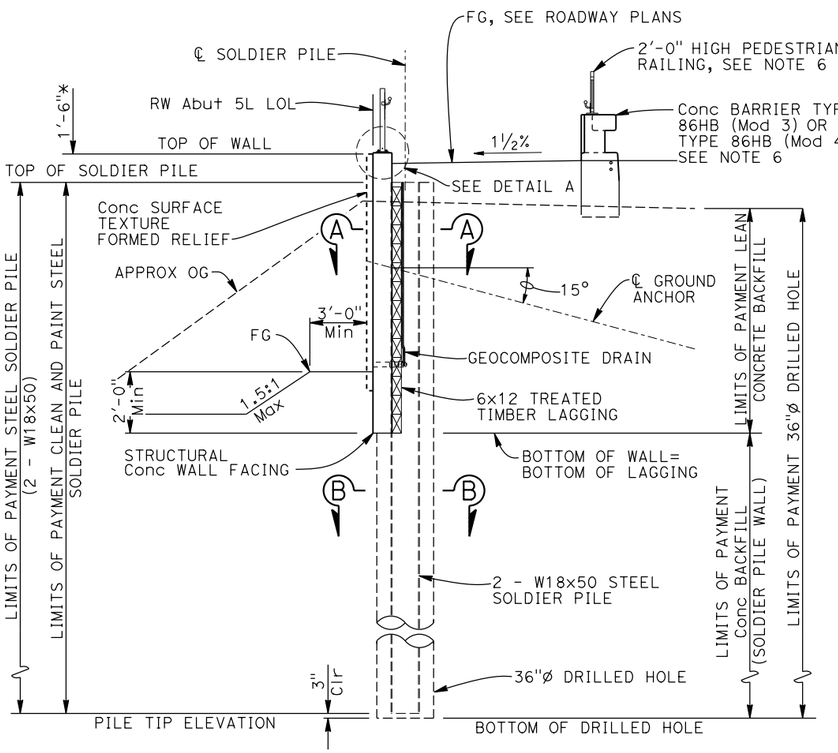


LIMITS OF CLEAN & PAINT STEEL SOLDIER PILE

NO SCALE



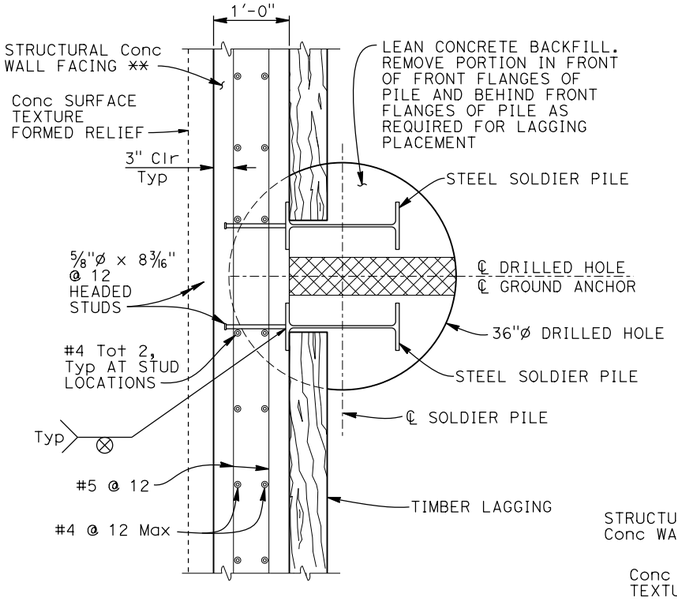
* WITHIN LIMITS OF APPROACH SLAB, STEEL PILE SHALL BE CUT BELOW THE BOTTOM OF THE APPROACH SLAB

TYPICAL SECTION

¼" = 1'-0"

NOTES:

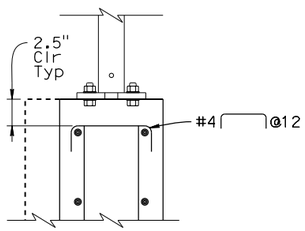
1. For Conc Surface Texture Formed Relief see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS Nos. 1-3" sheets.
2. For Approach Slab details, see "VENTURA OH (REPLACEMENT)" Structure Plans.
3. For Stay Plate Details, see "TYPICAL SECTION No. 2" sheet.
4. All reinforcing steel in the Structural Concrete Wall Facing shall be Post-fabricated Epoxy Coated Rebar for bottom of wall elevations 30' and higher.
5. All reinforcing steel in the Structural Concrete Wall Facing shall be Pre-fabricated Epoxy Coated Rebar for bottom of wall elevations below 30'.
6. For Concrete Barrier Type 86HB (Mod 3) or (Mod 4) sections with 2'0" High Pedestrian Railing see ROADWAY PLANS.



** STRUCTURAL Conc WALL FACING SHALL EXTEND TO BEGIN AND END OF WALL

SECTION A-A

1" = 1'-0"



NOTE: FOR INFORMATION NOT SHOWN SEE SECTION A-A

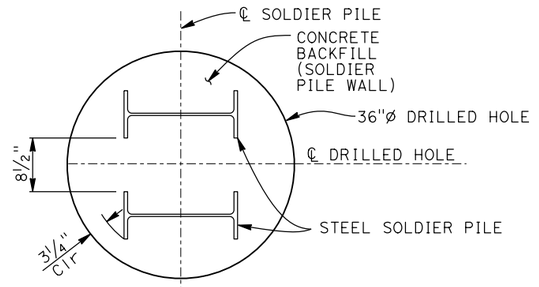
DETAIL A

NO SCALE

LEGEND:

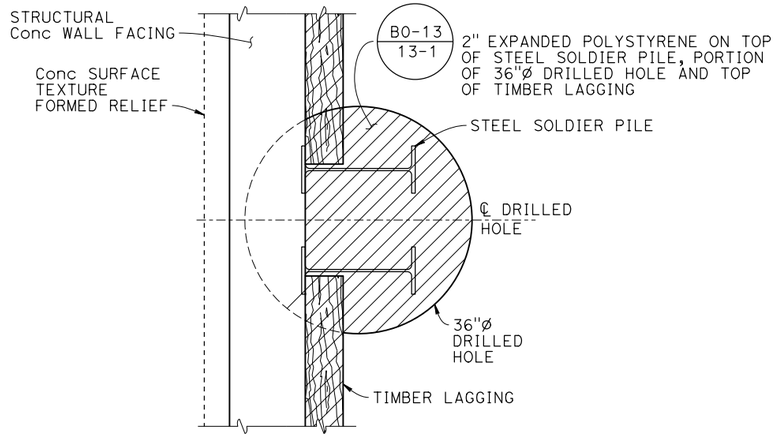
Limits of Cored Hole

Limits of 2" Expanded Polystyrene



SECTION B-B

1" = 1'-0"



NOTE: FOR INFORMATION NOT SHOWN SEE SECTION A-A

PLAN VIEW AT BOTTOM OF APPROACH SLAB

1" = 1'-0"

NOTE:
EXCAVATION MUST NOT EXTEND MORE THAN 2'-0" BELOW GROUND ANCHOR UNTIL GROUND ANCHORS ARE COMPLETELY GROUTED AND STRESSED

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	A. Onodera/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Malla	H. Terrill

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT

TYPICAL SECTION No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 16:41
FILE => 52e0032-k-ts01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-26-23		7-27-23	09-27-23	8	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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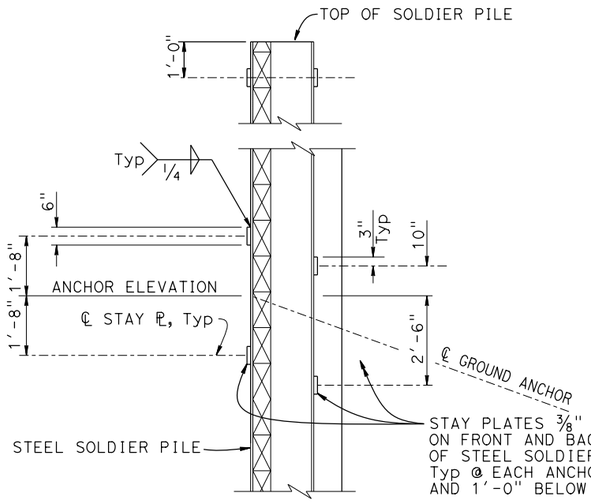
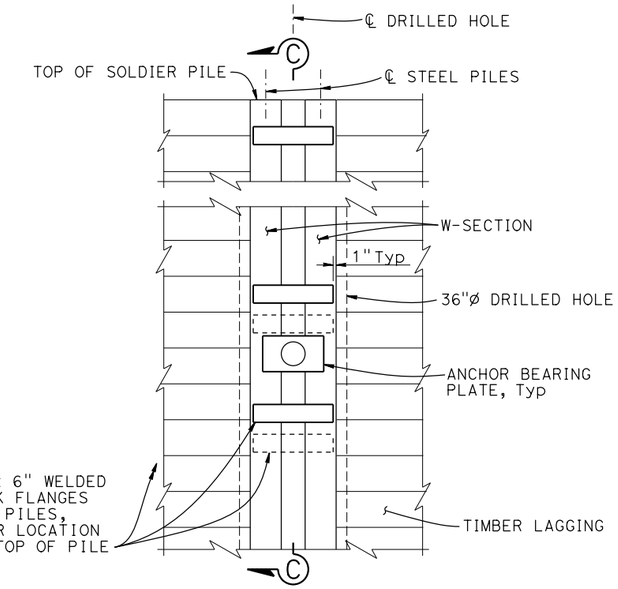


SECTION C-C



PART ELEVATION

NOTE: Conc SURFACE TEXTURE FORMED RELIEF, STRUCTURAL Conc WALL FACING, AND HEADED STUDS NOT SHOWN FOR CLARITY

STAY PLATE DETAILS

NO SCALE

NOTES:

1. For TYPICAL SECTION and other notes, see "TYPICAL SECTION No. 1" sheet

NOTE:
EXCAVATION MUST NOT EXTEND MORE THAN 2'-0" BELOW GROUND ANCHOR UNTIL GROUND ANCHORS ARE COMPLETELY GROUTED AND STRESSED

	BY	CHECKED
DESIGN	A. Malla	X. Carrillo/T. Sayre
DETAILS	A. Onodera/T. Bradshaw	X. Carrillo/T. Sayre
QUANTITIES	A. Malla	H. Terrill

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0032
POST MILE 21.74

RETAINING WALL ABUTMENT 5 LEFT

TYPICAL SECTION No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-11-23	7-25-23			9	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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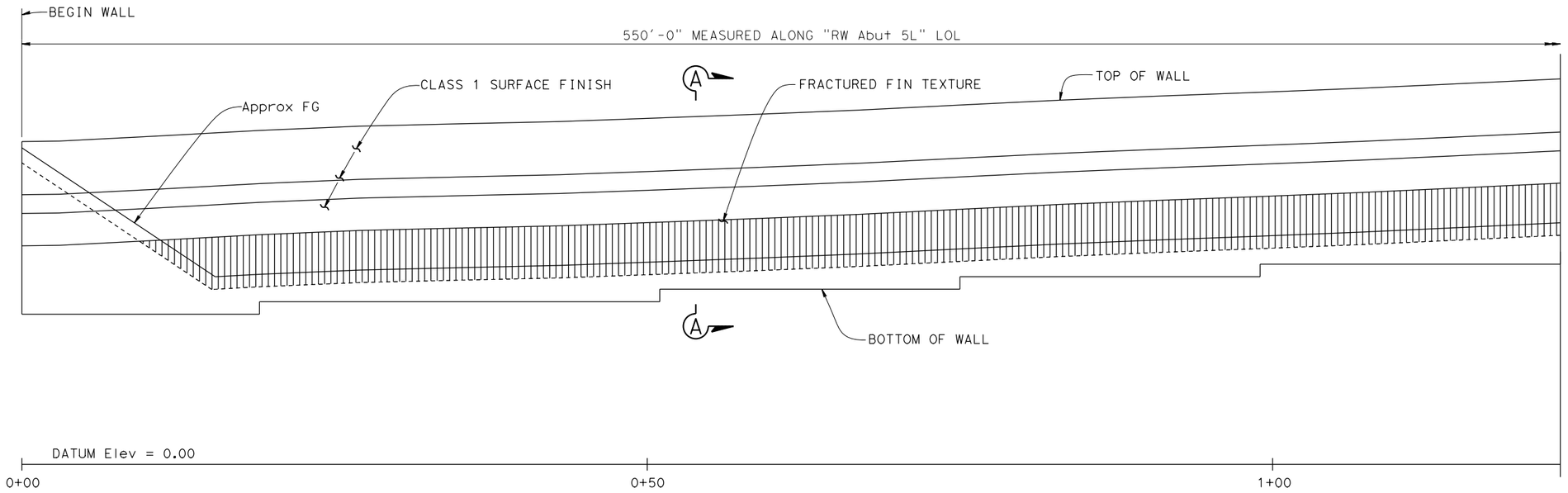
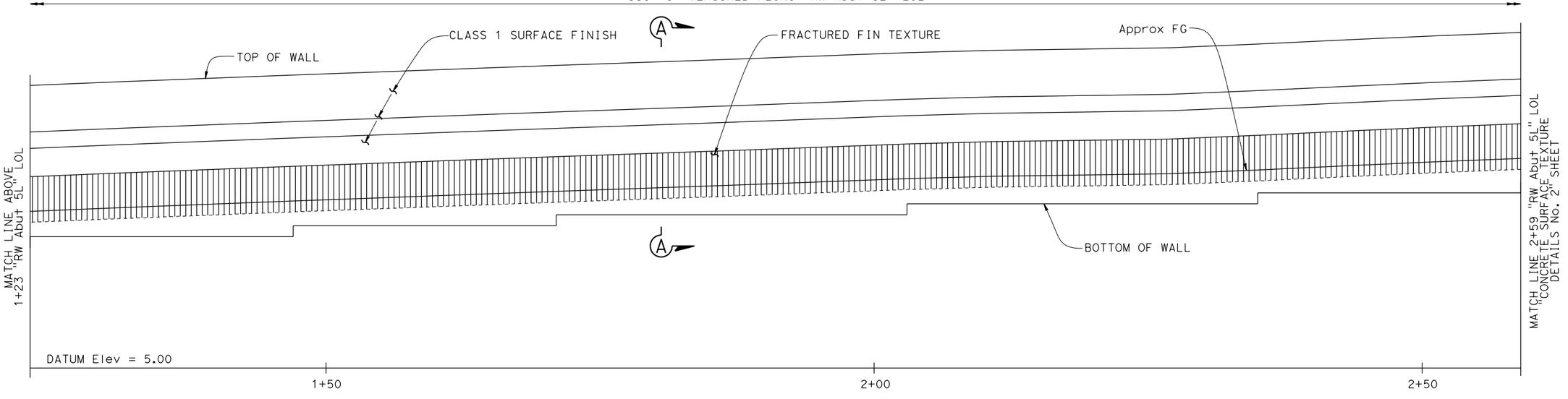


DEVELOPED ELEVATION
1" = 5'

NOTE: RAILING AND PILES NOT SHOWN FOR CLARITY

NOTES:

1. For Typical Section A-A, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 3" sheet.
2. For Fractured Fin Texture Details, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 3" sheet.



DEVELOPED ELEVATION
1" = 5'

NOTE: RAILING AND PILES NOT SHOWN FOR CLARITY

DESIGN	BY A. Malla	CHECKED X. CARRILLO/T. SAYRE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0032
DETAILS	BY N. VADIRAJ/T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE			POST MILE 21.54
QUANTITIES	BY A. MALLA	CHECKED H. TERRILL			

RETAINING WALL ABUTMENT 5 LEFT
CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-u-arch-det01.dgn USERNAME => s156654
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
~~4-12-23~~		7-26-23 ~~5-2-23~~	10	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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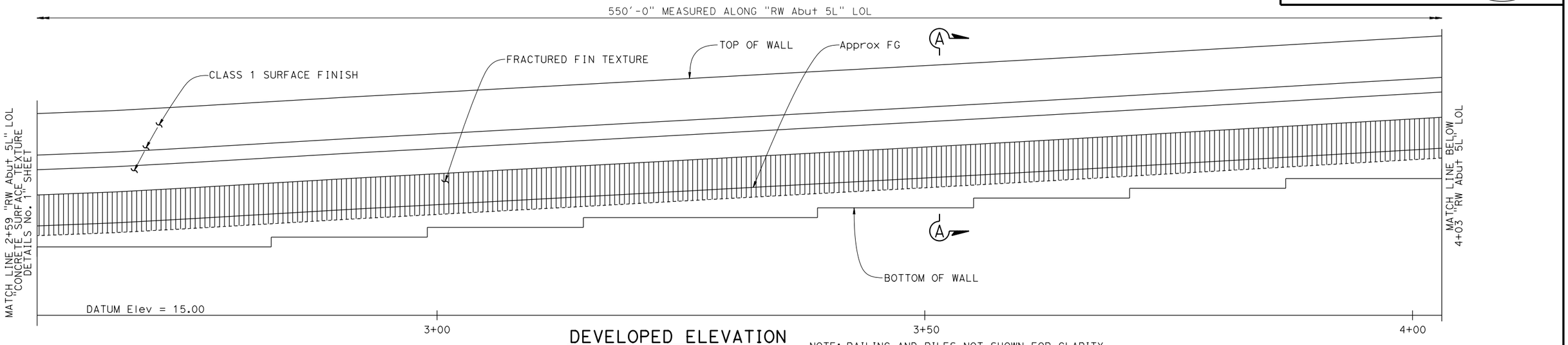
NOTES:

1. For Typical Sections A-A and B-B, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 3" sheet.

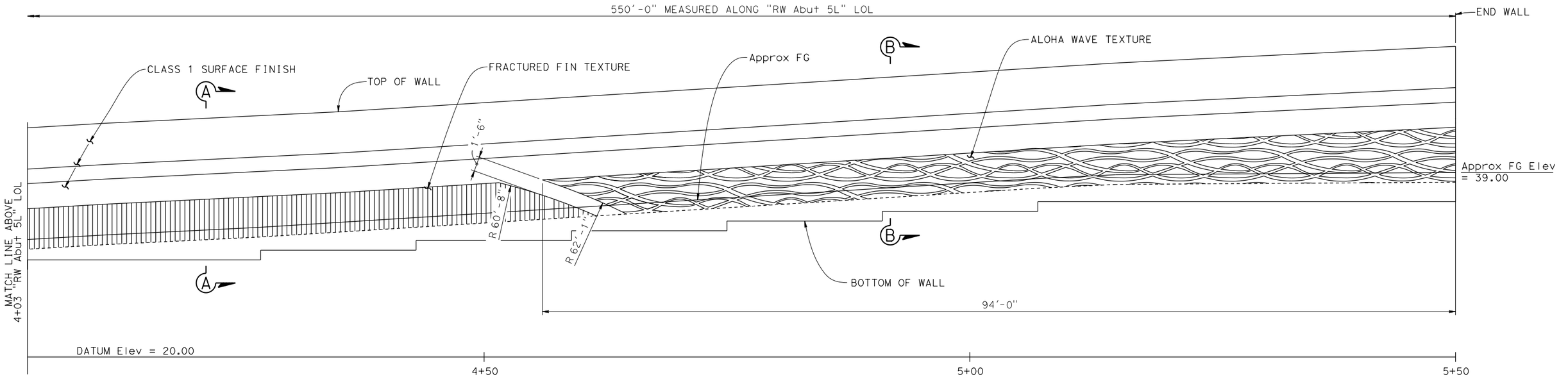
   For Aloha Wave Texture Details, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 3" sheet.



DEVELOPED ELEVATION

1" = 5'

NOTE: RAILING AND PILES NOT SHOWN FOR CLARITY



DEVELOPED ELEVATION

1" = 5'

NOTE: RAILING AND PILES NOT SHOWN FOR CLARITY

DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0032
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE			POST MILE 21.54
QUANTITIES	BY A. MALLA	CHECKED H. TERRILL			

RETAINING WALL ABUTMENT 5 LEFT

CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-u-arch-det02.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
4-17-23		7-25-23	5-4-23	11	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

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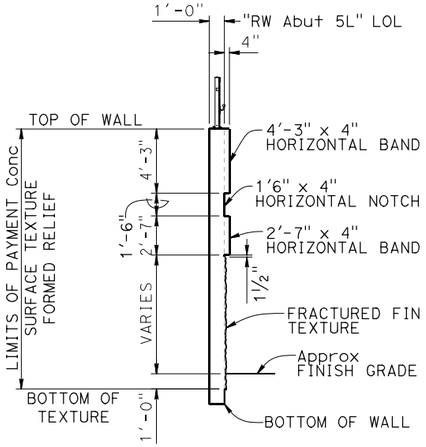
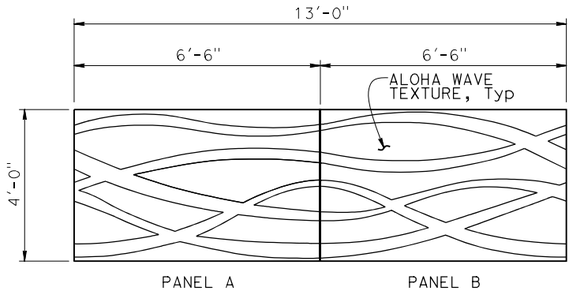
REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

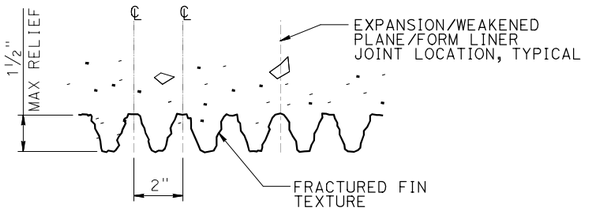


TYPICAL SECTION A-A
1" = 5'

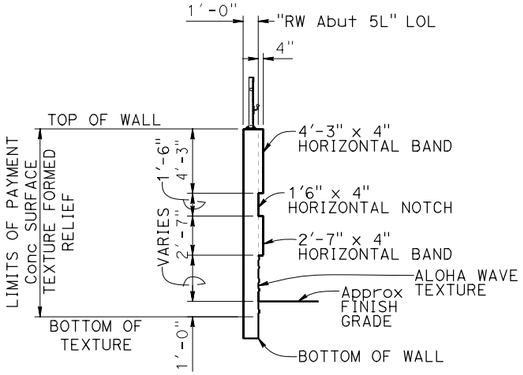


PATTERN ELEVATION
ALOHA WAVE TEXTURE
½" = 1'-0"

NOTE: For additional details see "CONCRETE SURFACE TEXTURE DETAILS No. 3" sheet in Ventura OH (Replacement) Structure Plans.



FRACTURED FIN TEXTURE
NO SCALE



TYPICAL SECTION B-B
1" = 5'

DESIGN	BY A. MALLA	CHECKED X. CARRILLO/T. SAYRE	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0032	RETAING WALL ABUTMENT 5 LEFT
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED X. CARRILLO/T. SAYRE			POST MILE 21.52	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 3
QUANTITIES	BY A. MALLA	CHECKED H. TERRILL				

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 8-SEP-2023 TIME PLOTTED => 15:28
FILE => 52e0032-u-arch-de+03.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
4-13-23		7-28-23	09-07-23	12	15

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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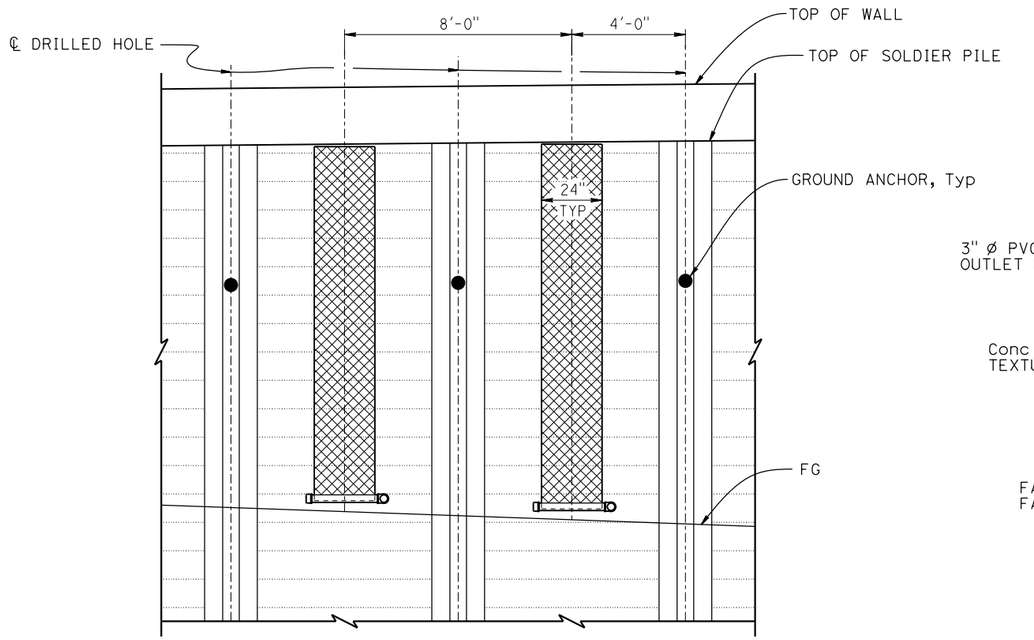
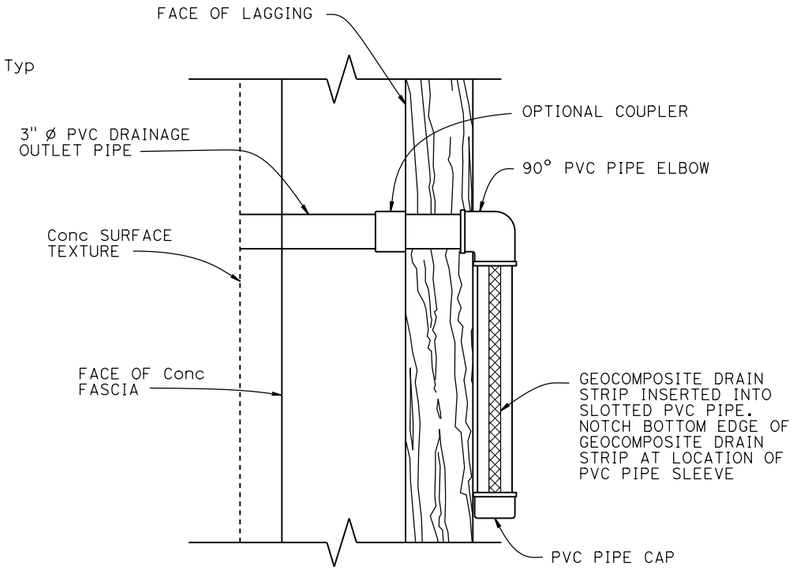


PART ELEVATION - GEOCOMPOSITE DRAIN

NO SCALE

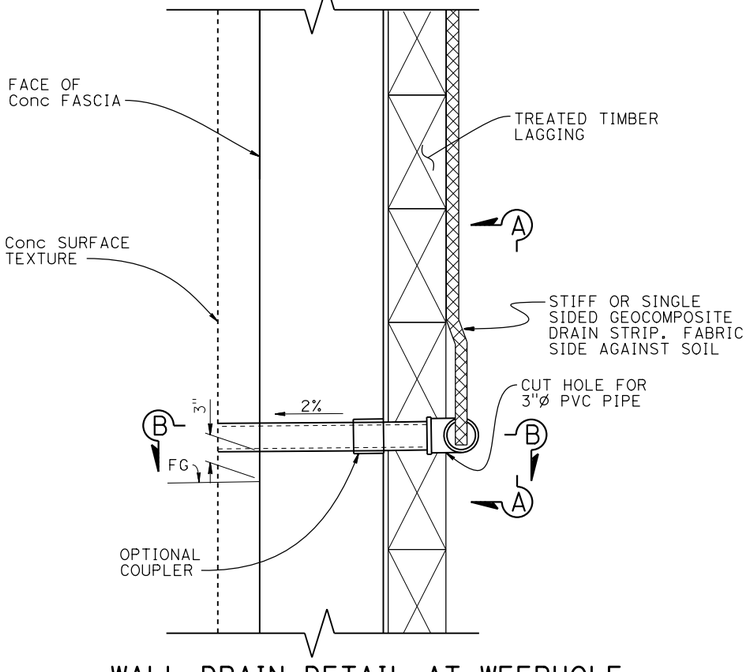


SECTION B-B

NO SCALE

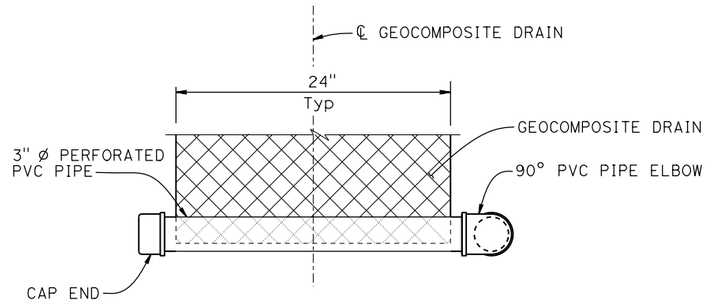
NOTE:

For details and dimensions not shown, see "TYPICAL SECTION" sheet.



WALL DRAIN DETAIL AT WEEPHOLE

NO SCALE



VIEW A-A

NO SCALE

DESIGN	BY A. Malla	CHECKED X. Carrillo/T. Sayre	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0032
DETAILS	BY A. Onodera/ T. Bradshaw	CHECKED X. Carrillo/T. Sayre			POST MILE 21.74
QUANTITIES	BY A. Malla	CHECKED H. Terrill			

RETAINING WALL ABUTMENT 5 LEFT

MISCELLANEOUS DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:41
FILE => 52e0032-u-miscd101.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
3-1-23		4-17-23	4-7-23	13	15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.

GENERAL NOTES (1)

~~DESIGN:~~
~~AASHTO LRFD Bridge Design Specifications, 4th Edition with California Amendments.~~

PRESTRESSING STEEL:

Bars - ASTM Designation: A722 Type II (150 ksi)

Strand Tendons-ASTM Designation: A416 (270 Ksi Low Relaxation steel)

FTL = Factored Test Load per anchor (Kips)

fpu = Minimum tensile strength of prestressing steel

As = Minimum cross sectional area of prestressing steel in ground anchor (square inch)

$$As(Min) = \frac{1.0\ FTL}{0.75\ fpu} \quad \text{(Strands)}$$

$$As(Min) = \frac{1.0\ FTL}{0.80\ fpu} \quad \text{(Bars)}$$

NOTES:

(A) Level of initial grouting for drilled hole 6" in diameter or smaller

(B) Level of secondary grouting

(C) Level of initial grouting inside corrugated sheathing

(D) Bonded length shall be determined by the contractor

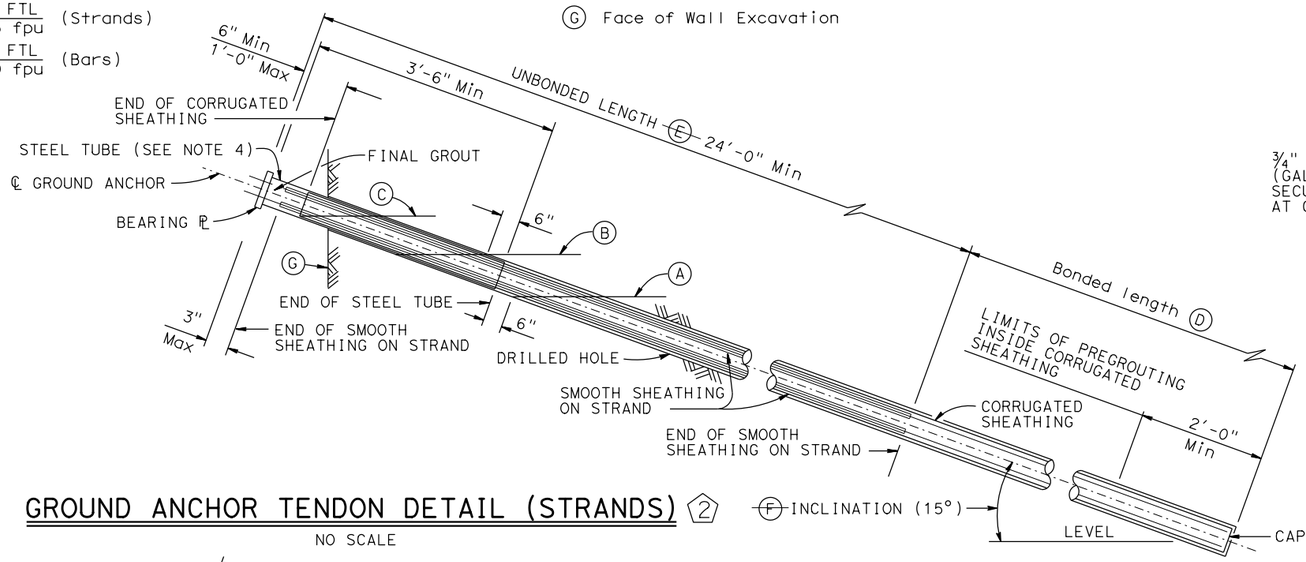
(1) ~~(E) For unbonded length, see PROJECT PLANS~~

~~(F) For inclination, see PROJECT PLANS~~

(G) Face of Wall Excavation

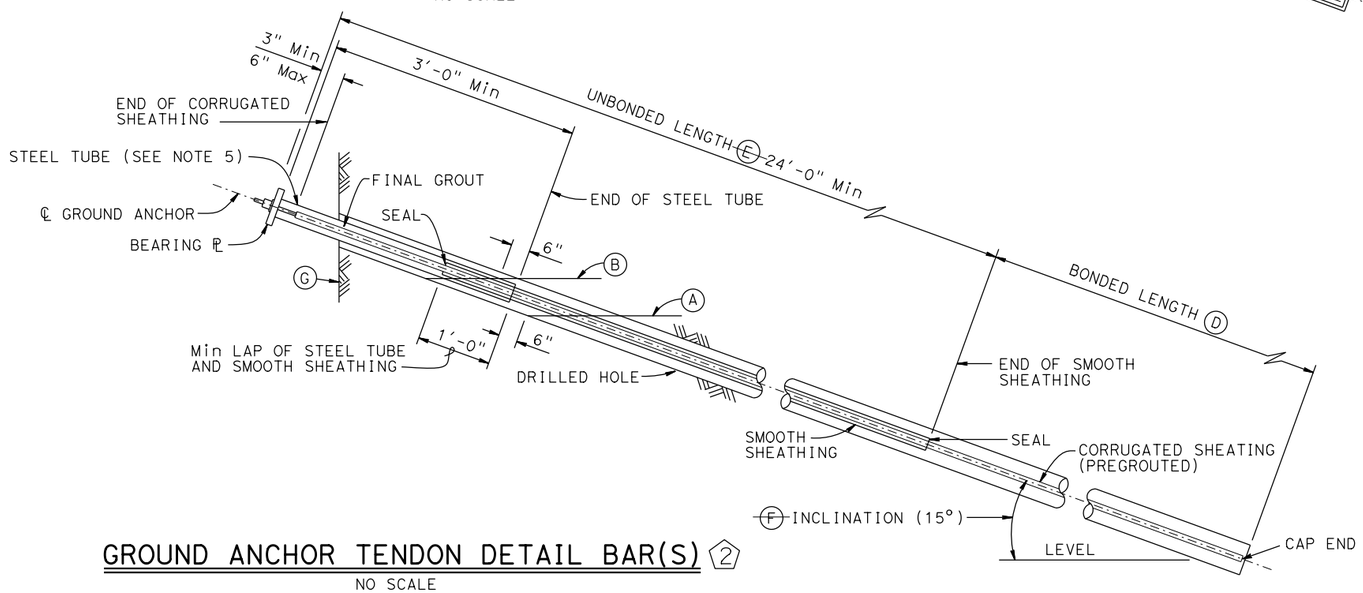
NOTES:

1. Anchorage enclosure shall only be used when anchor head assembly is not enclosed in concrete.
2. Anchorage enclosure shall have provisions to allow injecting grout at low end and venting at high end. Galvanize after fabrication.
3. Silicone sealant to cover full width of flange.
4. Steel tube (Min thickness = 1/4") welded to bearing plate. Galvanize assembly after fabrication
5. Steel tube welded to bearing plate. Inside diameter of steel tube (Min thickness = 1/4") to be 1" greater than outside diameter of smooth sheathing.
6. Galvanize assembly after fabrication.
7. For other wall details, see PROJECT PLANS.



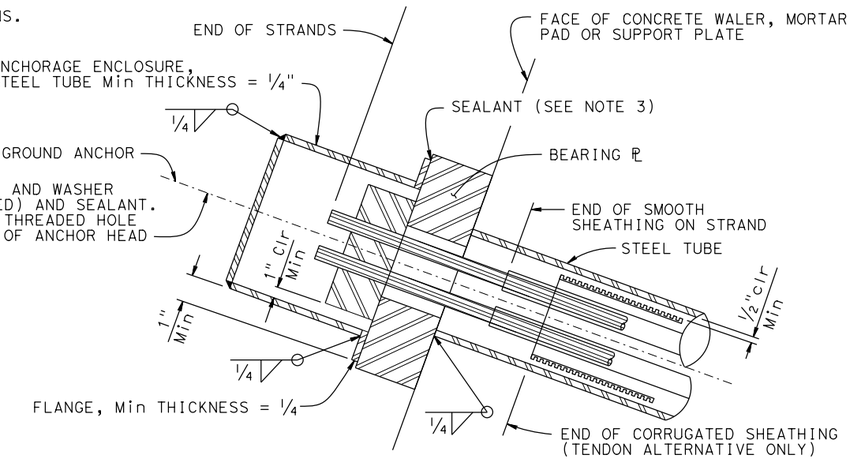
GROUND ANCHOR TENDON DETAIL (STRANDS) (2)

NO SCALE

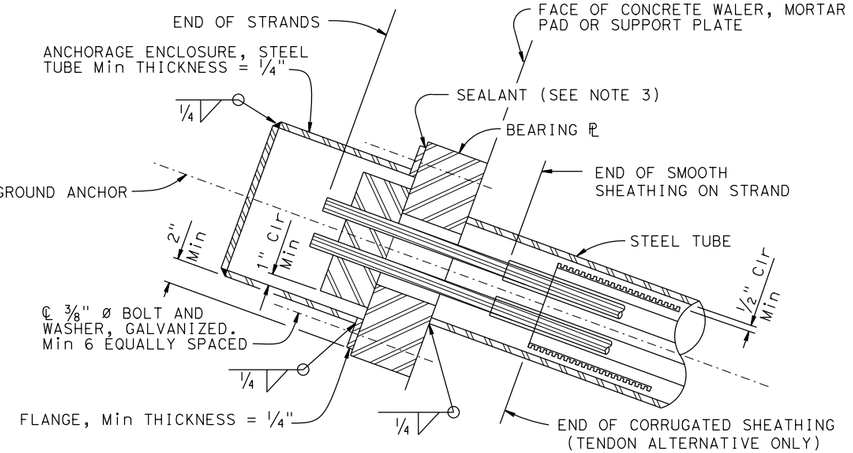


GROUND ANCHOR TENDON DETAIL BAR(S) (2)

NO SCALE



ALTERNATIVE X



ALTERNATIVE Y

ANCHORAGE ENCLOSURE DETAILS

NO SCALE

REVISED BRIDGE STANDARD DETAILS			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE NO. 52E0029	RETAINING WALL ABUTMENT 5 LEFT
xs12-040 FILE NO.	July 2014 APPROVAL DATE	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California	(1) – Modified Notes (2) – Modified Detail		POST MILE 21.74	SUB HORIZONTAL GROUND ANCHOR DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52e0032-x-xs12-040.dgn
USERNAME => s156654 TIME PLOTTED => 09:41 DATE PLOTTED => 23-AUG-2023

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT NO.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
~~12-22-22~~	6-9-23	~~5-2-23~~	14	15

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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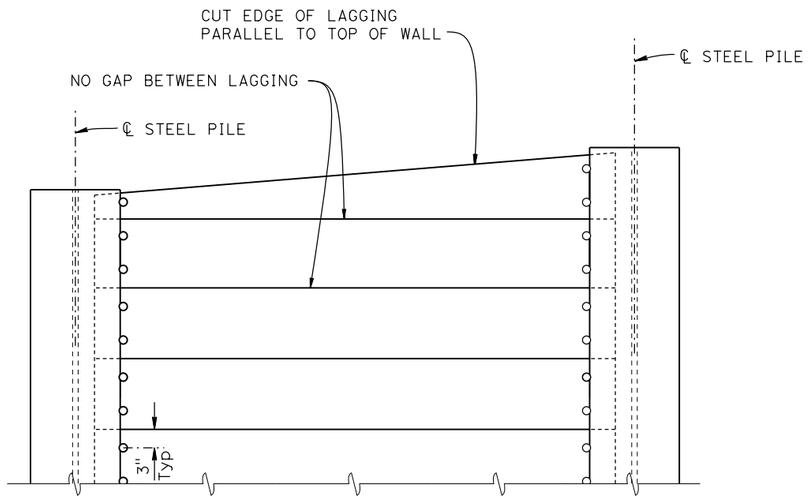
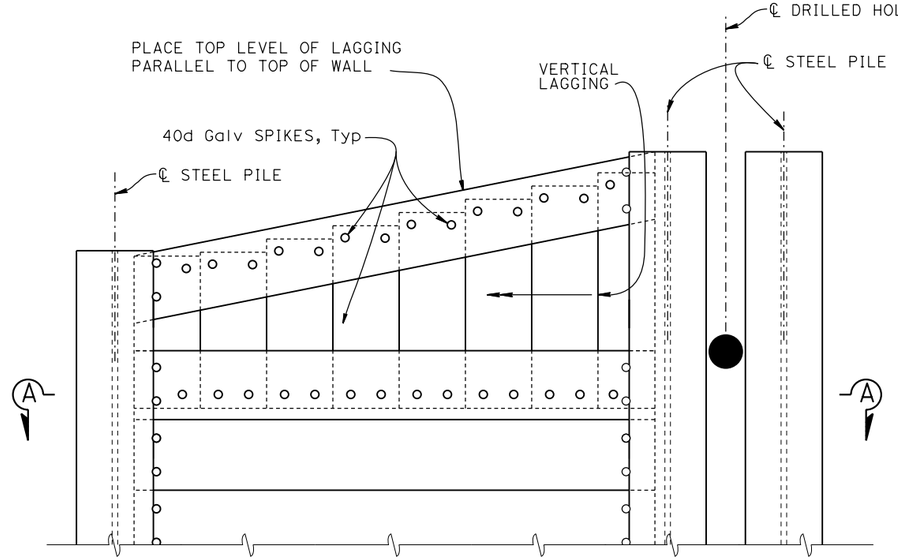
The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.



PART ELEVATION

LAGGING DETAILS (ALTERNATIVE 1) (1)

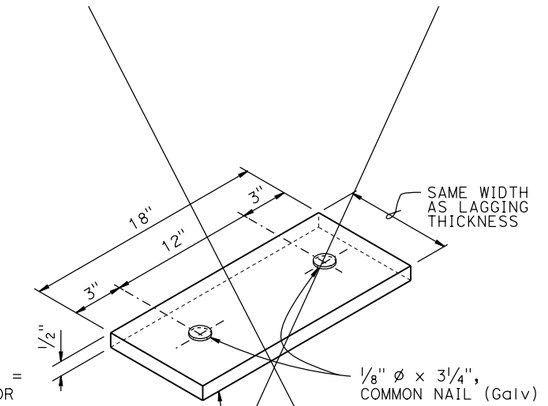
NO SCALE



PART ELEVATION

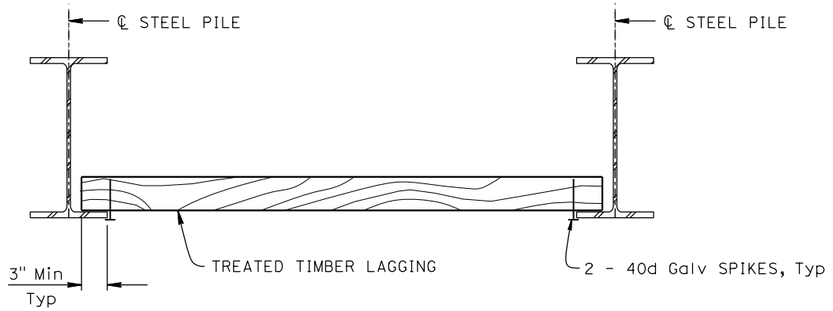
LAGGING DETAILS (ALTERNATIVE 2) (1)

NO SCALE



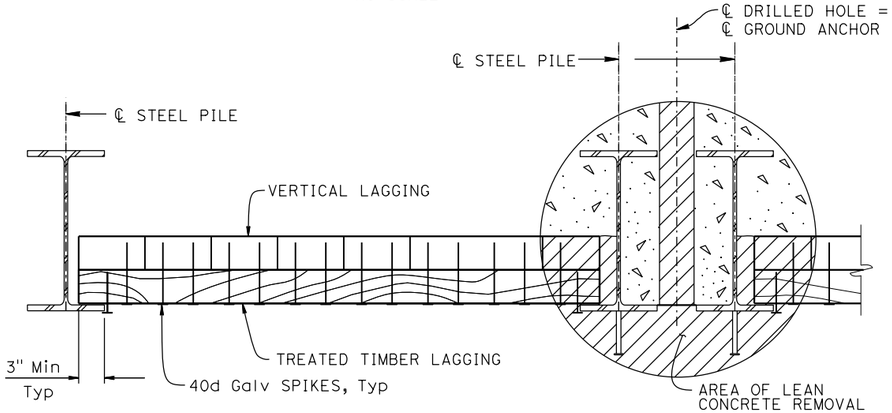
SHIM DETAIL (3)

NO SCALE



PART PLAN (1)

NO SCALE



SECTION A-A (1)

NO SCALE

NOTES:

(2)
1. No clipping of timber lagging corners allowed
2. Spikes shall not be bent

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS					
xs12-080	July 2014	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California	(1) — Modified Detail (3) — Detail not used (2) — Modified Note	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES
FILE NO.	APPROVAL DATE				

BRIDGE NO.	RETAINING WALL ABUTMENT 5 LEFT
52E0032	
POST MILE	SOLDIER PILE WALL LAGGING DETAILS
21.74	

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52e0032-x-xs12-080.dgn
USERNAME => s156654 TIME PLOTTED => 09:42 DATE PLOTTED => 23-AUG-2023

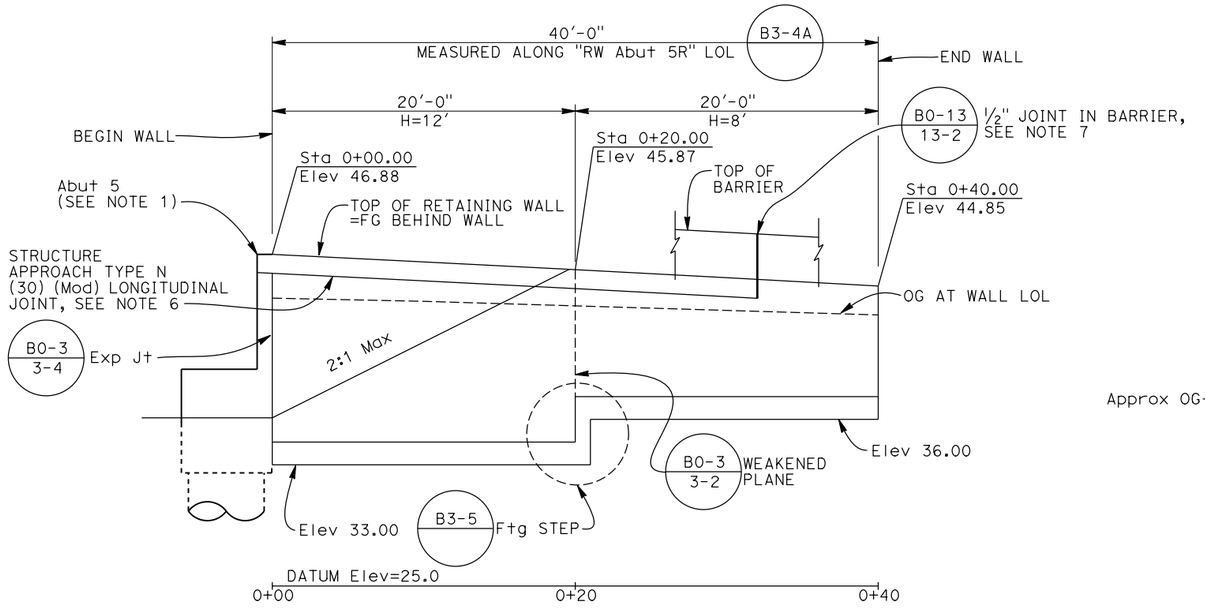
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT NO.: 07-319604

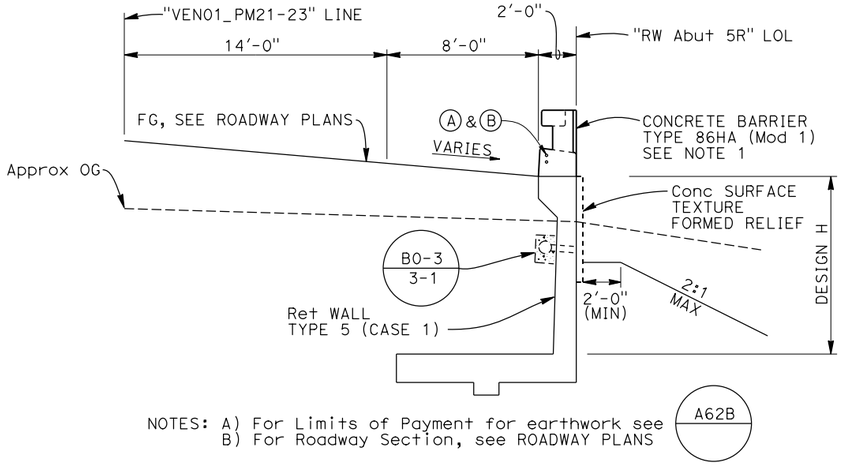
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-4-23		4-17-23	4-21-23	15	15



DEVELOPED ELEVATION

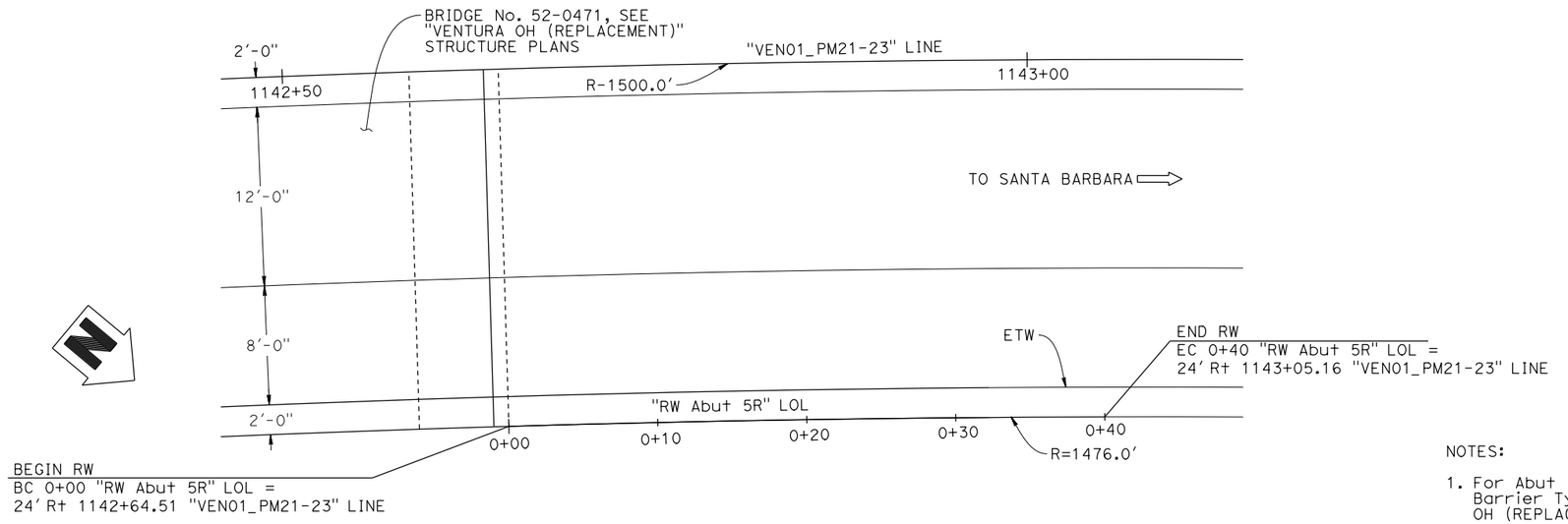
1" = 5'



NOTES: A) For Limits of Payment for earthwork see
B) For Roadway Section, see ROADWAY PLANS

TYPICAL SECTION

1/4" = 1'-0"



PLAN

1" = 5'

CURVE DATA

"VEN01_PM21-23" LINE	"RW Abut 5R" LOL
R = 1500.00'	R = 1476.00'
Δ = 31°17'50"	Δ = 1°33'10"
T = 420.18'	T = 20.00'
L = 819.36'	L = 40.00'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

EXPEDITE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

INDEX TO PLANS

STANDARD PLAN SHEET No. / DETAIL No.

SHEET No.	TITLE
1	GENERAL PLAN
2	FOUNDATION PLAN
3	CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

"DESIGN DATA" per revised Standard Plan RSP B3-4A

Standards Plans and Specifications, 2023 Edition

NOTES:

1. For Abut 5 details and Concrete Barrier Type 86HA (Mod 1), see "VENTURA OH (REPLACEMENT)" Structure Plans.
2. For Conc Surface Texture Formed Relief details, see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS" sheet.
3. For Retaining Wall details, see RSP B3-4A. Horizontal clearance for Reinf in the wall stem shall be 3".
4. (A) & (B) 1½"ø Electrical and Sprinkler Control Conduits. For locations and limits see ROADWAY ELECTRICAL AND IRRIGATION PLANS.
5. All reinforcing steel shall be Post-fabricated Epoxy Coated Rebar.
6. See "STRUCTURE APPROACH TYPE N (30) (Mod) DETAILS" and "STRUCTURE APPROACH DETAILS (Mod)" on "VENTURA OH (REPLACEMENT)" Structure Plans.
7. Joint requires double post condition, one post attached to Structure Approach Slab and the other post attached to the top of Retaining Wall.

John Peterson
BRANCH CHIEF

DESIGN	BY A. Malla	CHECKED I. Ghneam	SEISMIC ANALYSIS	BY X	CHECKED X
DETAILS	BY A. Onodera/N. Vadiraj/T. Bradshaw	CHECKED I. Ghneam	LAYOUT	BY A. Malla	CHECKED I. Ghneam
QUANTITIES	BY A. Quiroz	CHECKED S. Anam	SPECIFICATIONS	BY X	CHECKED PLANS AND SPECS COMPARED X

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52E0033
POST MILE 21.64

RETAINING WALL ABUTMENT 5 RIGHT
GENERAL PLAN

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 16:41
FILE => 52e0033-a-gp.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
5-30-23		7-26-23	6-12-23	1	3

CURVE DATA				
No.	R	Δ	T	L
③	1500.00′	31°17′50"	420.18′	819.36′
⑧	1476.00	01°33′10"	20.00′	40.00′
⑨	1531.00′	19°41′23"	265.68′	526.13′

SOFFIT ELEVATIONS

14 - 42.09 29 - 40.64

EXISTING BRIDGE LOCATION

② - 21.58 Ft Lt "VEN01_PM21-23" LINE, Sta 1142+54.18, Elev = 45.98±
④ - 21.96 Ft Rt "VEN01_PM21-23" LINE, Sta 1142+53.88, Elev = 44.45±

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

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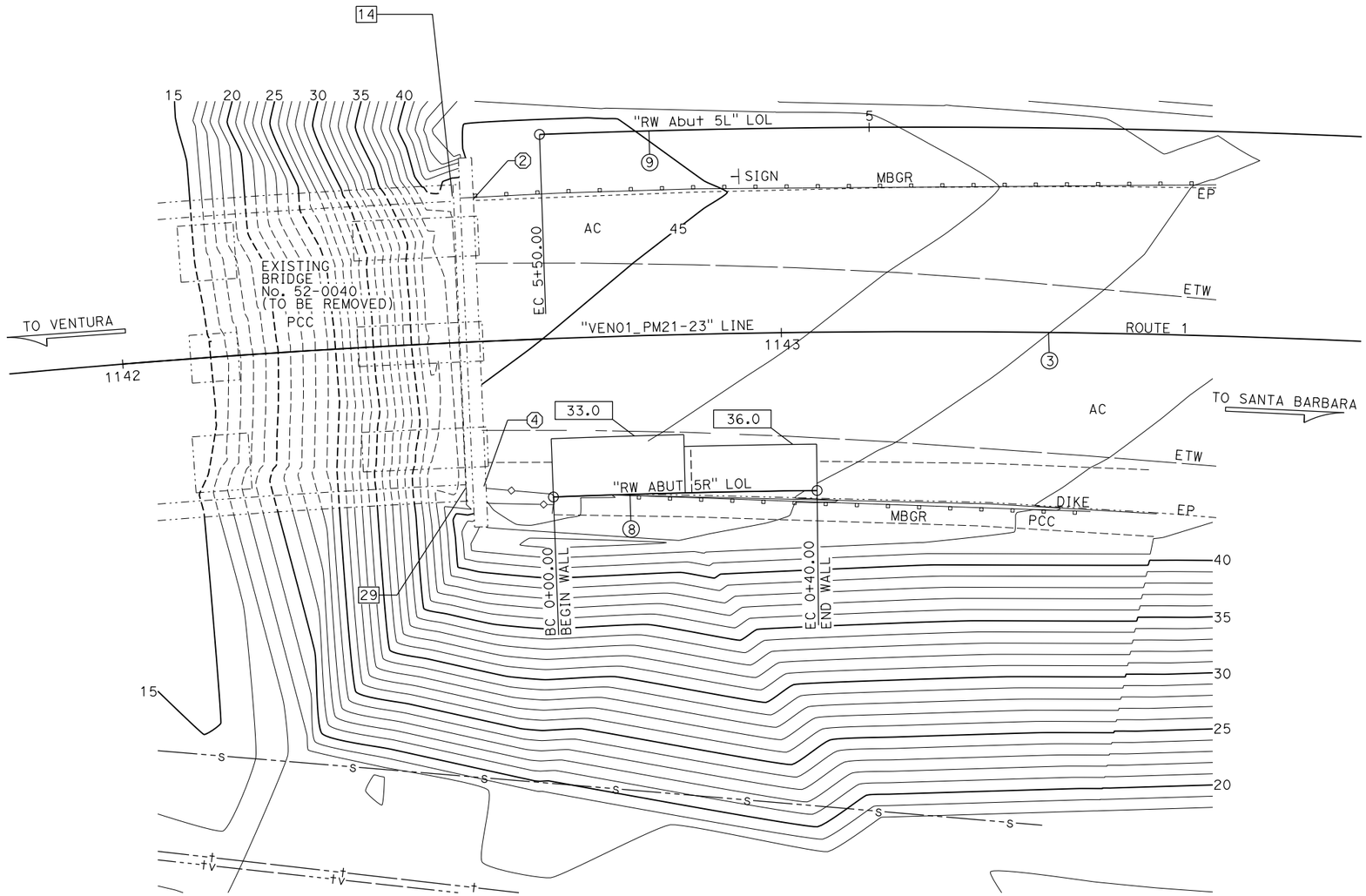

SURVEY CONTROL

PT-64 (NOT SHOWN ON PLAN SHEET)

130_SUHV
102.41′ Lt 1137+36.22 "VEN01_PM21-23" LINE
N 1,931452.93
E 6,157,378.64
Elev = 14.87

PT-65 (NOT SHOWN ON PLAN SHEET)

130_SUHV
54.85′ Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1,931,821.09
E 6,157,165.13
Elev = 16.53

SURVEY MONUMENTS SHOWN ON THE FOUNDATION PLAN ARE FOR DESIGN PURPOSES ONLY.
FOR COMPLETE LIST OF SURVEY MONUMENTS FOR THIS PROJECT, SEE ROADWAY PLANS.

LEGEND:

XX.X Bottom of footing elevation

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PRELIMINARY INVESTIGATIONS BRANCH								
SCALE: 1" = 10′	VERT. DATUM: NAVD88	SURVEYED	BY F. WOODS/DISTRICT	CHECKED C. FASSETT	DESIGN	BY A. MALLA	CHECKED I. GHNEAM
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY N. VADIRAJ/T. BRADSHAW	CHECKED I. GHNEAM
					QUANTITIES	BY A. QUIROZ	CHECKED S. ANAM

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52E0033
POST MILE 21.54

RETAINING WALL ABUTMENT 5 RIGHT
FOUNDATION PLAN

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 23-AUG-2023 TIME PLOTTED => 09:42
FILE => 52e0033-e-fdp101.dgn USERNAME => s156654

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
3-3-23		7-26-23	5-5-23	2	3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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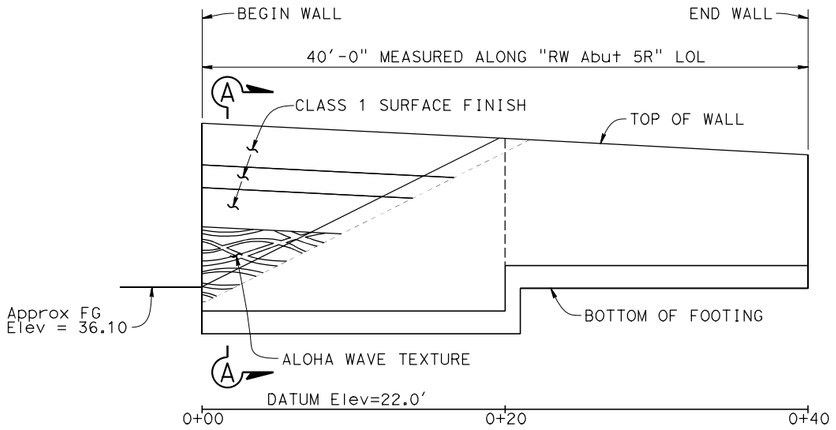
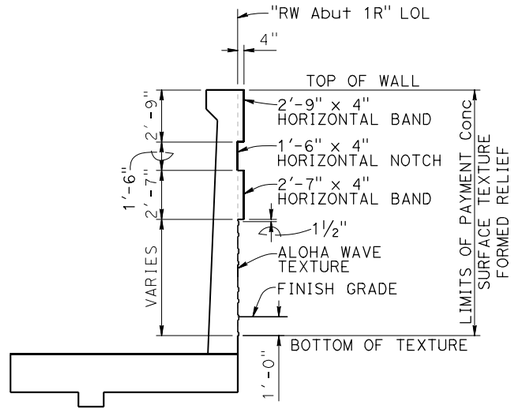


DEVELOPED ELEVATION

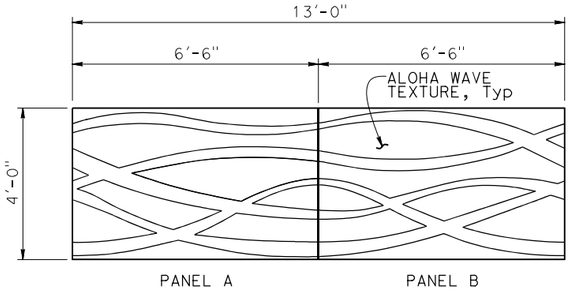
1" = 5'

NOTE: BARRIER NOT SHOWN FOR CLARITY



TYPICAL SECTION A-A

¼" = 1'-0"



PATTERN ELEVATION

ALOHA WAVE TEXTURE

½" = 1'-0"

NOTE: For additional details see "CONCRETE SURFACE TEXTURE DETAILS No. 3" sheet in Ventura OH (Replacement) Structure Plans.

DESIGN	BY A. MALLA	CHECKED I. GHNEAM	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52E0033
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED I. GHNEAM			POST MILE 21.54
QUANTITIES	BY A. QUIROZ	CHECKED S. ANAM			

RETAINING WALL ABUTMENT 5 RIGHT

CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 8-SEP-2023 TIME PLOTTED => 15:28
FILE => 52e0033-u-arch-det.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

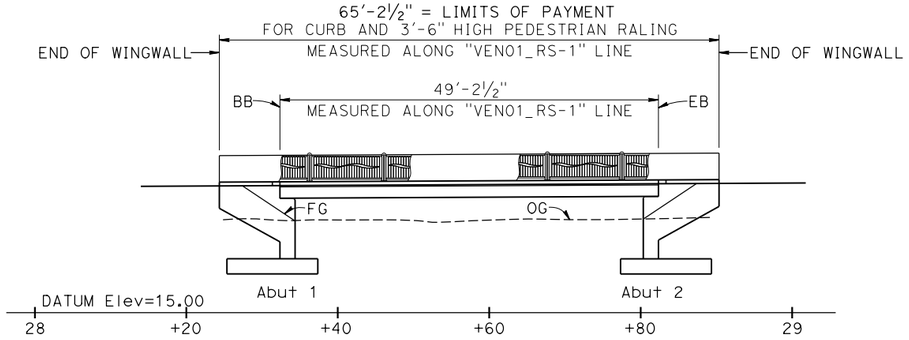
UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
4-14-23	7-28-23	09-07-23	3	3

PROFILE GRADE
NO SCALE



ELEVATION
1" = 10'

EXPEDITE

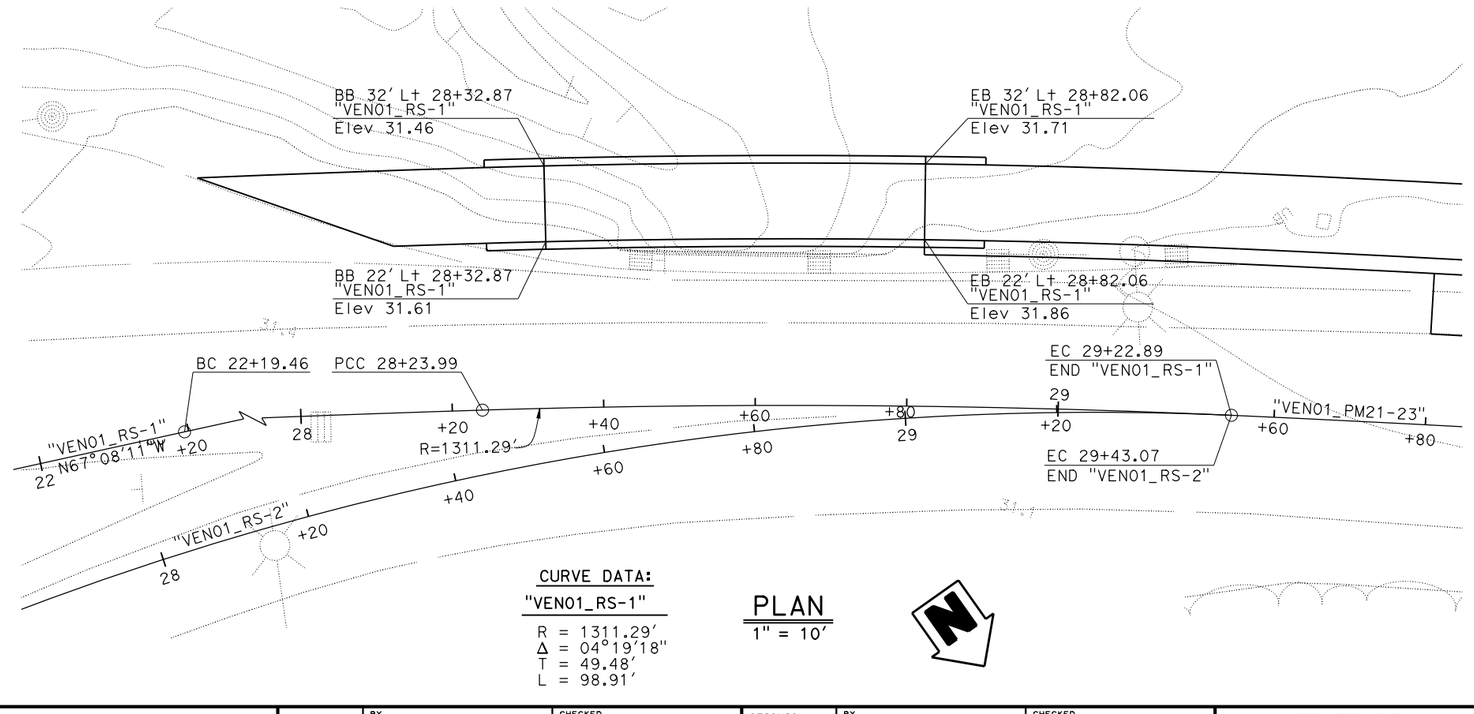
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



CURVE DATA:

"VEN01_RS-1"

R = 1311.29'
Δ = 04°19'18"
T = 49.48'
L = 98.91'

PLAN
1" = 10'

JOHN PETERSON BRANCH CHIEF	DESIGN	BY C. HENSEL	CHECKED L. VALLA	SEISMIC ANALYSIS	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0472Z POST MILE 21.29	VENTURA PEDESTRIAN BRIDGE GENERAL PLAN
	DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA	LAYOUT	BY C. HENSEL	CHECKED L. VALLA				
	QUANTITIES	BY C. HENSEL	CHECKED L. VALLA	SPECIFICATIONS	BY K. ELLINGSON	PLANS AND SPECS COMPARED K. ELLINGSON				

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-o-gp.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
5-4-23		8-16-23	7-31-23	1	8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, 8th edition with California Amendments, preface dated April 2019.

AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges dated December 2009.

Standard Plans and Specifications, 2023 edition.

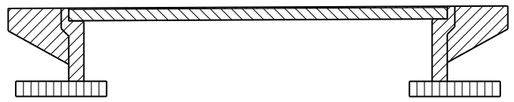
DEAD LOAD:
Includes 2" overlay on top of voided slabs

LIVE LOADING:
H10 Design load
Pedestrian Load = 90 psf

REINFORCED CONCRETE:
fy = 60 ksi unless otherwise noted
f'c = 3600 psi unless otherwise noted.

REINFORCING STEEL:
All Super-structure PC/PS Voided Slabs and Curbs are prefabricated epoxy coated reinforcement.
All Substructure Abutments, Backwall, Wingwalls, and Footings are prefabricated epoxy coated reinforcement.

SEISMIC LOADING:
See "VENTURA OH (REPLACEMENT)" Structure Plans.



LEGEND:

Structural Concrete, Bridge
(f'c = 3,600 psi)

Structural Concrete, Bridge Footing
(f'c = 3,600 psi)

Structural Concrete, Bridge PC/PS Voided Slab
TYPE SIII (Mod) Girders
(f'c = 6,000 psi)

CONCRETE STRENGTH AND TYPE LIMITS

NO SCALE

INDEX TO PLANS

SHEET NO.	TITLE:
1	GENERAL PLAN
2	INDEX TO PLANS
3	DECK CONTOURS
4	FOUNDATION PLAN
5	ABUTMENT LAYOUT
6	ABUTMENT DETAILS
7	TYPICAL SECTION PC/PS VOIDED SLAB
8	TYPE SIII-48 (Mod) DETAILS

DESIGN	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0472Z
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA			POST MILE 21.29
QUANTITIES	BY C. HENSEL	CHECKED L. VALLA			

VENTURA PEDESTRIAN BRIDGE
INDEX TO PLANS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-a-itp.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606 COUNTY/ROUTE: Ven/01
PROJECT NUMBER & PHASE: 0716000025 & 1 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
6-15-23		8-15-23 08-29-23	2	8

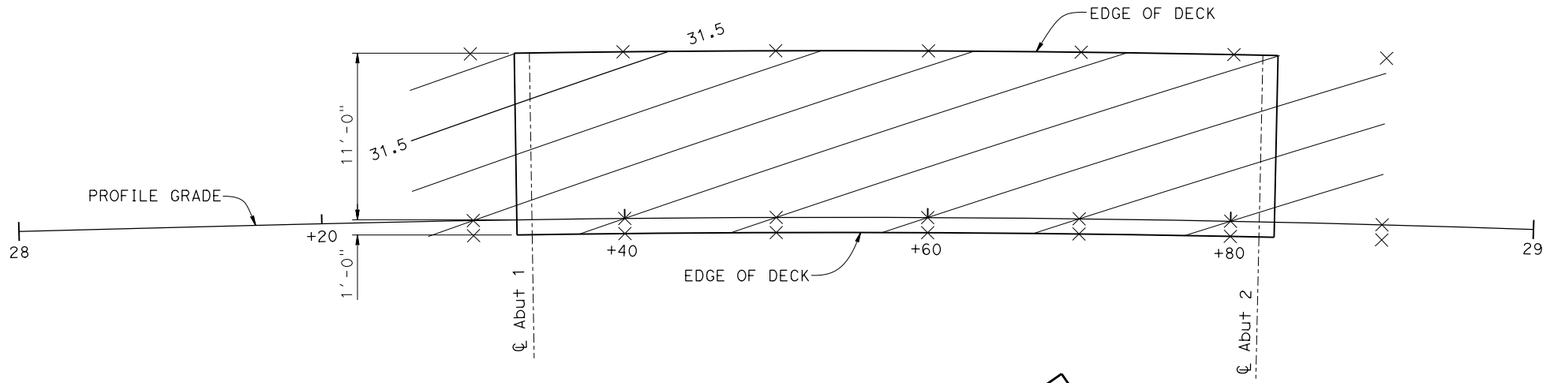
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PLAN
1" = 5'

NOTE:
X = 10' Intervals along station line.
Contours do not include camber.
Contour intervals = 3.16'.

DESIGN	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0472Z
DETAILS	BY L. VALLA	CHECKED L. VALLA			POST MILE 21.29
QUANTITIES	BY C. HENSEL	CHECKED L. VALLA			

VENTURA PEDESTRIAN BRIDGE
DECK CONTOURS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-d-dc.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606 COUNTY/ROUTE: Ven/01
PROJECT NUMBER & PHASE: 0716000025 & 1 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
				3	8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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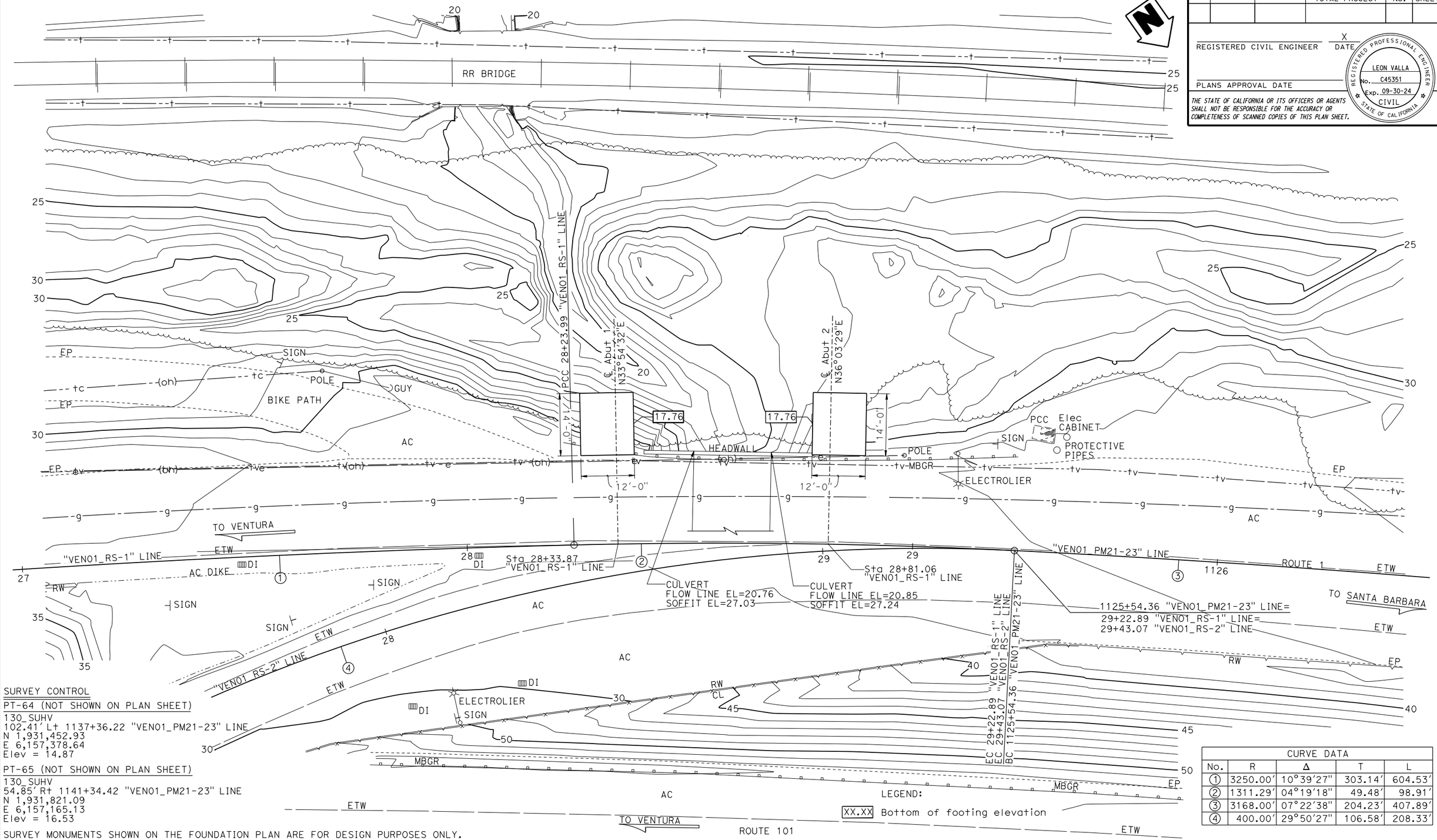


SURVEY CONTROL

PT-64 (NOT SHOWN ON PLAN SHEET)
130_SUHV
102.41' Lt 1137+36.22 "VEN01_PM21-23" LINE
N 1,931,452.93
E 6,157,378.64
Elev = 14.87

PT-65 (NOT SHOWN ON PLAN SHEET)
130_SUHV
54.85' Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1,931,821.09
E 6,157,165.13
Elev = 16.53

SURVEY MONUMENTS SHOWN ON THE FOUNDATION PLAN ARE FOR DESIGN PURPOSES ONLY.
FOR COMPLETE LIST OF SURVEY MONUMENTS FOR THIS PROJECT, SEE ROADWAY PLANS.

LEGEND:
XX.XX Bottom of footing elevation

CURVE DATA				
No.	R	Δ	T	L
①	3250.00'	10°39'27"	303.14'	604.53'
②	1311.29'	04°19'18"	49.48'	98.91'
③	3168.00'	07°22'38"	204.23'	407.89'
④	400.00'	29°50'27"	106.58'	208.33'

PRELIMINARY INVESTIGATIONS BRANCH

SCALE:	VERT. DATUM: NAVD88	SURVEYED	BY DISTRICT	CHECKED C. FASSETT
1" = 10'	HORIZ. DATUM: CCS83 (1991.35)	DRAFTED	BY T. ZOLNIKOV	CHECKED L. LEW

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	C. HENSEL	L. VALLA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0472Z
POST MILE 21.29

VENTURA PEDESTRIAN BRIDGE
FOUNDATION PLAN

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-e-fdpl.dgn USERNAME => s128972

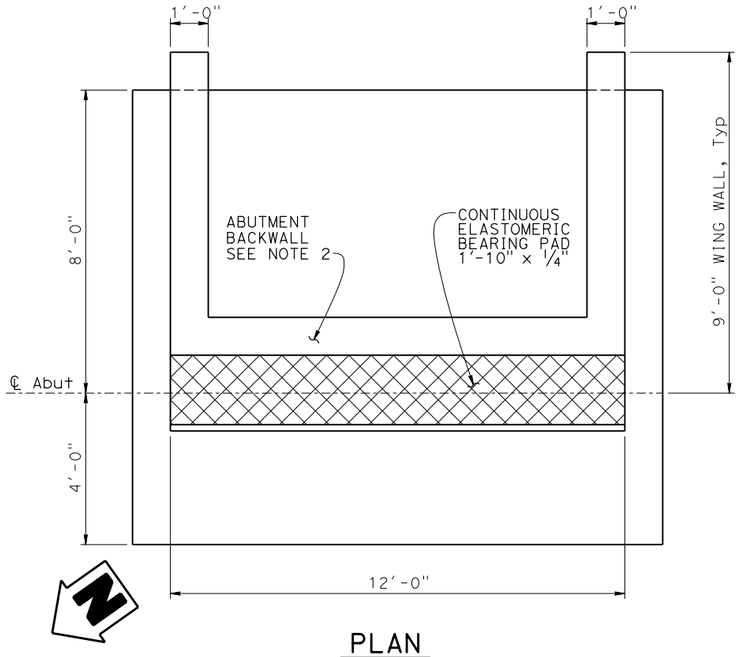
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3646 COUNTY/ROUTE/ZONE: Ven/001/5
PROJECT NUMBER & PHASE: 07160000251 CONTRACT No.: 07-319604

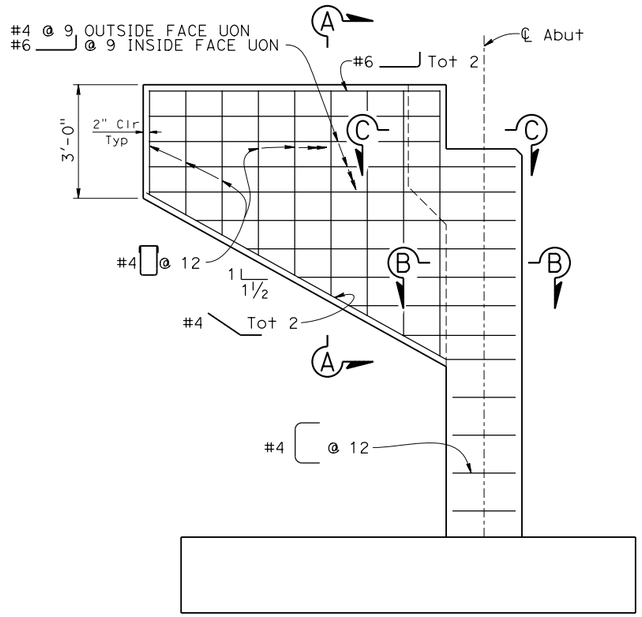
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			
7-14-23		7-31-23	8-15-23

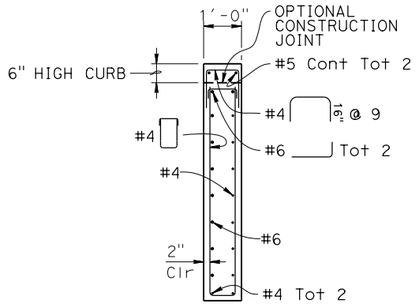
SHEET 4 OF 8



PLAN
½" = 1'-0"



WINGWALL ELEVATION
½" = 1'-0"



SECTION A-A
½" = 1'-0"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

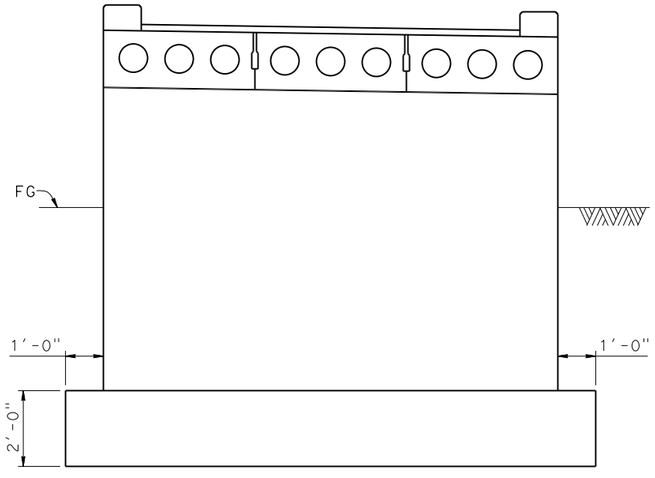
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

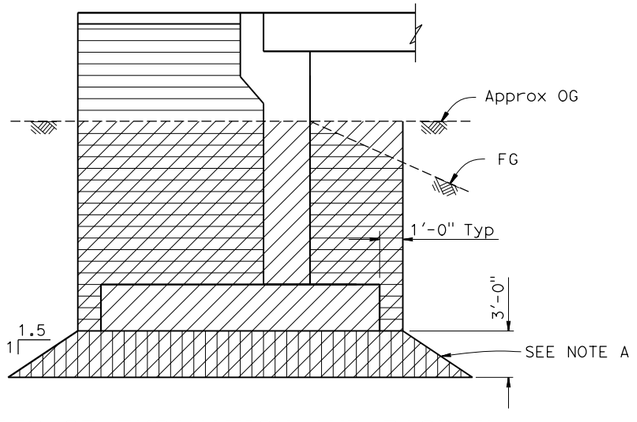
1. Abutment 1 shown, Abutment 2 similar
2. Abutment backwall and wingwalls are to be poured monolithically
3. UON = Unless Otherwise Noted
4. Lap with #6 Abut backwall Reinf

LEGEND:

- Elastomeric Bearing Pad
- Structure Excavation (Bridge)
- Structure Backfill (Bridge)
- Structure Backfill Bridge (Over Excavation)

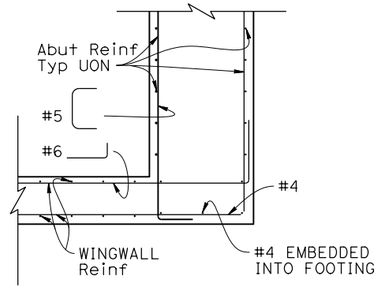


ELEVATION
½" = 1'-0"

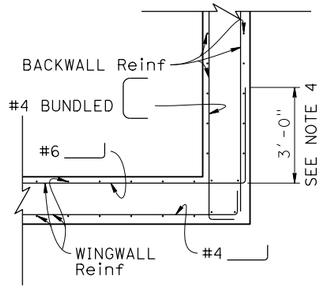


LIMITS OF EXCAVATION AND BACKFILL
NO SCALE

NOTE A: Do not exceed a slope of 2:1 of Over Excavation at bottom of existing wingwall footing.



SECTION B-B
NO SCALE



SECTION C-C
NO SCALE

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	C. HENSEL	L. VALLA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0472Z
POST MILE 21.29

VENTURA PEDESTRIAN BRIDGE
ABUTMENT LAYOUT

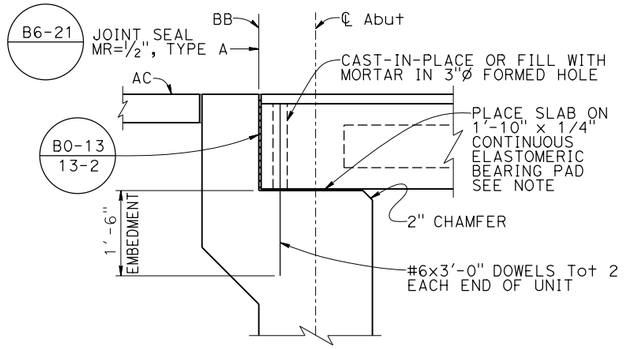
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-f-a01_lo.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

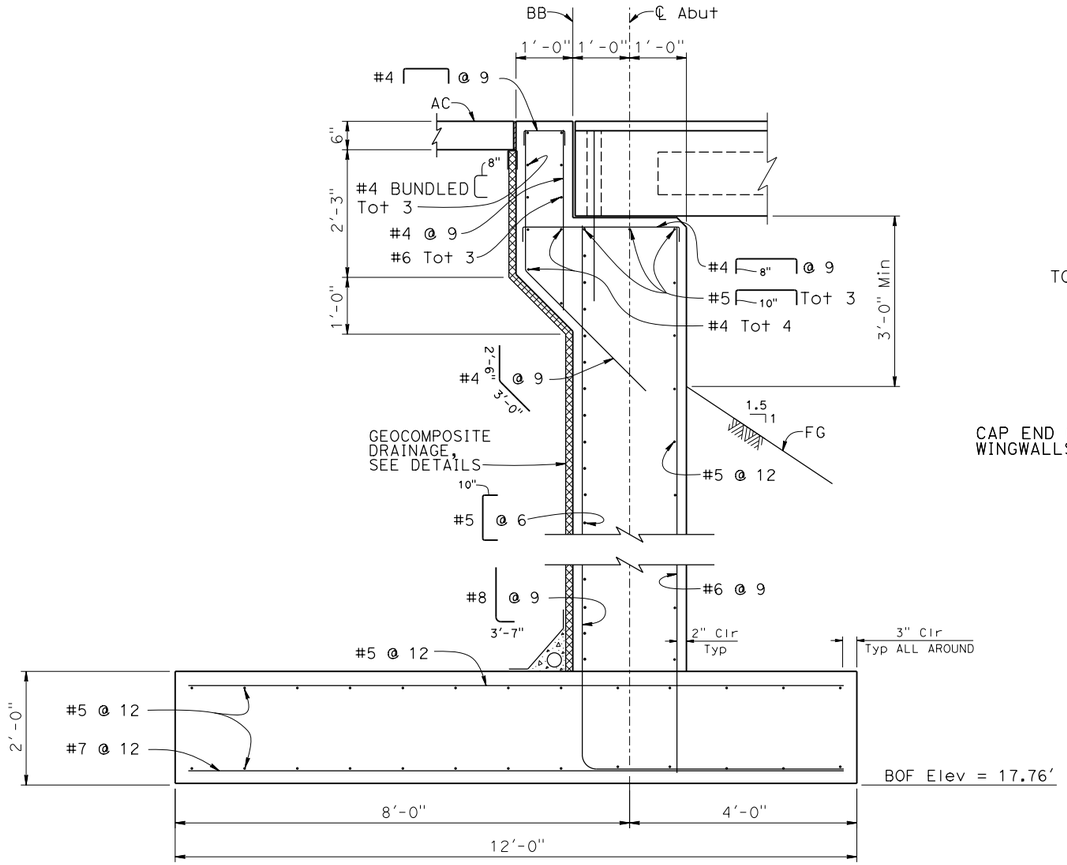
REVISION DATES			SHEET	OF
6-9-23		09-11-23 8-29-23	5	8



NOTE: Abut Seats must be formed to profile grade and cross slope

ABUTMENT SUPPORT DETAIL

¾" = 1'-0"



ABUTMENT SECTION

¾" = 1'-0"

LEGEND:

Geocomposite Drain

NOTES:

1. Abutment 1 shown, Abutment 2 similar.

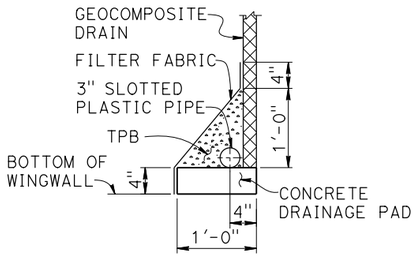
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

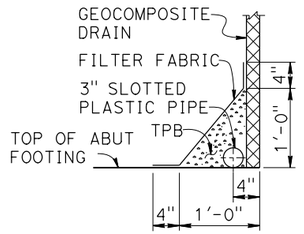
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

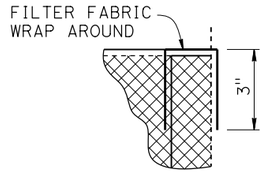
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



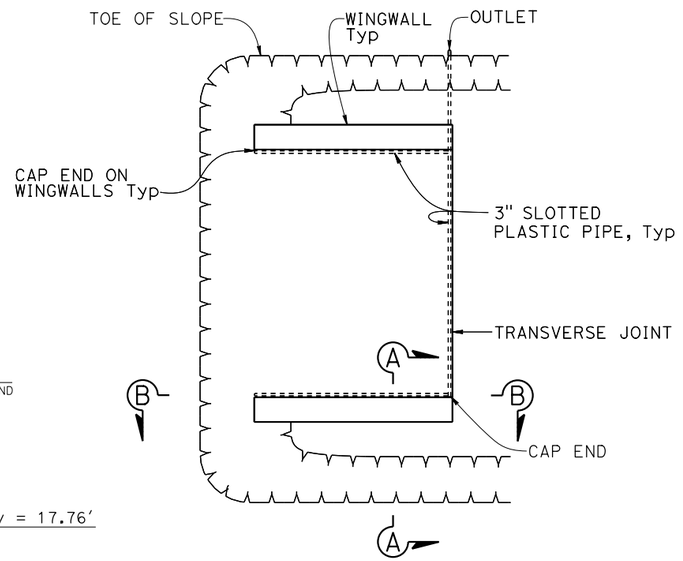
SECTION A-A



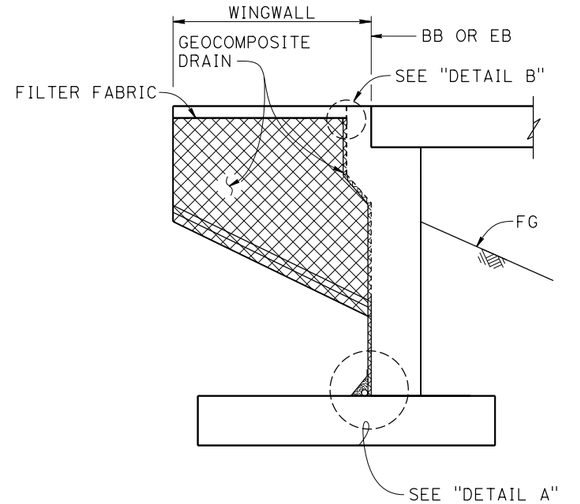
DETAIL A



DETAIL B



PLAN



NOTE:
All bends in plastic pipe must have 3'-0" minimum radius. Plastic pipe used for bends is not required to be slotted.

SECTION B-B

GEOCOMPOSITE DRAINAGE DETAILS

NO SCALE

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	C. HENSEL	L. VALLA

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0472Z
POST MILE 21.29

VENTURA PEDESTRIAN BRIDGE

ABUTMENT DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

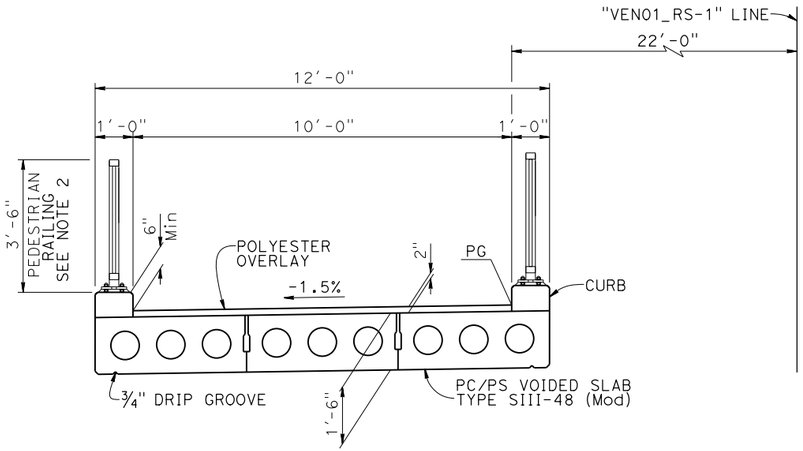
DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-f-adt01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-9-23		8-15-23	8-29-23	6	8



TYPICAL SECTION

1/2" = 1'-0"

LEGEND:

Non-shrink grout

NOTES:

1. For slab details, see "PC/PS VOIDED SLAB TYPE SIII-48 (Mod) DETAILS" sheet.
2. For details see "BRIDGE RAILING DETAILS No. 2" sheet on "VENTURA OH (REPLACEMENT)" Structure Plans.

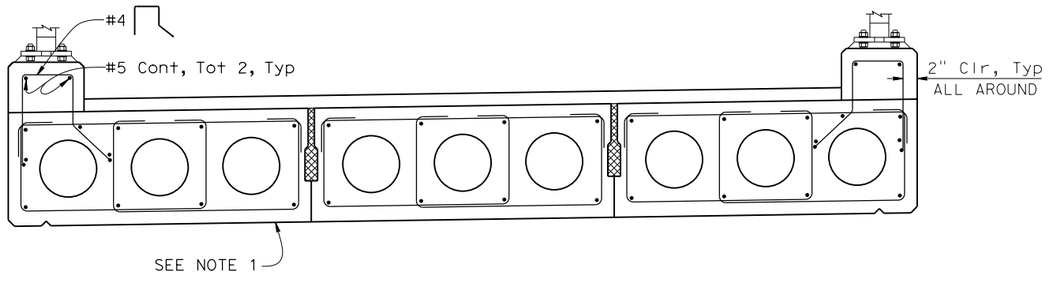
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



TYPICAL SECTION - BARRIER CURB

1" = 1'-0"

DESIGN	BY C. HENSEL	CHECKED L. VALLA	
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA	
QUANTITIES	BY C. HENSEL	CHECKED L. VALLA	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0472Z
POST MILE 21.29

VENTURA PEDESTRIAN BRIDGE

TYPICAL SECTION

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-k-ts.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~05-04-23~~		08-01-23	~~07-26-23~~	7	8

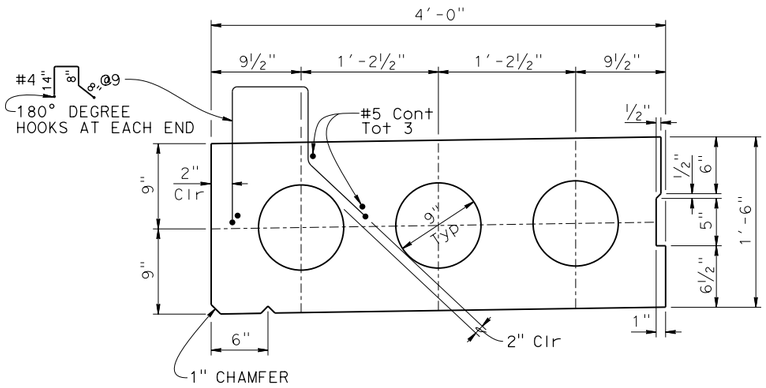
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

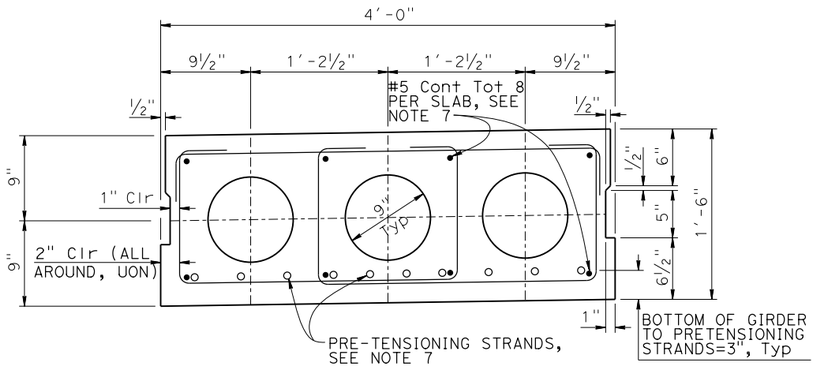
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA



EXTERIOR SLAB



INTERIOR SLAB

TYPICAL SECTION

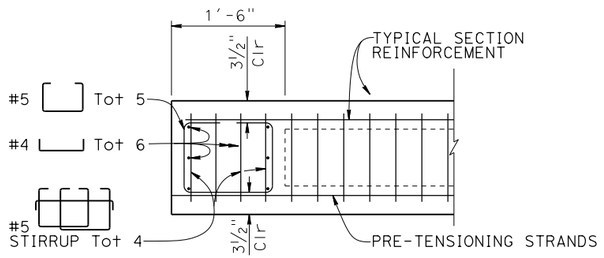
1½" = 1'-0"

NOTES:

1. Jacking Force (P): The jacking force required at the point of control along the span. The jacking force does not include any fabrication specific losses.
2. The maximum tensile stress in the prestressing steel upon release must not exceed 75% of the specified minimum ultimate tensile strength of the prestressing steel.
3. The maximum temporary tensile stress (jacking stress) in the prestressing steel must not exceed 80% of the specified minimum ultimate tensile strength of the prestressing steel.
4. Concrete strength: f'ci is at time of initial stressing. f'c is at 28 days.
5. Deflection components are informational and will be used to set screed line elevations.
6. Prestressing strand must be 270 ksi low relaxation.
7. Interior slab reinforcement shown. Reinforcing for exterior slab similar.
8. UON = Unless otherwise noted.
9. PC/PS Voided Slab Type SIII-48 (Mod) Girders must be pretensioned 90 days before placing polyester overlay.

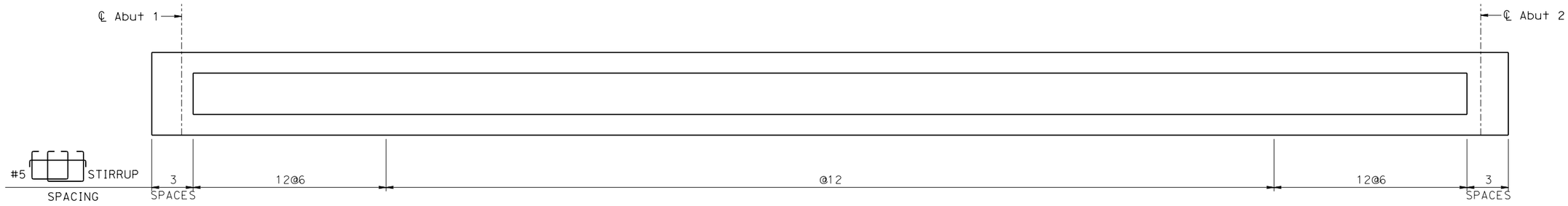
PRETENSIONING TABLE

LOCATION	JACKING FORCE (P) (kips)	CONCRETE STRENGTH (ksi)		MIDSPAN DEAD LOAD DEFLECTION (IN)	
		f'ci	f'c	FWS	RAIL
SPAN 1	440	4.5	6.0	0.31	0.46



END DIAPHRAGM

1" = 1'-0"



LONGITUDINAL SECTION

VERT 1" = 1'-0"
HORIZ ½" = 1'-0"

DESIGN	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE NO. 52-0472Z
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA			POST MILE 21.29
QUANTITIES	BY C. HENSEL	CHECKED L. VALLA			

VENTURA PEDESTRIAN BRIDGE

PC/PS VOIDED SLAB TYPE SIII-48 (Mod) DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:41
FILE => 52-0472z-i-g_io.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-26-23		8-10-23	7-27-23	8	8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

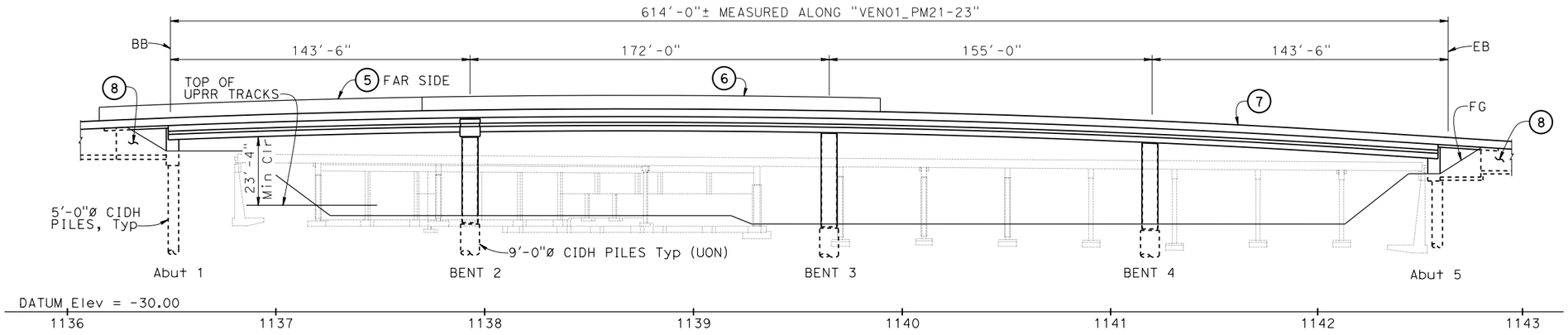
EXPEDITE

BVC 1135+75
Elev 54.49
3.85%

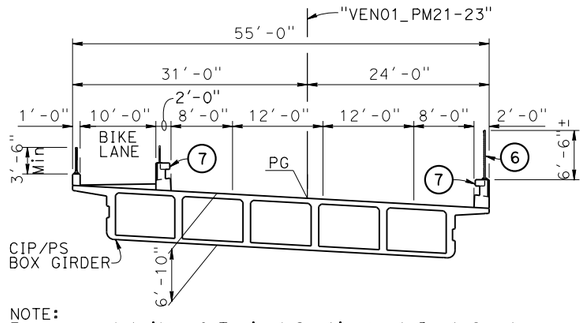
VC = 650
RC = -1.36%/Sta

EVC 1142+25
Elev 50.77
-4.99%

PROFILE GRADE
NO SCALE

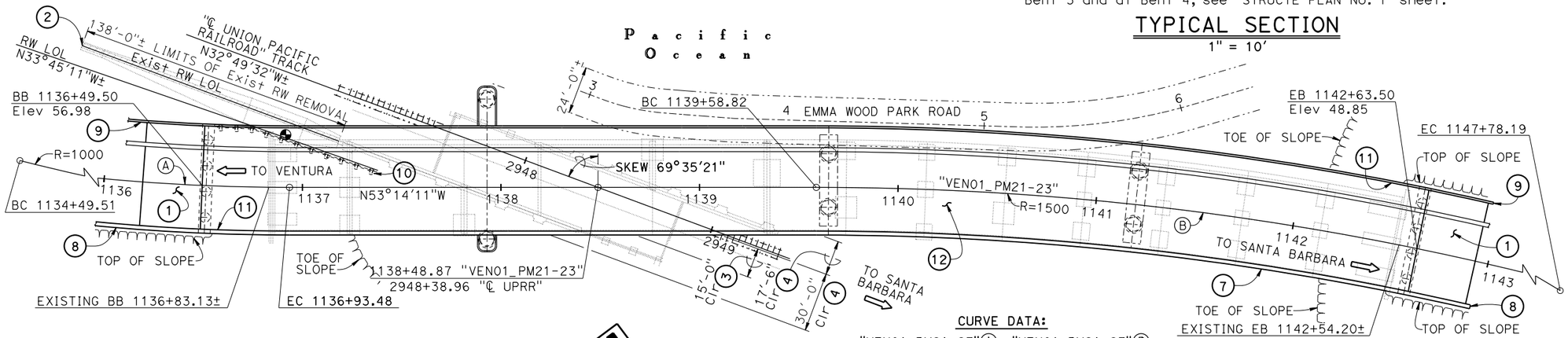


ELEVATION
1" = 30'



NOTE:
For more details of Typical Sections at Bent 2, at Bent 3 and at Bent 4, see "STRUCTE PLAN No. 1" sheet.

TYPICAL SECTION
1" = 10'



NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PLAN
1" = 30'

CURVE DATA:

"VEN01_PM21-23"Ⓐ	"VEN01_PM21-23"Ⓑ
R = 1000.00'	R = 1500.00'
Δ = 13°58'43"	Δ = 31°17'50"
T = 122.59'	T = 420.18'
L = 243.97'	L = 819.36'

LEGEND:

- Existing structure
- Existing retaining wall stem removal for Bridge No. 52-0040
- Point of minimum vertical clearance

NOTES:

(1) Structure Approach Type N (30) (Mod)

(2) Existing retaining wall stem removal for Bridge No. 52-0040. See "RETAINING WALL ABUTMENT 1 UNDER BRIDGE" Structure Plans for further limits of existing retaining wall removal; located in "TYPICAL SECTION A-A" on "GENERAL PLAN" sheet.

(3) Temporary falsework min horizontal clearance inside UPRR R/W Typical

(4) Permanent min horizontal clearance for UPRR R/W

(5) 3'-6" Pedestrian Railing with Chain Link Railing Type 7 (Mod 1) over UPRR See "STRUCTURE PLAN NO. 1" for limits and locations

(6) 3'-6" Pedestrian Railing with Chain Link Railing Type 7 (Mod 2) over UPRR See "STRUCTURE PLAN NO. 1" for limits and locations

(7) Concrete Barrier Type 86H (Mod 1) or (Mod 2). See "STRUCTURE PLAN NO. 1" for limits and locations

(8) Type 5 Retaining Walls:Standard and Modified B3-4A. See structure plans "RETAINING WALL ABUTMENT 1 RIGHT" and "RETAINING WALL ABUTMENT 5 RIGHT"

(9) Retaining Wall Soldier Pile Wall. See structure plans "RETAINING WALL ABUTMENT 1 LEFT" and "RETAINING WALL ABUTMENT 5 LEFT"

(10) Retaining Wall Soldier Pile Wall. See structure plans "RETAINING WALL ABUTMENT 1 LEFT UNDER BRIDGE"

(11) Paint "VENTURA OH BRIDGE No. 52-0471" Year Constructed

(12) Remove Existing Bridge

1. For "GENERAL NOTES", and "INDEX TO PLANS" see "INDEX TO PLANS" sheet. For "PILE DATA TABLE" see "STRUCTURE PLAN No. 1" sheet.

DESIGN	BY C. HENSEL	CHECKED L. VALLA	SEISMIC ANALYSIS	BY C. HENSEL	CHECKED L. VALLA
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA	LAYOUT	BY L VALLA	CHECKED W. ADDLESPURGER/A. MALLA
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	SPECIFICATIONS	BY K. ELLINGSON	PLANS AND SPECS COMPARED K. ELLINGSON

JOHN PETERSON
BRANCH CHIEF

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
GENERAL PLAN

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 9/27/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:35
FILE => 52-0471-a-gp.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
11-9-21		08-28-23	8-18-23	1	65

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, 8th edition with California Amendments, preface dated April 2019

Standard Plans and Specifications, 2023 edition

SEISMIC DESIGN:
Caltrans Seismic Design Criteria (SDC), Version 2.0 dated April 2019

DEAD LOAD:
Includes 35 psf for future wearing surface.

LIVE LOADING:
HL93 and permit design load

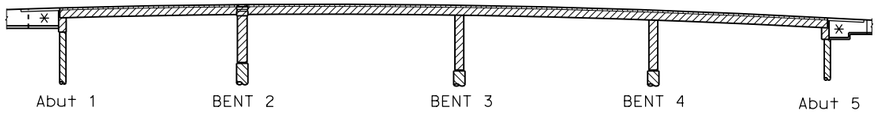
SEISMIC LOADING:
Soil Profile: Vs30 = 1049.6 ft/sec
Moment Magnitude: Mmax = 7.0
Peak Ground Acceleration: 0.71 g

REINFORCED CONCRETE:
fy = 60 ksi unless otherwise noted
fy = 80 ksi for all 9'Ø and 9.5'Ø CIDH Pile longitudinal reinforcing bars only
f'c = 3600 psi unless otherwise noted.

REINFORCING STEEL:
All bridge bar reinforcing steel is post-fabricated epoxy coated Reinf except as noted where it will be prefabricated epoxy coated or stainless steel Reinf for the bars listed at the following locations:
a) Bents 2 through 4 Columns #11 longitudinal Reinf, #8 hoops, and #4 architectural: all prefabricated epoxy coated Reinf.
b) Bents 2 through 4 108", 114" and 120" Diameter CIDH Piles for #14 longitudinal Reinf and #8 hoops: all prefabricated epoxy coated Reinf.
c) Type 86H (Mod) concrete barriers where prefabricated epoxy coated and stainless steel Reinf are noted on plan details.
d) 1'-6" high curb with stainless steel for #5 dowels and "U" shaped transverse Reinf. All other Reinf is prefabricated epoxy coated.

REINFORCED LIGHTWEIGHT CONCRETE: on Bike Path, Curb and Construction Key-way Block-outs
fy = 60 ksi
f'c = 6000 psi

STRUCTURAL STEEL:
HSS: fy = 46 ksi Min
Plates = 55 ksi Min
NPS: fy = 42 ksi Min



LEGEND:

Structural Concrete, Bridge (f'c = 6,000 psi)

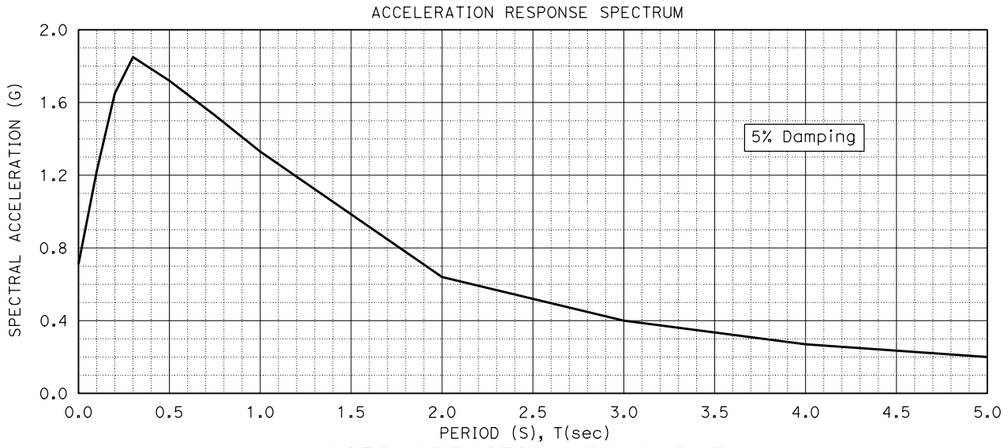
Structural Concrete, Bridge (Polymer Fiber) ** (f'c = 6,000)

Cast In Drilled Hole Concrete Pile (f'c = 6,000)

* For Concrete Strength on Retaining Walls see Structure Plans "RETAINING WALL ABUT 1 RIGHT" and "RETAINING WALL ABUT 5 RIGHT"

** This Concrete Strength also includes Lightweight Concrete for key-way block-outs and bike path on left side of bridge

CONCRETE STRENGTH AND TYPE LIMITS
NO SCALE



SITE SPECIFIC ARS CURVE
NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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INDEX TO PLANS

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2	INDEX TO PLANS
3	STRUCTURE PLAN No. 1
4	STRUCTURE PLAN No. 2
5	STRUCTURE PLAN No. 3
6	STRUCTURE PLAN No. 4
7	DECK CONTOURS
8	FOUNDATION PLAN No. 1
9	FOUNDATION PLAN No. 2
10	ABUTMENT LAYOUT
11	ABUTMENT DETAILS No. 1
12	ABUTMENT DETAILS No. 2
13	BENT 2 LAYOUT
14	BENT 2 DETAILS No. 1
15	BENT 2 DETAILS No. 2
16	BENT 3 AND 4 LAYOUT
17	BENT 3 DETAILS
18	BENT 4 DETAILS
19	PIPE PIN DETAILS
20	COLUMN ISOLATION CASING DETAILS No. 1
21	COLUMN ISOLATION CASING DETAILS No. 2
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23	GIRDER LAYOUT
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36	CONCRETE BARRIER TYPE 86H (MOD 2) DETAILS No. 1
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63	LEGEND ROCK
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	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	L. VALLA	A. Quiroz

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
INDEX TO PLANS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:43
FILE => 52-0471-a-itp.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES: 1-23-23 | 09-11-23 | 08-30-23

SHEET	OF
2	65

PILE DATA TABLE

Location	Pile Type	Nominal Resistance (kips)				Permanent Casing Specified Tip Elevation (ft)	Design Tip Elevation (ft)	Specified Tip Elevation (ft)	Cut-Off Elevation (Ft)
		Strength/Construction		Extreme Event					
		Compression	Tension	Compression	Tension				
Abut 1	60"Ø CIDH With 72" Permanent CMP Casing	1100	0	500	0	3.00	-18.00 (a) -8.00 (b) -5.00 (c)	-18.00	40.25
Bent 2L	108"Ø CIDH With 120" Permanent CMP Casing (Type II Shaft)	4720	0	2200	0	-25.00	-75.00 (a) -53.00 (b) -73.00 (c)	-75.00	12.00
Bent 2R	108"Ø CIDH With 120" Permanent CMP Casing (Type II Shaft)	6000	0	2750	0	-25.00	-92.00 (a) -65.00 (b) -73.00 (c)	-92.00	12.00
Bent 3L	108"Ø CIDH With 114" Permanent Steel Casing (Type II Shaft)	5430	0	2300	0	-8.00	-68.00 (a) -39.00 (b) -68.00 (c)	-68.00	10.00
Bent 3R	108"Ø CIDH With 114" Permanent Steel Casing (Type II Shaft)	5360	0	2100	0	-8.00	-67.00 (a) -37.00 (b) -68.00 (c)	-68.00	10.00
Bent 4L	108"Ø CIDH With 120" Permanent CMP Casing (Type II Shaft)	5650	0	2400	0	-8.00	-70.00 (a) -40.00 (b) -69.00 (c)	-70.00	9.00
Bent 4R	108"Ø CIDH With 120" Permanent CMP Casing (Type II Shaft)	5360	0	2100	0	-8.00	-68.00 (a) -38.00 (b) -69.00 (c)	-69.00	9.00
Abut 5	60"Ø CIDH With 72" Permanent CMP Casing	1100	0	500	0	-8.00	-30.00 (a) -19.00 (b) -14.40 (c)	-30.00	32.85

NOTES:
1. Design tip elevations for Bents and Abutments are controlled by:
   (a) Compression (Strength), (b) Compression (Extreme Event), (c) Lateral
2. The Specified Tip Elevation shall not be raised above the lowest design tip elevation.
3. Design Tip Elevations for settlement are not calculated because the piles are tipped in rock.

NOTES:

1. Remove existing bridge
2. 7′-10"± high Chain Link Railing Type 7 (Mod 1) with 3′-6" high Pedestrian Railing on 6" min high curb and 8" min clear above bike path over UPRR. It is centered 25′ from UPRR present and future tracks. With adjacent structure, Retaining Wall Abut 1 Left, its limits are 31′ Lt 1136+17.50±-1138+40.00 "VEN01_21-23" Line
3. 6′-6"± high Chain Link Railing Type 7 (Mod 2) with 3′-6" high Pedestrian Railing on 3′-8" high Concrete Barrier Type 86H (Mod 1) and is 10′ min clear above bridge deck over UPRR. It is centered 25′ from UPRR present and future tracks
4. Limits of 3′-6" high Pedestrian Railing with Chain Link Railing Type 7 (Mod 1) with bridge limits of 31′ Lt 1136+48.50-1138+40.00 "VEN01_21-23" Line
5. Limits of 3′-6" high Pedestrian Railing with Chain Link Railing Type 7 (Mod 2) with bridge limits of 24′ Rt 1137+70.00-1139+90.00 "VEN01_21-23" Line
6. Concrete Barrier Type 86H (Mod 1) with bridge limits of 20′ Lt 1136+17.50-1139+70.00 and 24′ Rt 1136+17.50-1142+95.50 "VEN01_21-23" Line *
7. Concrete Barrier Type 86H (Mod 2) with bridge limits of 20′ Lt 1139+70.00-1142+95.50 "VEN01_21-23" Line *
8. Limits of 3′-6" high Pedestrian Railing at 31′ Lt 1138+40.00-1142+64.50 "VEN01_21-23" Line
9. Limits of 2′-0" high Pedestrian Railing at 19′ Lt 1136+17.50-1142+95.50 "VEN01_21-23" Line

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

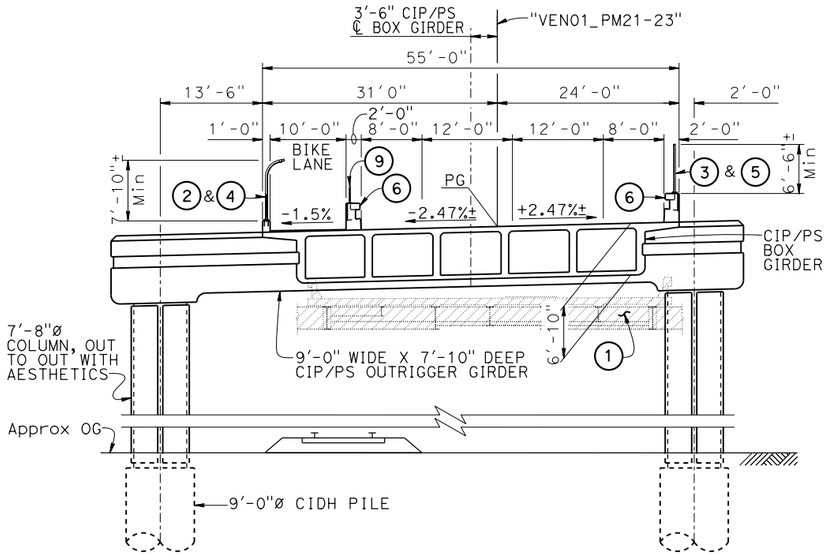
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

LEGEND:

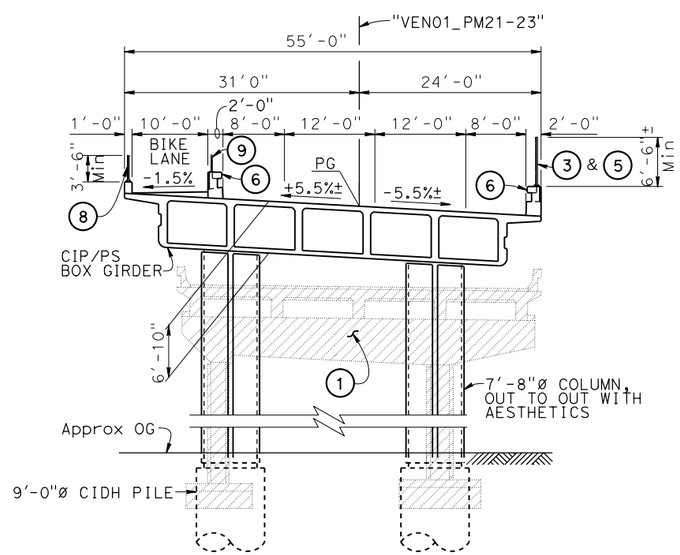
Existing structure

Existing bridge removal for No. 52-0040

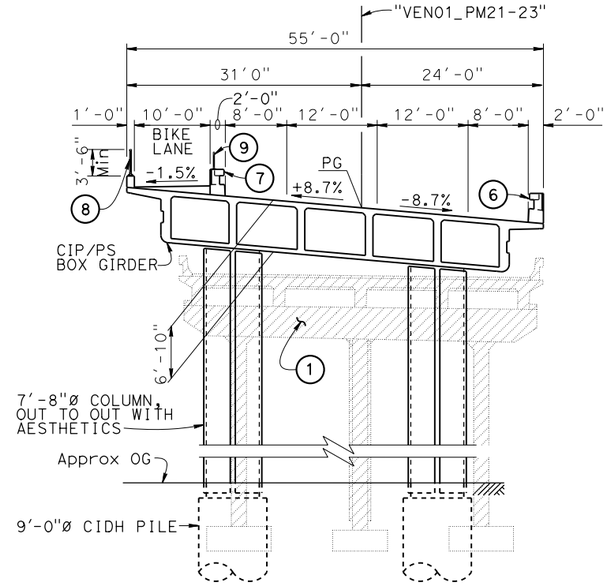
* See "CONCRETE BARRIER TYPE 86H (Mod 1) AND (Mod 2) TRANSITION DETAILS" sheet for additional information



AT BENT 2



AT BENT 3



AT BENT 4

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

TYPICAL SECTION

1" = 10′

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
STRUCTURE PLAN No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 11-SEP-2023 TIME PLOTTED => 15:54
FILE => 52-0471-c-sp01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
3-8-23		09-11-23	8-24-23	3	65

EXISTING UTILITY LEGEND:

—— -+-+—— ——-+-+- Sprint and MCI Fiber Optic Lines

—— --+—— ——--+- AT&T and SPTC Fiber Optic Lines

—— ---+v—— ——---+v- Ave Cable TV Line

—— ——//—— ——W—— Abandoned Waste Water Line

—— -g—— ——-g- 16" So Cal Gas Line, to be relocated, see NOTE 3 through NOTE 5

—— --o—— ——--o 22" Mobil (DCOR LCC) Oil Line, see NOTE 3 and NOTE 5

—— --s—— ——-- 8" Steel Ventura County Pressure Sewer, see NOTE 3 and NOTE 5

—— --+'—— ——--+'- 4DU Pac Bell Line

NOTE:

1. Not all CIDH Pile Casings shown for clarity.
2. Temporary Falsework Min Horiz Clearance inside UPRR R/W.
3. Existing Utility must be protected in place during construction from any movement both vertically and laterally. For details see ROADWAY PLANS.
4. Portion of gas line must be relocated before construction of Retaining Wall Abutment 1 Under Bridge.
5. For more information see Utility ROADWAY PLANS.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

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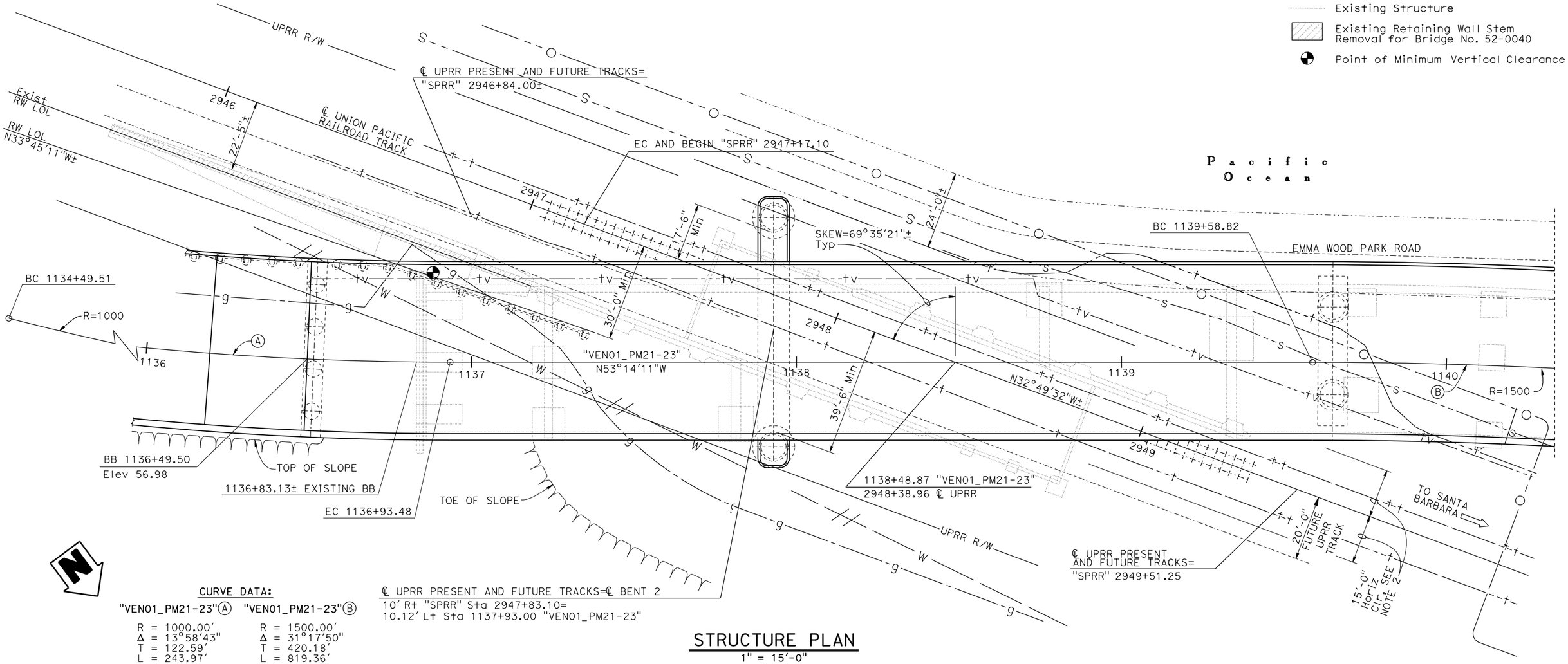
REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

LEGEND:

- Existing Structure
- Existing Structure
- Existing Retaining Wall Stem Removal for Bridge No. 52-0040
- Point of Minimum Vertical Clearance



CURVE DATA:

"VEN01_PM21-23"Ⓐ	"VEN01_PM21-23"Ⓑ
R = 1000.00′	R = 1500.00′
Δ = 13°58′43"	Δ = 31°17′50"
T = 122.59′	T = 420.18′
L = 243.97′	L = 819.36′

STRUCTURE PLAN

1" = 15′-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	C. Hensel	L. Valla
DETAILS	A. Onodera/T. Bradshaw	L. Valla
QUANTITIES	L. Valla	A. Quiroz

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

STRUCTURE PLAN No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:42
FILE => 52-0471-c-sp02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/1
CONTRACT No.: 07-31964

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-2-22		09-14-23	09-15-23	4	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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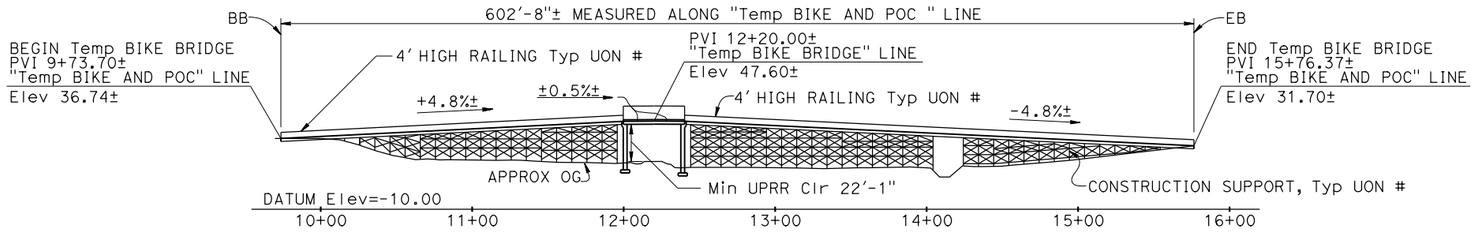
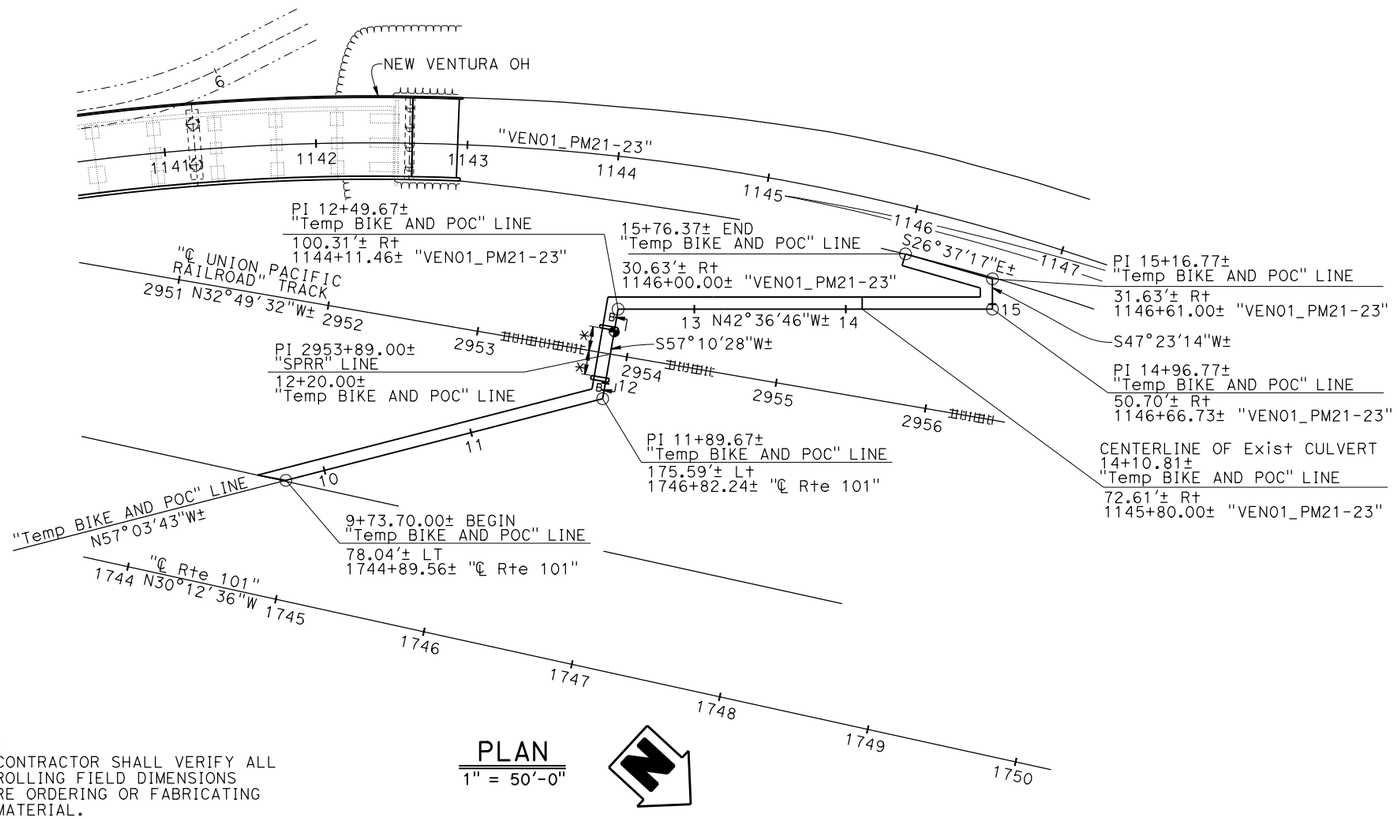


DEVELOPED ELEVATION

1" = 50'-0"



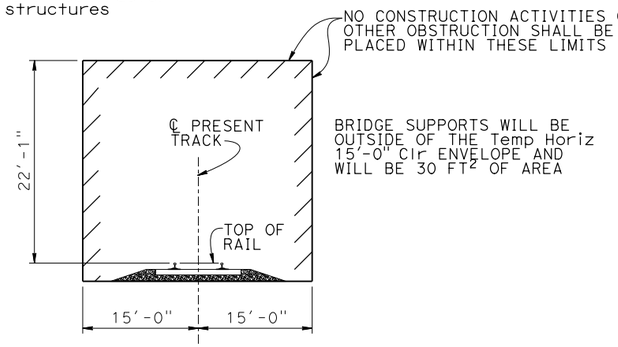
PLAN

1" = 50'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

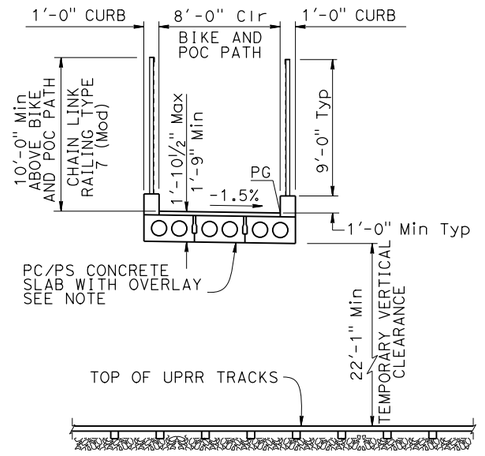
LEGEND:

- Existing structure
- New structure (UON=Unless otherwise noted)
- Point of minimum vertical clearance
- 16'-0" from face of column support to ℄ of UPRR tracks. "SPRR" line
- # Vendor and/or contractor supplied structures



MINIMUM TEMPORARY CONSTRUCTION CLEARANCE ENVELOPE (NORMAL TO RAILROAD)

NO SCALE



TYPICAL SECTION

1" = 5'-0"

NOTE: For design and details of PC/PS Concrete Slab Bridge see Ventura OH (Replacement) Temp Bike and POC Structure Plans.

DESIGN	BY L. Valla	CHECKED J. Wang	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471
DETAILS	BY T. DOAN/A. ONODERA/T. BRADSHAW	CHECKED J. Wang			POST MILE 21.54
QUANTITIES	BY L. Valla	CHECKED A. Quiroz			

VENTURA OH (REPLACEMENT) TEMP BIKE AND POC

STRUCTURE PLAN No. 3

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 16:43
FILE => 52-0471-c-sp03.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/1
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-10-23		09-27-23	09-15-23	5	65

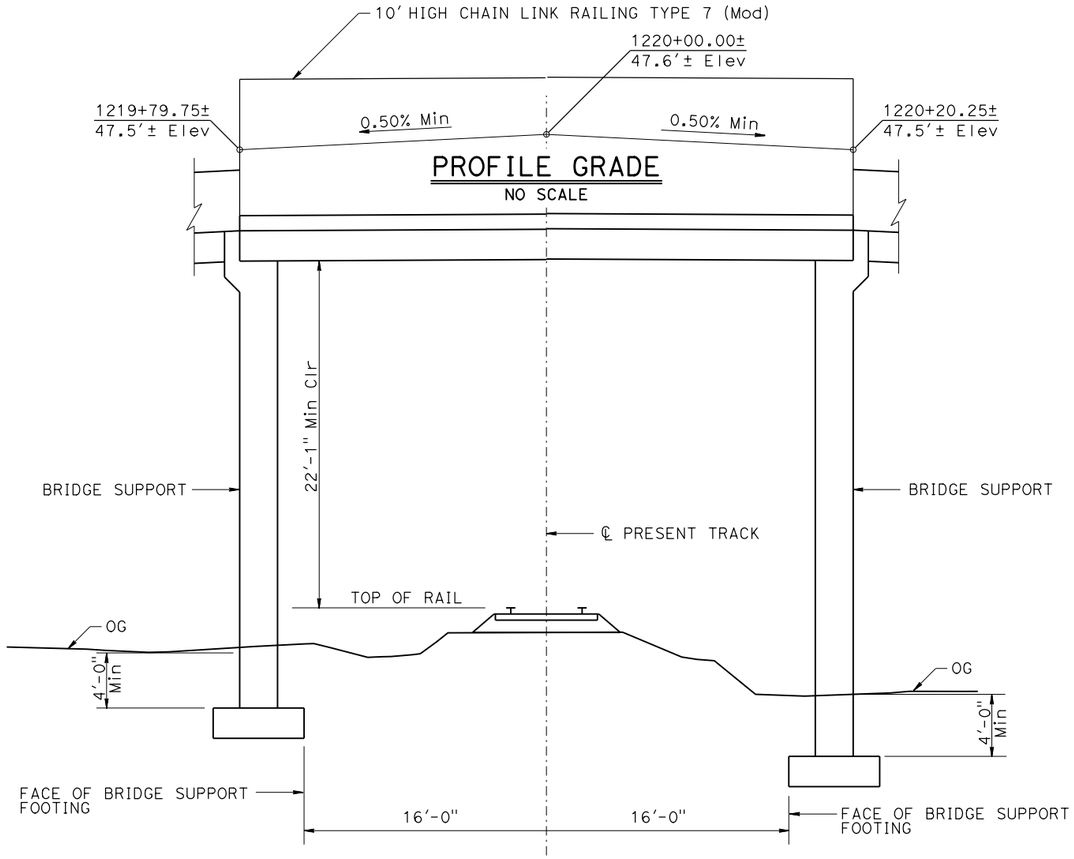
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



VIEW B-B
RAILROAD TEMPORARY MINIMUM CLEARANCES
NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	L. Valla	J. Wang
DETAILS	T. Doan/A. Onodera/T. Bradshaw	J. Wang
QUANTITIES	L. Valla	A. Quiroz

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT) TEMP BIKE AND POC
STRUCTURE PLAN No. 4

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 10:45
FILE => 52-0471-c-sp04.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/1
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-10-23		09-27-23	8-14-23	6	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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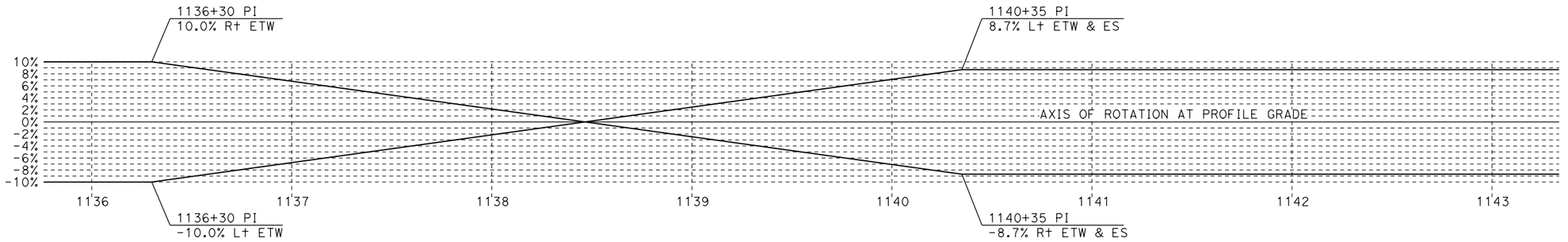
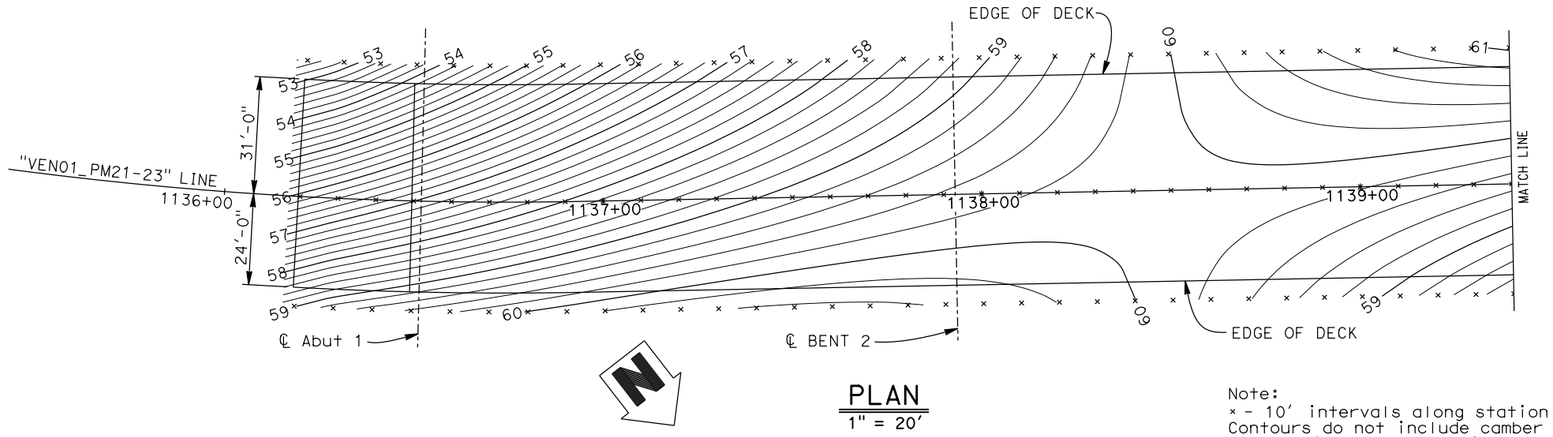


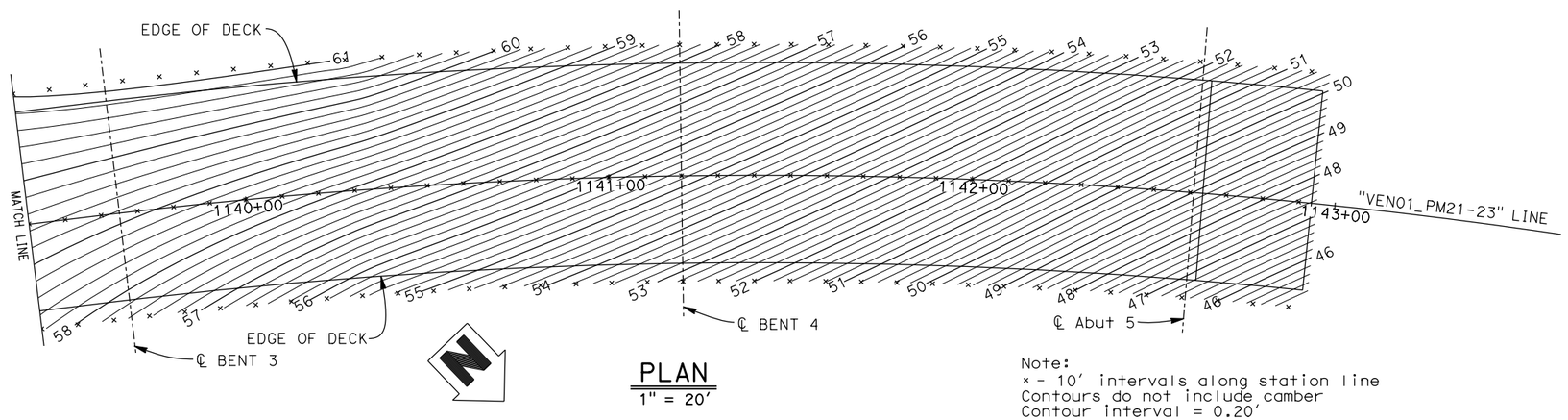
SUPERELEVATION DIAGRAM

NO SCALE



PLAN
1" = 20'

Note:
× - 10' intervals along station line
Contours do not include camber
Contour interval = 0.20'



PLAN
1" = 20'

Note:
× - 10' intervals along station line
Contours do not include camber
Contour interval = 0.20'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	C. Hensel	L. Valla
DETAILS	A. Onodera	L. Valla
QUANTITIES	L. Valla	A. Quiroz

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
DECK CONTOURS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:35
FILE => 52-0471-d-dc01.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-26-23				7	65

CURVE DATA				
No.	R	Δ	T	L
①	3738.00′	35°01′49"	1179.67′	2285.38′
②	1000.00′	13°58′43"	122.59′	243.97′
④	3366.12′	08°02′03"	236.39′	472.01′
⑤	1024.00′	02°53′16"	25.81′	51.61′
⑥	842.00′	08°31′04"	62.70′	125.17′
⑦	969.00′	11°23′57"	96.71′	192.79′

EXISTING BRIDGE LOCATION

① - 21.94 Ft Lt "VEN01_PM21-23" LINE, Sta 1136+83.57, Elev = 48.30±
② - 21.64 Ft Lt "VEN01_PM21-23" LINE, Sta 1142+53.89, Elev = 45.98±
③ - 21.72 Ft Rt "VEN01_PM21-23" LINE, Sta 1136+84.00, Elev = 48.98±
④ - 22.18 Ft Rt "VEN01_PM21-23" LINE, Sta 1142+53.79, Elev = 44.45±

LEGEND:

5′Ø CIDH PILE
9′Ø CIDH PILE
XX.XX Bottom of Abutment Stem elevation

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

PACIFIC OCEAN

ROCKS

"UPRR" LINE

"RW1L" LINE S39°15′28"E

"RW1R" LINE AC S39°15′28"E

"VEN01_PM21-23" LINE

"CLVEN101" LINE

TO VENTURA

N39°15′28"W

N53°14′11"W

N32°49′32"W

N36°45′49"E

UTILITY STEEL PIPE

RETAINING WALL

DIKE

CONDUIT

SIGNS

SIGN

MBGR PCC

EXISTING BRIDGE No. 52-0040

RW ABUT 1L LOL

RW ABUT 1R LOL

RW ABUT 1UB

℄ BENT 2

℄ PILE 1136+52.00

BC 0+00.00

PT 0+86.00

PI 0+67.00

EC 2947+17.10

BC 1134+49.51

EC 1+76.78

PCC 0+51.61

BC 1+92.79

PI 1136+51.50

PI 1137+93.00

EC 1136+93.48

PCC

AC

EP

ETW

BWF

UNDERGROUND UTILITY

"VEN01_PM21-23" LINE 1138+48.87
"UPRR" LINE 2948+38.96

MATCH LINE SEE FOUNDATION PLAN No. 2

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

SURVEY CONTROL

PT-64
130_SUHV
102.41′ Lt 1137+36.22 "VEN01_PM21-23" LINE
N 1,931452.93
E 6,157,378.64
Elev = 14.87

PT-65
130_SUHV
54.85′ Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1,931,821.09
E 6,157,165.13
Elev = 16.53

SURVEY MONUMENTS SHOWN ON THE FOUNDATION PLAN ARE FOR DESIGN PURPOSES ONLY. FOR COMPLETE LIST OF SURVEY MONUMENTS FOR THIS PROJECT, SEE ROADWAY PLANS.

RAIL ELEVATION (TOP)

A	23.02	E	22.57
B	22.99	F	22.58
C	22.69	G	22.35
D	22.72	H	22.30

SOFFIT ELEVATIONS

1	44.33	8	45.29	15	45.00	23	45.05
2	44.52	9	46.52	16	44.99	24	45.81
3	44.53	10	46.16	17	43.66	25	45.73
4	45.03	11	46.11	18	44.07	26	44.95
5	44.67	12	45.36	19	44.06	27	43.59
6	45.12	13	44.62	20	44.13	28	42.58
7	45.19	14	42.09	21	44.44	29	40.64
				22	44.94		

PRELIMINARY INVESTIGATIONS BRANCH								
SCALE: 1" = 20′	VERT. DATUM: NAVD88	SURVEYED	BY DISTRICT	CHECKED C. FASSETT	DESIGN	BY C. HENSEL	CHECKED L. VALLA
	HORIZ. DATUM: CCS83(1991.35)Z5	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY T. DOAN	CHECKED L. VALLA
					QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
FOUNDATION PLAN No. 1

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:35
FILE => 52-0471-e-fdp101.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3646 COUNTY/ROUTE: Vev/01
PROJECT NUMBER & PHASE: 0716000025 & 1 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
10/31/22	03-09-23			8	65

LEGEND:

- 5'ø CIDH PILE
- 9'ø CIDH PILE
- XX.XX Bottom of Abutment Stem elevation

CURVE DATA				
No.	R	Δ	T	L
③	1500.00'	31°17'50"	420.18'	819.36'
⑧	390.00'	05°52'35"	20.02'	40.00'
⑨	1531.00'	02°07'19"	28.35'	56.70'

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — X — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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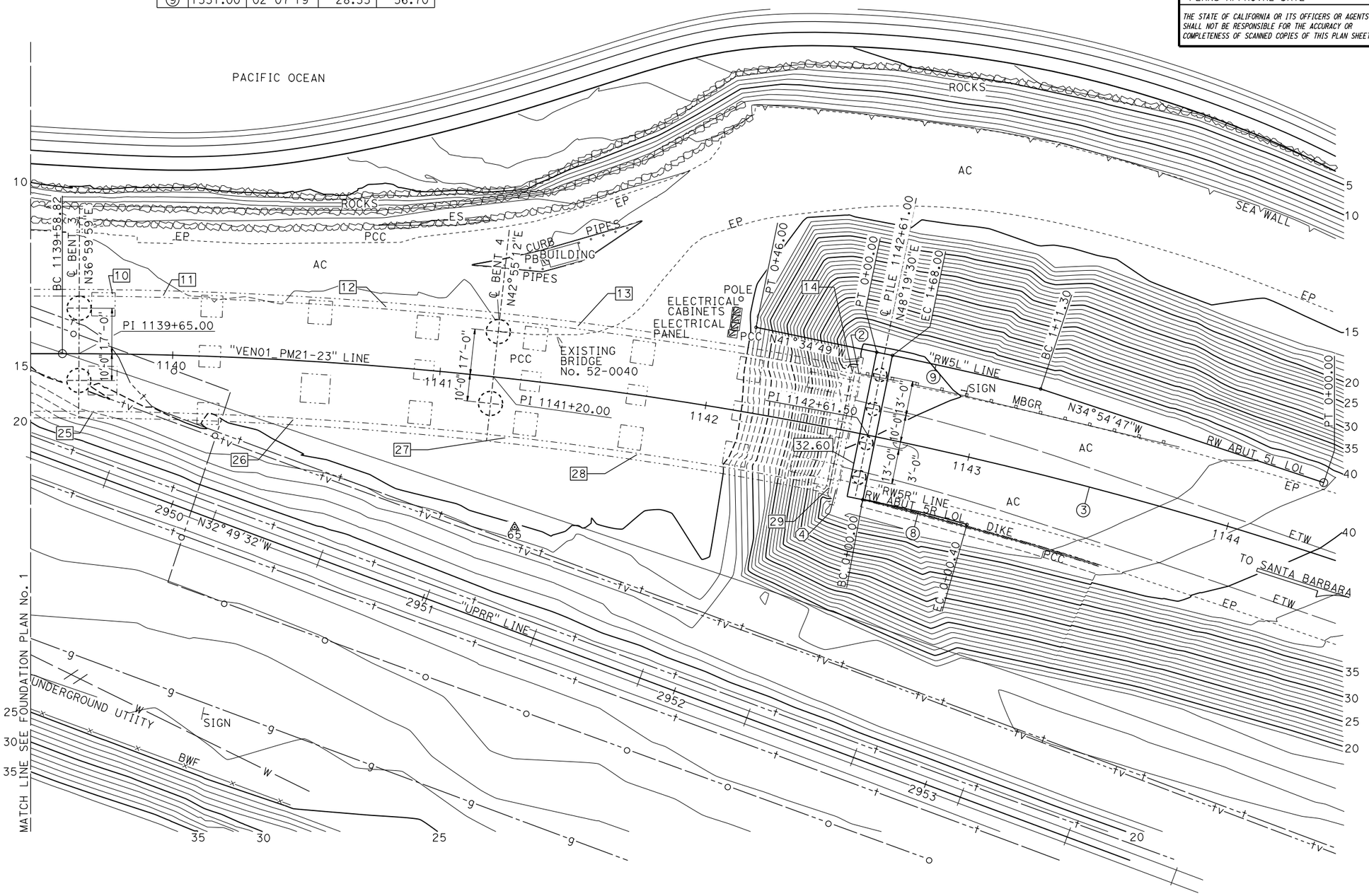

NOTE:
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PRELIMINARY INVESTIGATIONS BRANCH								
SCALE: 1" = 20'	VERT. DATUM: X	SURVEYED	BY DISTRICT	CHECKED C. FASSETT	DESIGN	BY C. HENSEL	CHECKED L. VALLA
	HORIZ. DATUM: X	DRAFTED	BY T. ZOLNIKOV	CHECKED C. FASSETT	DETAILS	BY T. DOAN	CHECKED L. VALLA
					QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
FOUNDATION PLAN No. 2

STRUCTURES FOUNDATION PLAN SHEET (ENGLISH) (REVISION 4/21/2021)

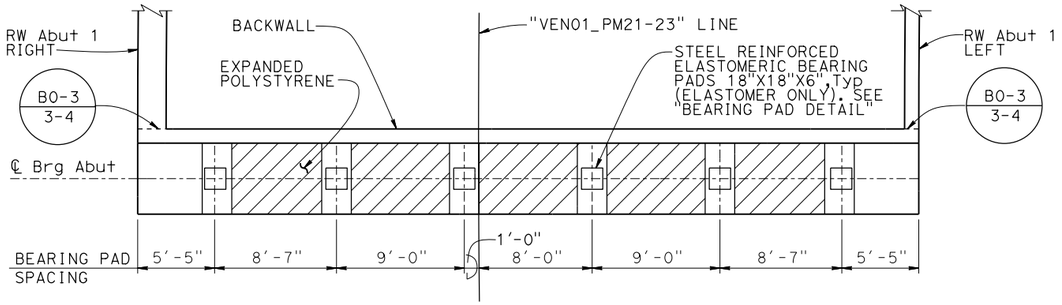
DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:35
FILE => 52-0471-e-fdp102.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3646 PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01 CONTRACT No.: 07-319604

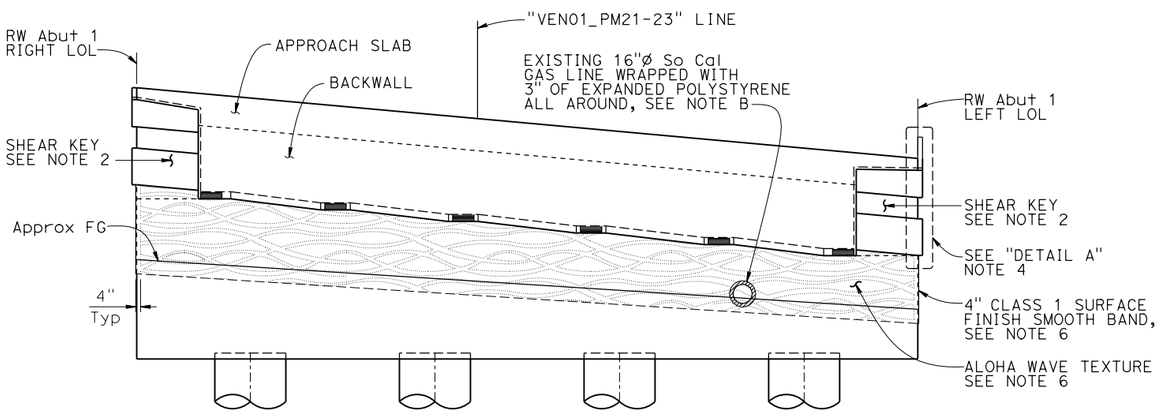
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
10/21/22	03-09-23			9	65



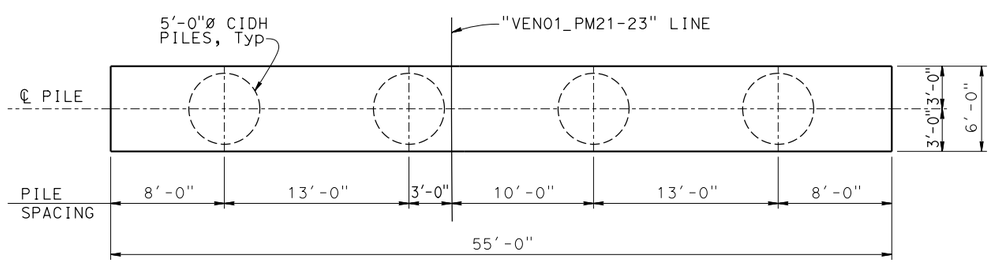
NOTE: Architectural Details not shown for clarity.

PLAN
3/16" = 1'-0"
B0-3



NOTES: A. Bike curb, bike path, railing and concrete barriers not shown for clarity.
B. 5'-0"Ø CIDH Pile spacing to be adjusted if required to clear gas line as approved by Engineer.

ELEVATION
3/16" = 1'-0"
B7-10



NOTE:
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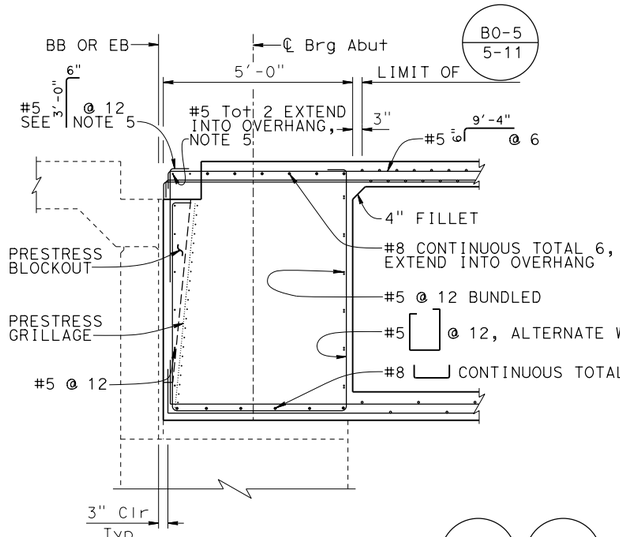
FOOTING PLAN
3/16" = 1'-0"



END DIAPHRAGM
1/2" = 1'-0"
B0-5
B8-5

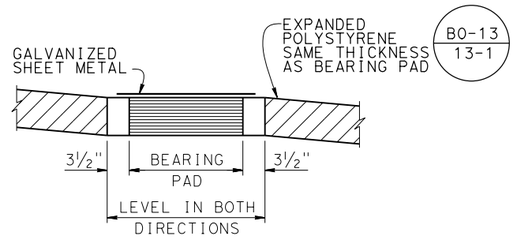
B. 5'-0"* CIDH Pile spacing to be adjusted if required to clear gas line as approved by Engineer.

NOTES:

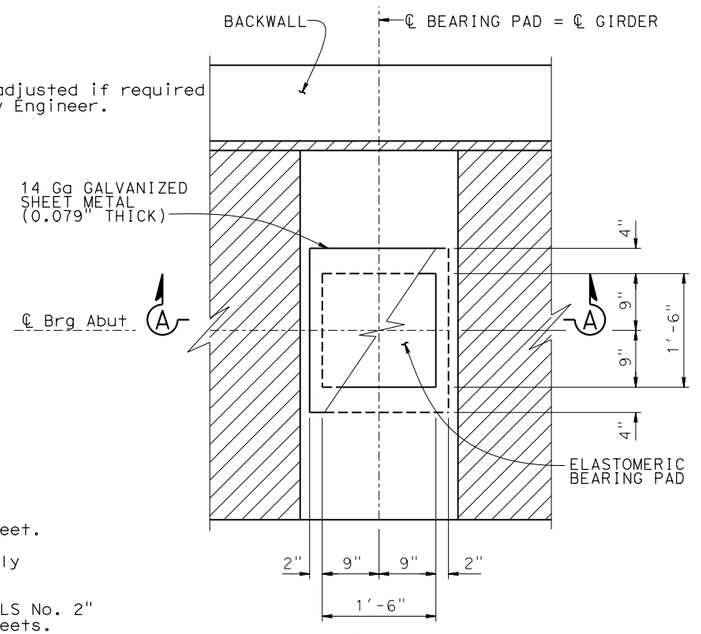
1. Abutment 1 shown, abutment 5 similar.
2. For "SHEAR KEY DETAIL", See "ABUTMENT DETAILS No. 1" sheet.
3. For Retaining Walls, see Structure Plans.
4. For "DETAIL A", see "ABUTMENT DETAILS No. 2" sheet.
5. Bars may be adjusted to clear joint seal assembly as directed by the Engineer.
6. For details see "CONCRETE SURFACE TEXTURE DETAILS No. 2" and "CONCRETE SURFACE TEXTURE DETAILS No. 3" sheets.

LEGEND:

Limits of expanded polystyrene



SECTION A-A



PLAN

BEARING PAD DETAIL
1" = 1'-0"

NOTE:
Coat top of bearing pad with silicon grease prior to placing sheet metal.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
ABUTMENT LAYOUT

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:52
FILE => 52-0471-f-a01_lo.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

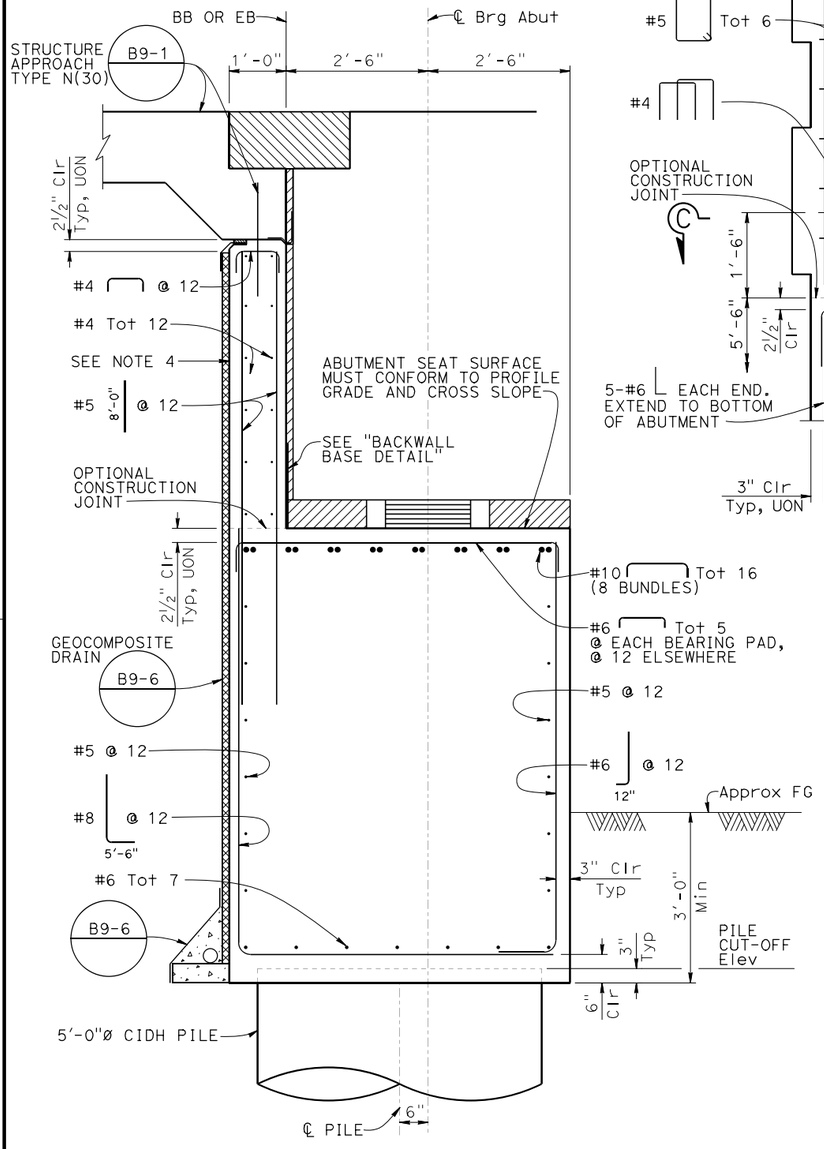
UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			SHEET	OF
8-18-22		09-14-23 09-28-23	10	65

NOTES:

1. For "SHEAR KEY" location, see "ABUTMENT LAYOUT" sheet.
2. For details see "END DIAPHRAGM" on "ABUTMENT DETAILS No. 2" sheet.
3. UON = Unless Otherwise Noted.
4. Abutment Backwall will be at FG for Abut 1L and Abut 5L Retaining Walls.



NOTE: Concrete Surface Texture not shown for clarity

ABUTMENT SECTION

¾" = 1'-0"

NOTE:
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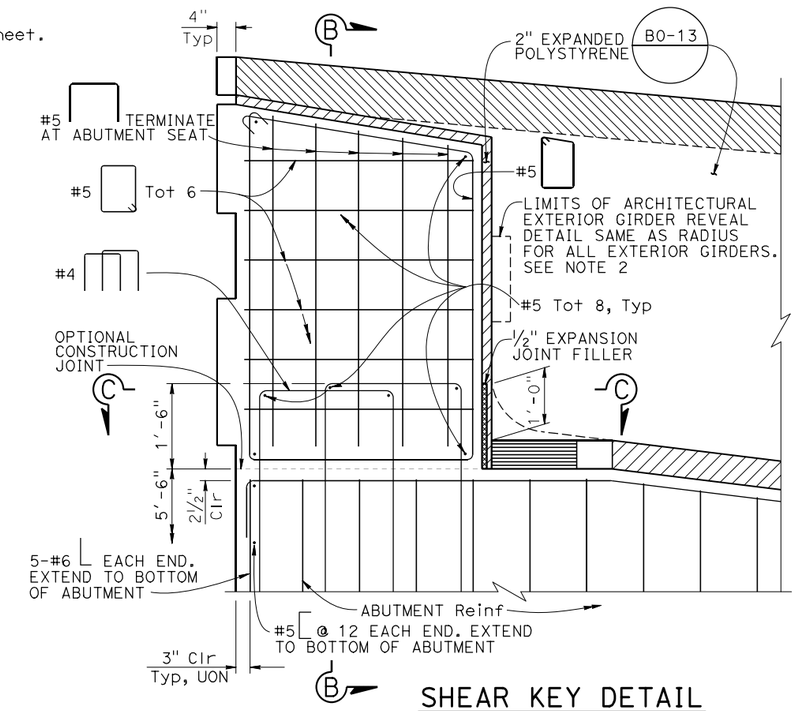


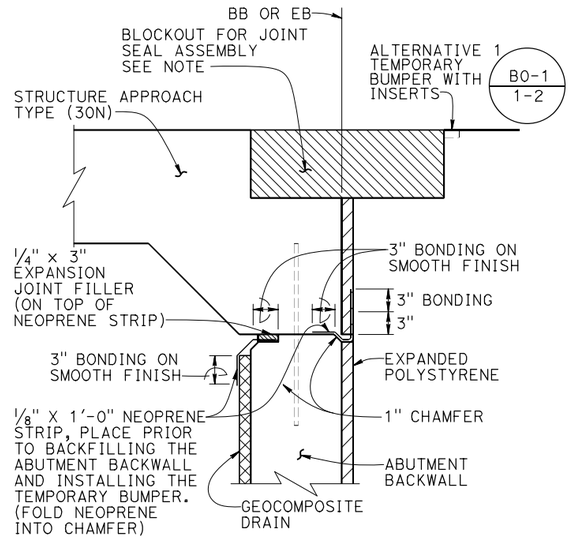
SHEAR KEY DETAIL

¾" = 1'-0" SEE NOTE 1

LEGEND:

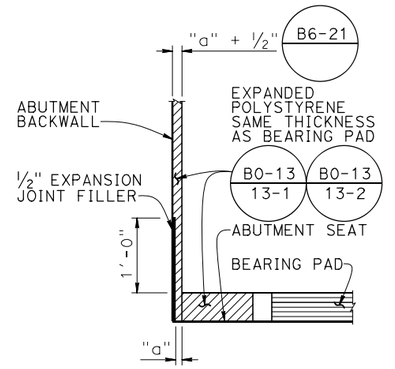
Limits of expanded polystyrene

Limits of Joint Seal Assembly Blockout



JOINT PROTECTION DETAIL

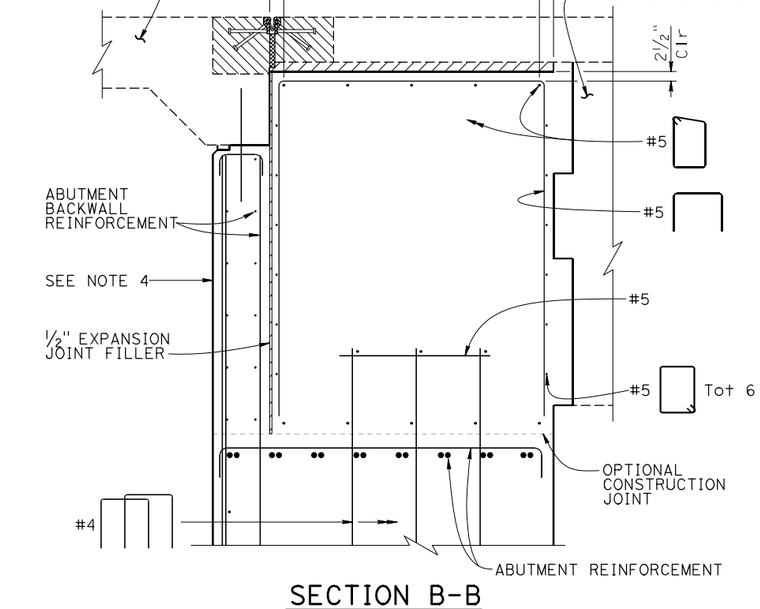
NO SCALE



BACKWALL BASE DETAIL

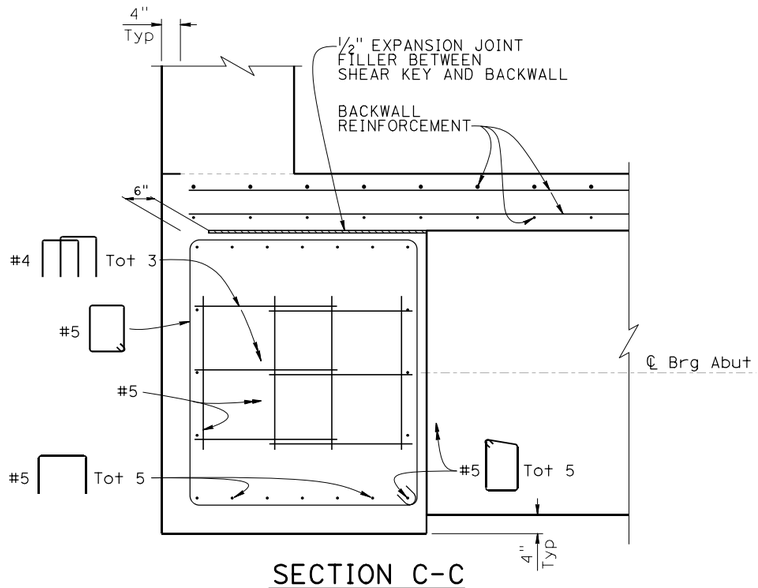
1" = 1'-0"

NOTE:
For Joint Assembly, see "STRIP JOINT SEAL ASSEMBLY MAXIMUM MOVEMENT RANGE = 4" sheet



SECTION B-B

¾" = 1'-0"



SECTION C-C

¾" = 1'-0"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

ABUTMENT DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 8-SEP-2023 TIME PLOTTED => 08:52
FILE => 52-0471-f-ad01.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1

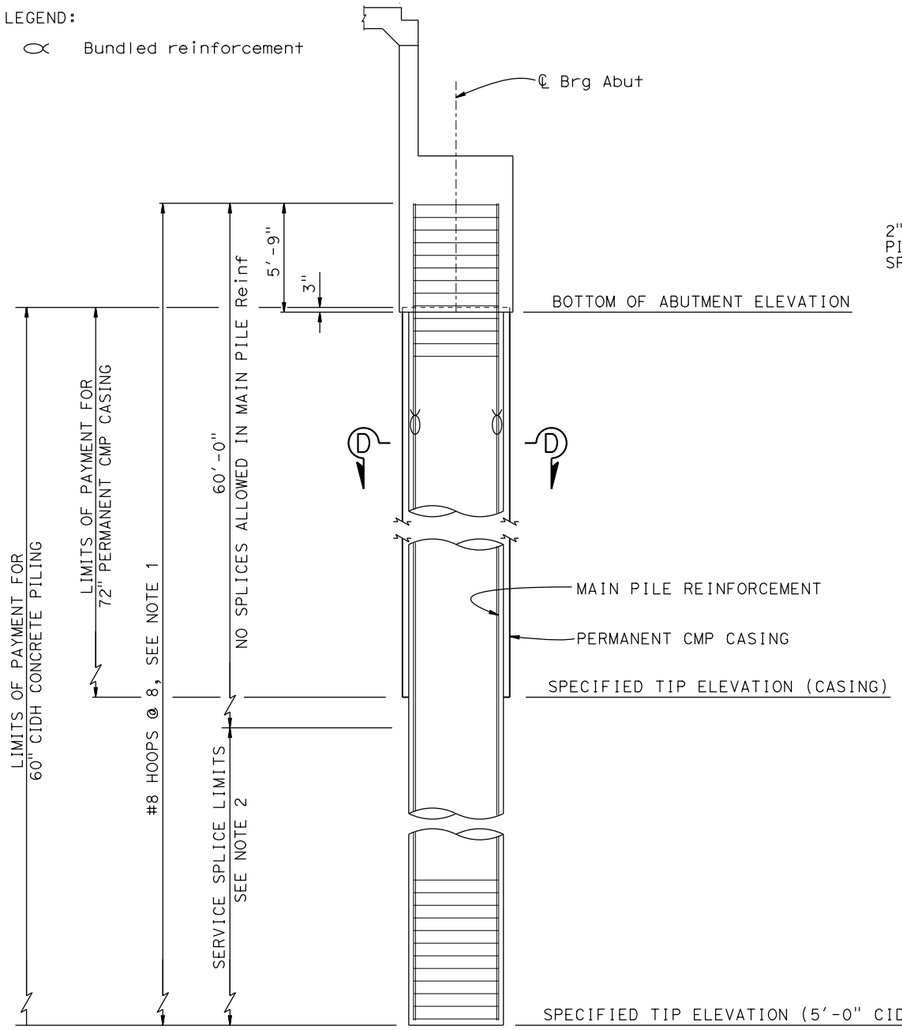
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
8-18-22		09-08-23 6-19-23	11	65

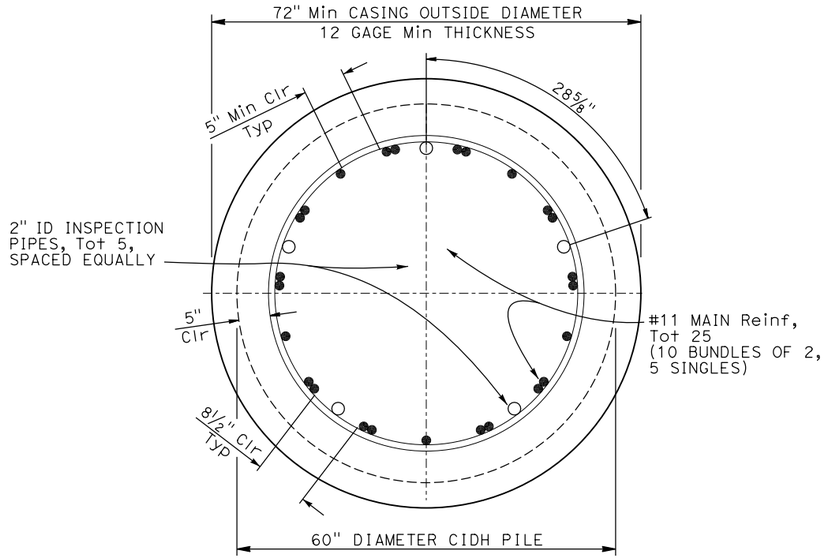
LEGEND:

Bundled reinforcement



ELEVATION

1/4" = 1'-0"



SECTION D-D

1" = 1'-0"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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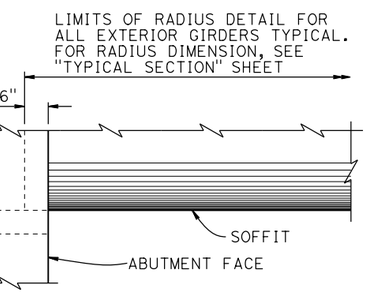
NOTES:

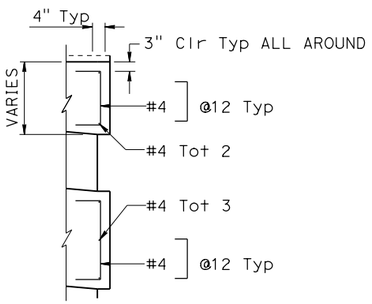
1. All hoops are "Ultimate" butt spliced continuous.
2. Stagger service splices per Standard Specifications.
3. For Structure Approach, see "STRUCTURE APPROACH TYPE N (30) (Mod)" sheet. (B9-1)
4. For "PILE DATA TABLE" see "STRUCTURE PLAN No. 1" sheet.
5. All reinforcement not shown for clarity.
6. For location of "DETAIL A" see "ABUTMENT LAYOUT" sheet.



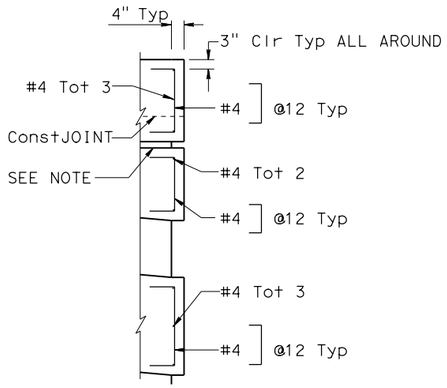
END DIAPHRAGM

3/8" = 1'-0"

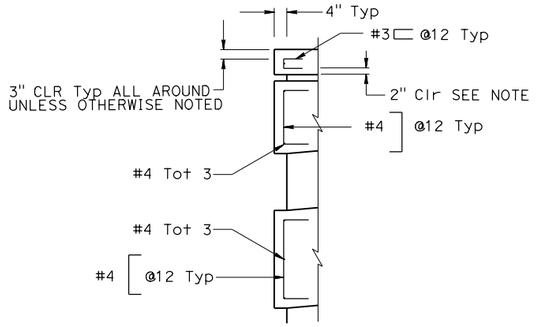
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



FACE OF KEY AT ABUT 1L,1R AND ABUT 5L,5R



FACE OF KEY AND FACE OF ABUT 1L,5L BACKWALL WITH 1'-6" PARAPET EXTENSION



FACE OF KEY AND FACE OF ABUT 1R,5R BACKWALL

Note: 2" Joint not required on Abut Backwall

ARCHITECTURAL REINFORCEMENT DETAIL A

1/2" = 1'-0"

DESIGN	BY C. Hensel	CHECKED L. Valla	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471
DETAILS	BY A. Onodera/N. Vadiraj/T. Bradshaw	CHECKED L. Valla			POST MILE 21.54
QUANTITIES	BY L. Valla	CHECKED A. Quiroz			

VENTURA OH (REPLACEMENT)

ABUTMENT DETAILS No. 2

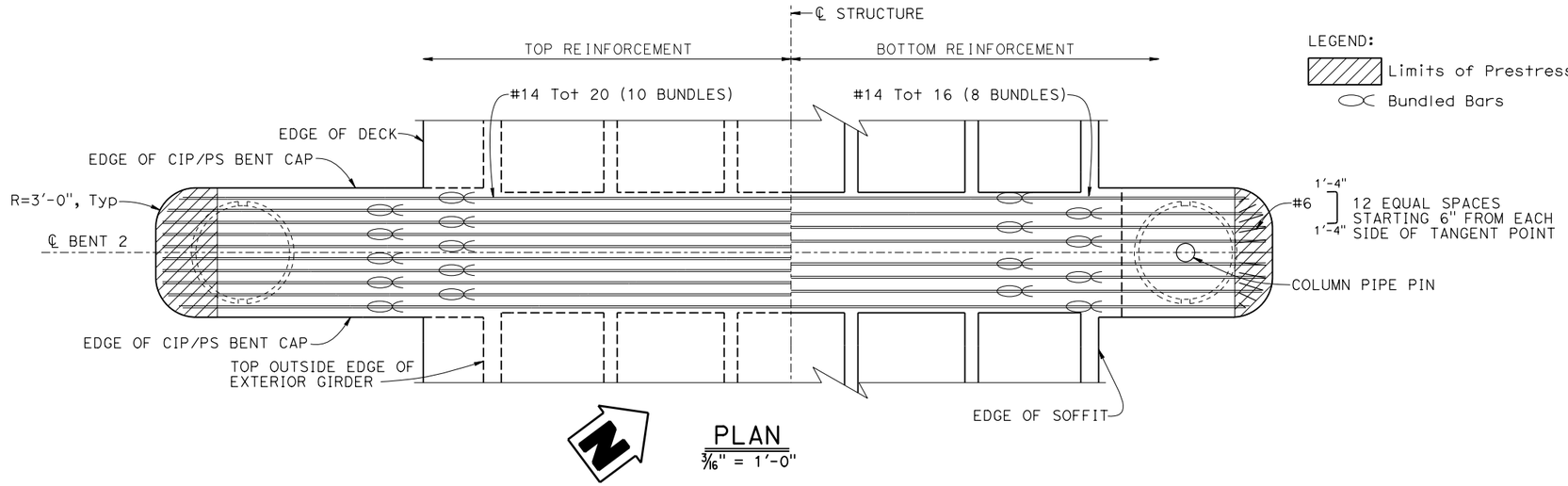
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:35
FILE => 52-0471-f-ad+02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-10-23		7-19-23	8-24-23	12	65



PLAN
3/16" = 1'-0"

LEGEND:
- Limits of Prestress Blockouts
- Bundled Bars

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

PRESTRESSING NOTES

SEE NOTE 12

270 KSI Low Relaxation Strand:

P_{jack}	=	16,120	(kips)
Anchor Set	=	3/8	(in)
Friction curvature coefficient, μ	=	0.15	(1/rad)
Friction wobble coefficient, K	=	0.0002	(1/ft)
Assumed long term losses	=	20	(ksi)
Total Number of Ducts	=	TBD	

The final force ratio (larger divided by smaller) between any two girders shall not exceed exceed the ratio of: 10 to 9

Concrete:

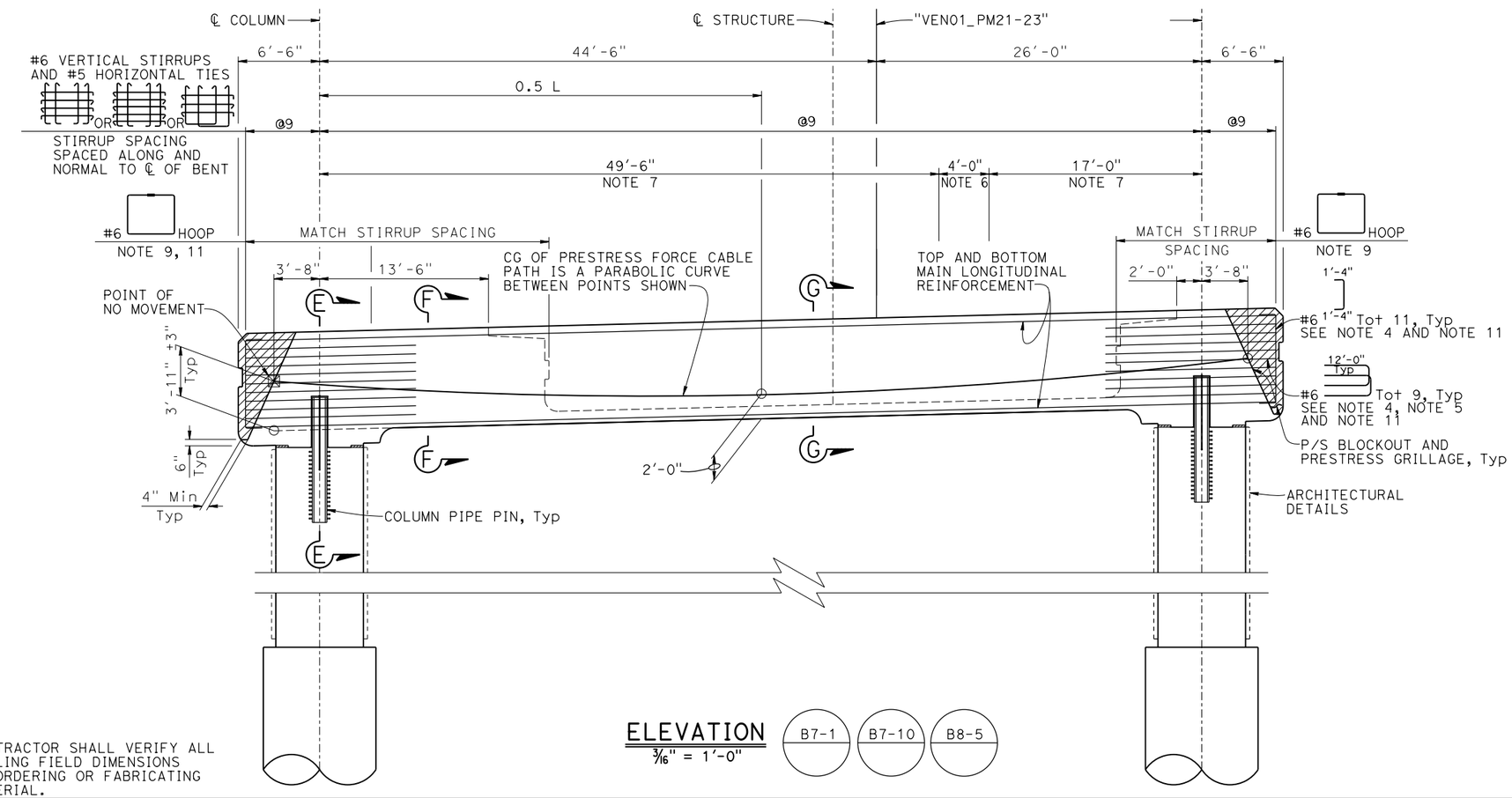
f'c = 6,000 psi @ 28 days

f'ci = 4,000 psi @ time of stressing

Contractor shall submit elongation calculations based on initial stress at:

☒ = 0.913 times jacking stress.

One end stressing shall be performed from right column end.



ELEVATION
3/16" = 1'-0"

B7-1 B7-10 B8-5

NOTES:

1. For "SECTION E-E", "SECTION F-F", and "SECTION G-G", see "BENT 2 DETAILS No. 1" sheet.
2. For column details, see "BENT 2 DETAILS No. 2" sheet.
3. For pipe pin details, see "PIN DETAILS" sheet.
4. Bars may be adjusted to clear P/S ducts as approved by Engineer.
5. "U" shaped bars at cap end to be spliced with cap longitudinal side reinforcement.
6. Ultimate splices only allowed at this location. Stagger per Standard Specifications both vert and horz.
7. No splices allowed.
8. Utility openings not shown, see "TYPICAL SECTION" sheet for sizes and locations.
9. Hoops to be ultimate butt spliced.
10. For Architectural Details, see "ARCHITECTURAL DETAILS" sheet.
11. Use service splices in prestress blockout locations.
12. For Prestressing Sequence see "GIRDER LAYOUT" sheet.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
BENT 2 LAYOUT

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 16:28
FILE => 52-0471-h-b02_lo.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			SHEET	OF
01-03-23		09-28-23 07-18-23	13	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — X — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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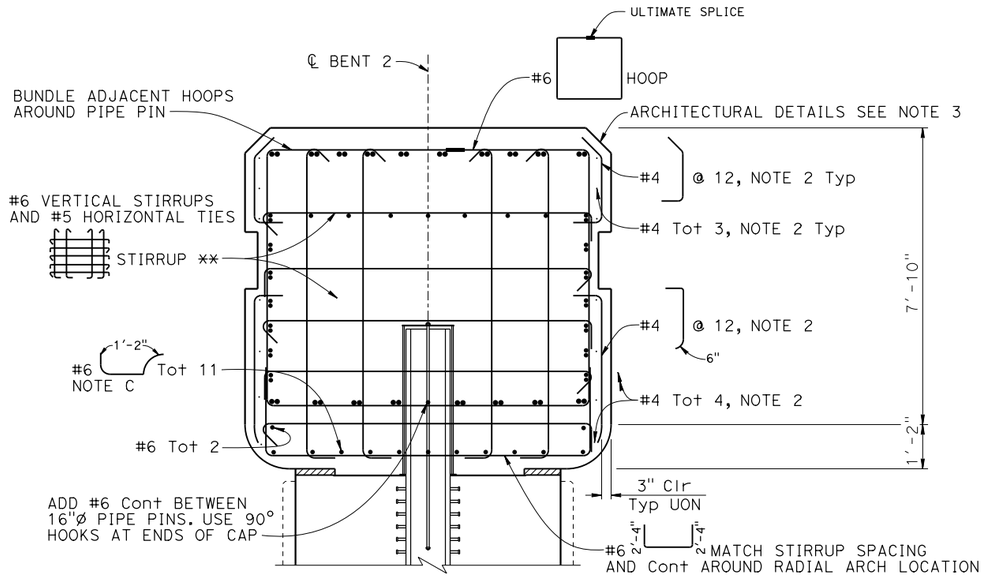
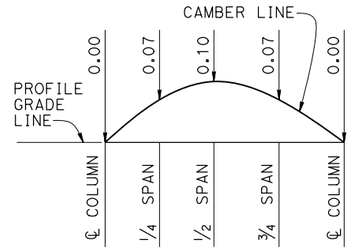


NOTES: A. For details and reinf not shown see "SECTION G-G" and "SECTION F-F"
B. Column reinf not shown for clarity.
C. Cut center #6 reinf bar around pipe pin.

SECTION E-E
½" = 1'-0"



BENT 2 OUTRIGGER CAMBER DIAGRAM
NO SCALE

Camber values shown do not include allowance for falsework settlement

NOTES:

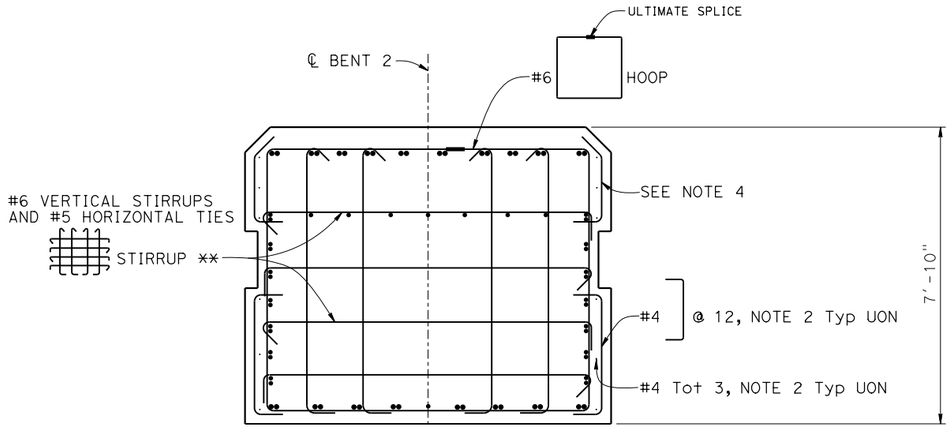
1. For locations of "SECTION E-E", "SECTION F-F" and "SECTION G-G", see "BENT 2 LAYOUT" sheet.
2. Continue reinforcement for architectural details around perimeter of Bent Cap outside bridge limits.
3. For Architectural Details see "ARCHITECTURAL DETAILS" sheet.
4. Foreshorten vertical #4 around bridge overhangs.

LEGEND:

* Clear to main cap reinforcing.

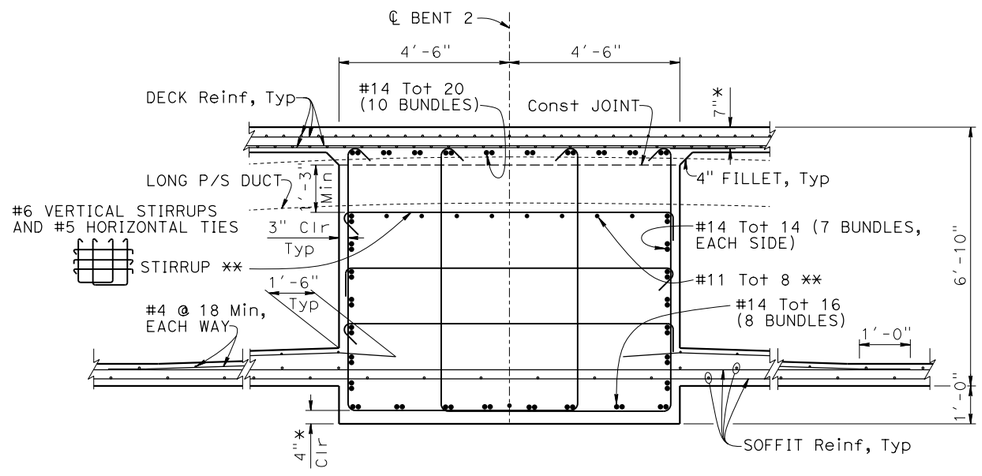
** Location of reinforcing may be adjusted to clear P/S ducts as directed by the Engineer.

UON Unless otherwise noted



NOTE: For details and reinf not shown see "SECTION G-G" and "SECTION E-E"

SECTION F-F
½" = 1'-0"



NOTE: For details and reinf not shown see "SECTION E-E"

SECTION G-G
½" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/N. Vadiraj	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
BENT 2 DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-h-b02dt01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES: 01-12-23 | 06-05-23 | 04-28-23

SHEET	OF
14	65

LEGEND:

Bundled bars

NOTES:

1. Architectural treatment not shown for clarity.
2. Stagger service splices per Standard Specifications.
3. All hoops to be ultimate butt spliced.
4. For "PILE DATA TABLE" see "STRUCTURE PLAN No. 1" sheet.
5. All column and pile reinforcement not shown.
6. See Table for Top of Column Isolation Casings Elevation on "COLUMN ISOLATION CASING DETAILS No. 2" sheet.
7. For limits of column isolation casing payment details see "COLUMN ISOLATION CASING DETAILS No. 1" sheet.
8. Architectural Details not shown for clarity. For Architectural Details and Reinf, see "ARCHITECTURAL DETAILS" sheet.
9. Elevation taken from "BENT 2 LAYOUT" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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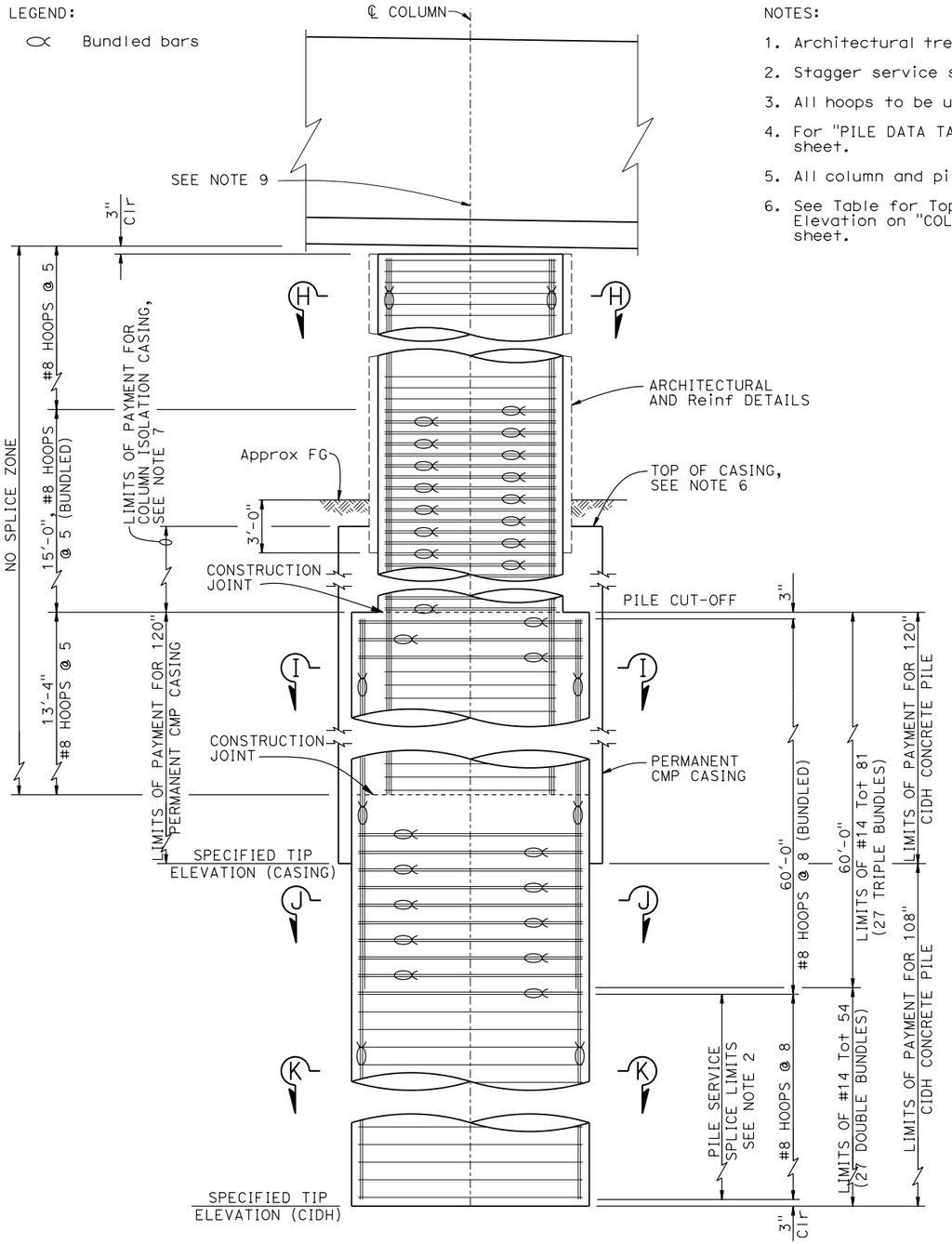
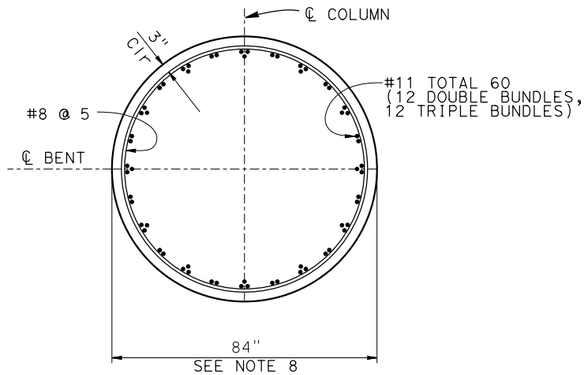
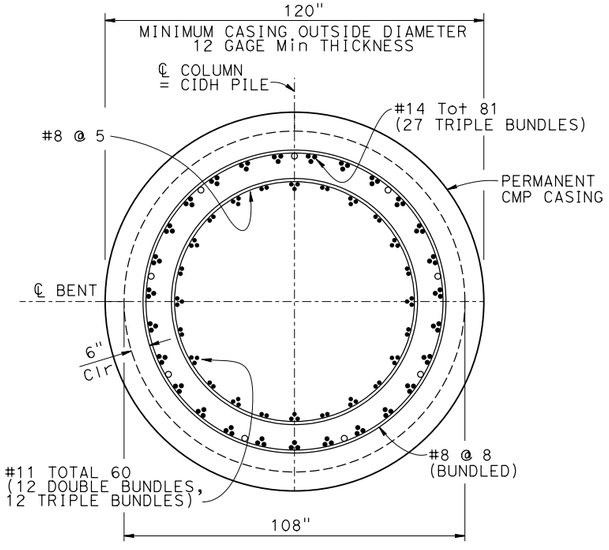


COLUMN DETAILS
3/8" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

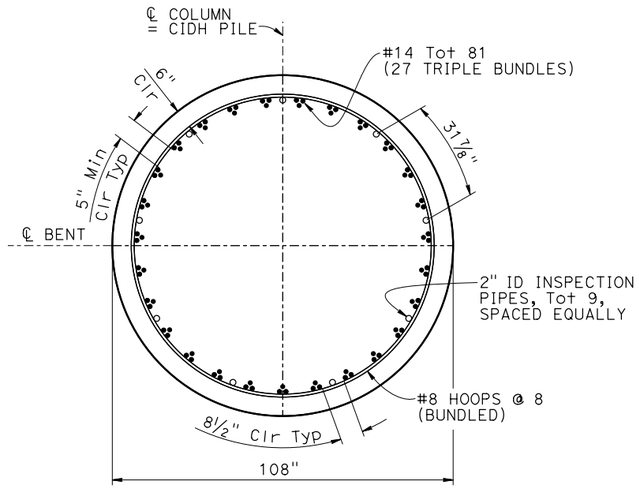


SECTION H-H
1/2" = 1'-0"

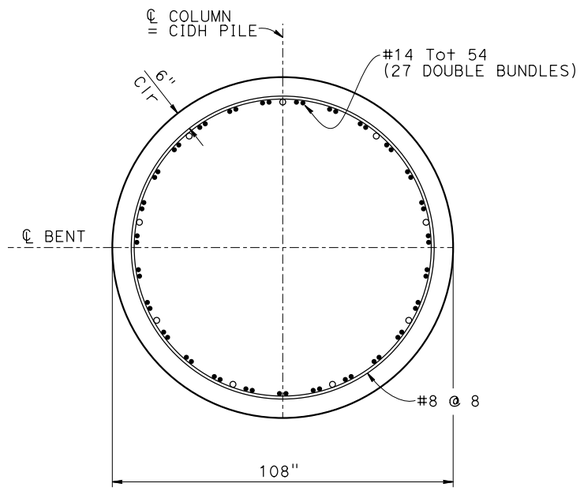


NOTE:
For details not shown, see "SECTION J-J"

SECTION I-I
1/2" = 1'-0"



SECTION J-J
1/2" = 1'-0"



NOTE:
For details not shown, see "SECTION J-J"

SECTION K-K
1/2" = 1'-0"

DESIGN	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY T. DOAN/A. O./N. V./T. B.	CHECKED L. VALLA	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	BRIDGE No. 52-0471 POST MILE 21.54

VENTURA OH (REPLACEMENT)
BENT 2 DETAILS No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-h-b02dt02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606 COUNTY/ROUTE: Ven/01
PROJECT NUMBER & PHASE: 0716000025 & 1 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			SHEET	OF
1-1-23		8-24-23 8-28-23	15	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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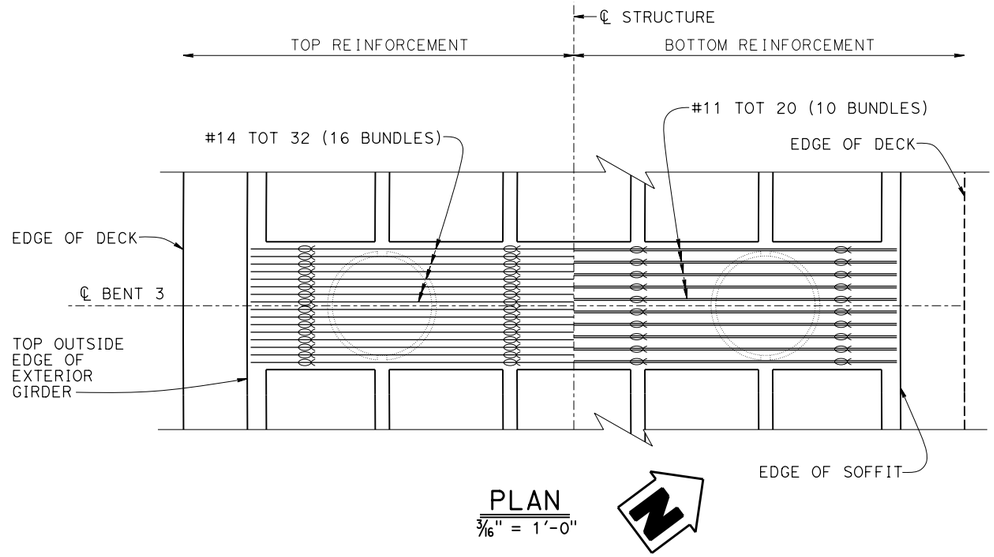
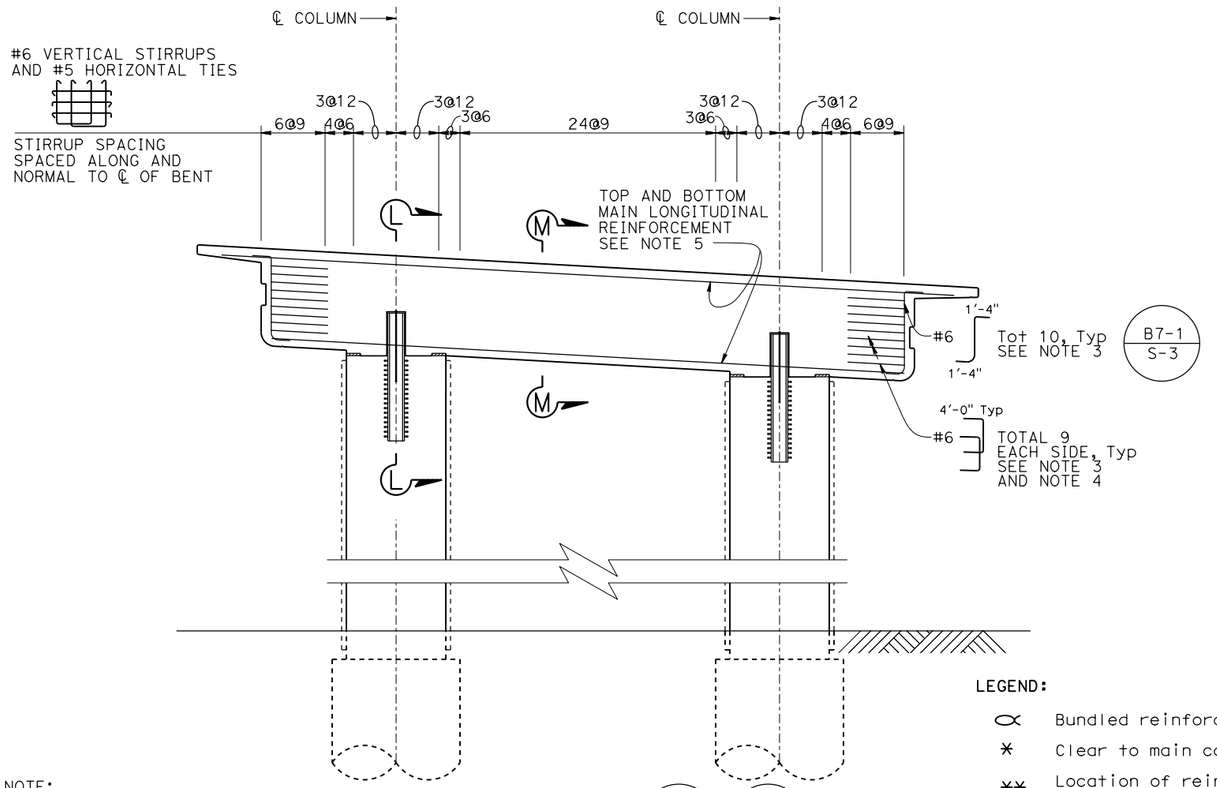


PLAN
3/16" = 1'-0"

NOTES:

1. For column details, see "BENT 3-4 DETAILS" sheet.
2. For pipe pin details, see "PIPE PIN DETAILS" sheet.
3. Bars may be adjusted to clear P/S ducts as approved by Engineer.
4. "U" shaped bars at cap end to be spliced with cap longitudinal side reinforcement where possible.
5. No lap splices allowed in main bent cap reinforcement.
6. Utility openings not shown, see "TYPICAL SECTION" sheet for sizes and locations.
7. Bent 3 shown, bent 4 similar.



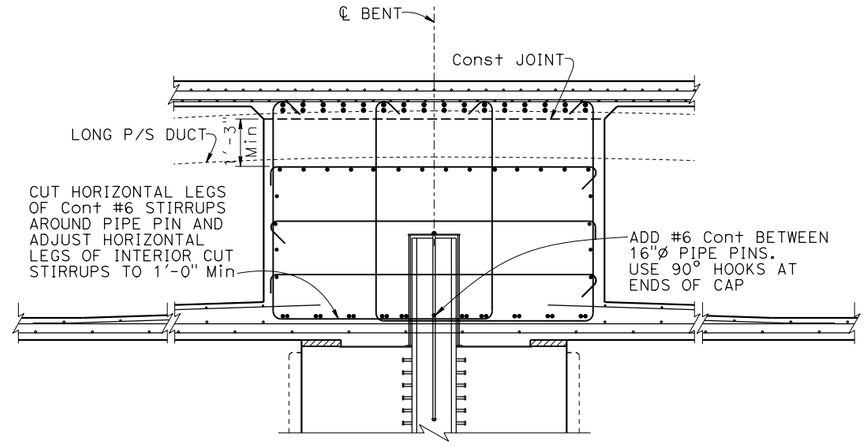
ELEVATION
3/16" = 1'-0"

B7-1 B7-10

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

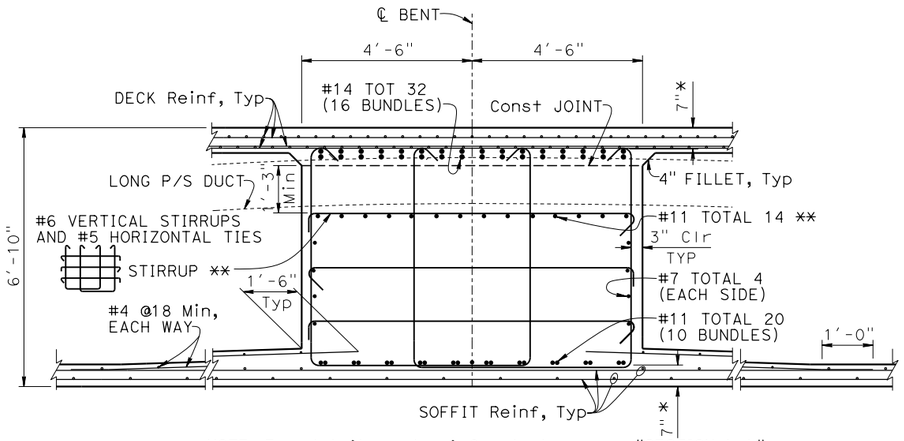
LEGEND:

∝	Bundled reinforcement
*	Clear to main cap reinforcing.
**	Location of reinforcing may be adjusted to clear P/S ducts as directed by the Engineer



NOTE: For details and reinf not shown see "SECTION M-M"

SECTION L-L
1/2" = 1'-0"



NOTE: For details and reinf not shown see "SECTION L-L"

SECTION M-M
1/2" = 1'-0"

DESIGN	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471
DETAILS	BY T. DOAN	CHECKED L. VALLA			POST MILE 21.54
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ			

VENTURA OH (REPLACEMENT)
BENTS 3 AND 4 LAYOUT

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 16:18
FILE => 52-0471-h-b03_10.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			
01-03-23		06-06-23	09-28-23

SHEET	OF
16	65

LEGEND:

Bundled bars

NOTES:

1. Architectural treatment not shown for clarity.
2. Stagger service splices per Standard Specifications.
3. All hoops to be ultimate butt spliced.
4. For "PILE DATA TABLE" see "STRUCTURE PLAN No. 1" sheet.
5. All column and pile reinforcement not shown.
6. See Table for Top of Column Isolation Casings Elevation on "COLUMN ISOLATION CASING DETAILS No. 2" sheet.
7. For limits of column isolation casing payment details see "COLUMN ISOLATION CASING DETAILS No. 1" sheet.
8. Architectural Details not shown for clarity. For Architectural Details and Reinf, see "ARCHITECTURAL DETAILS" sheet.
9. Elevation taken from "BENT 3 AND 4 LAYOUT" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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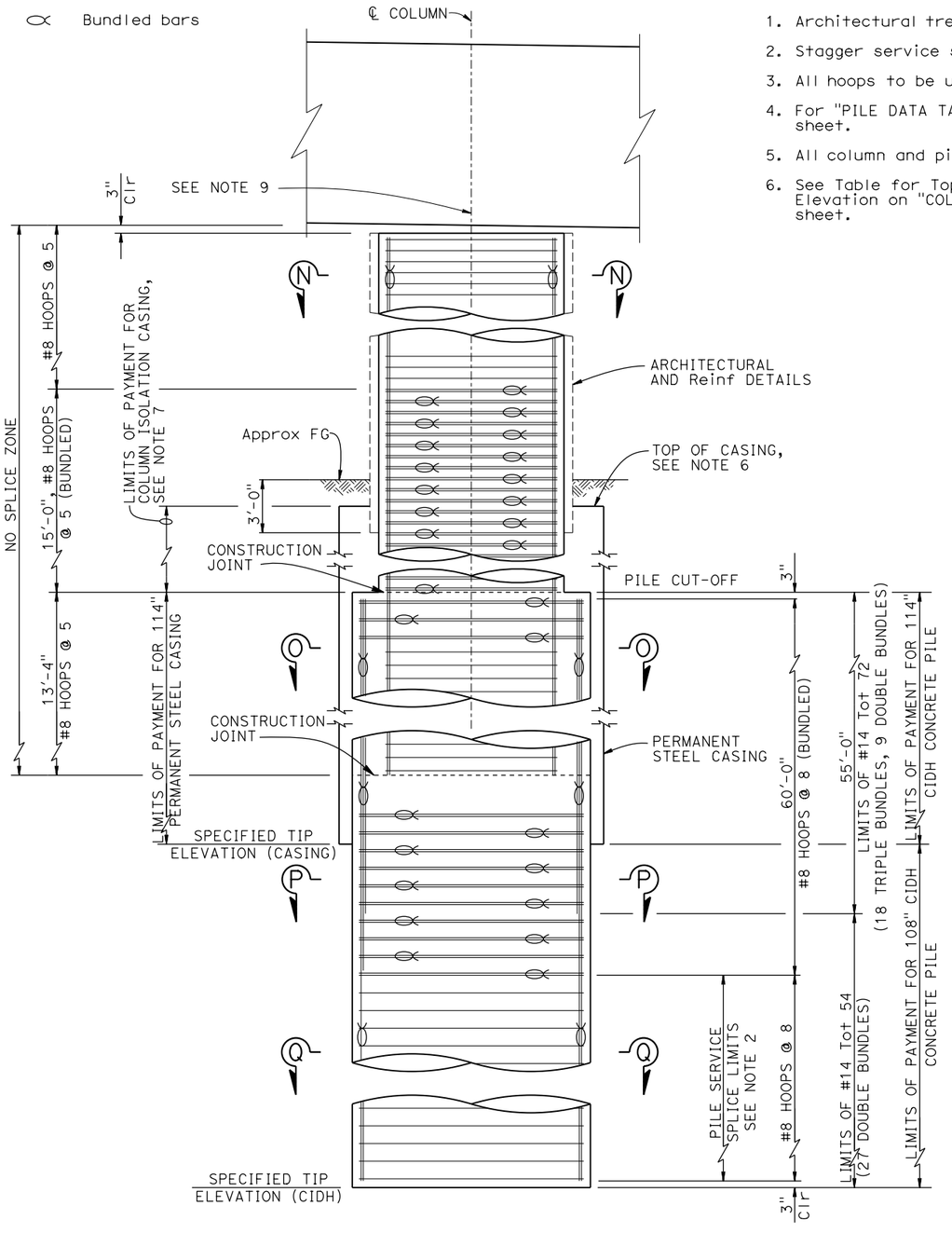
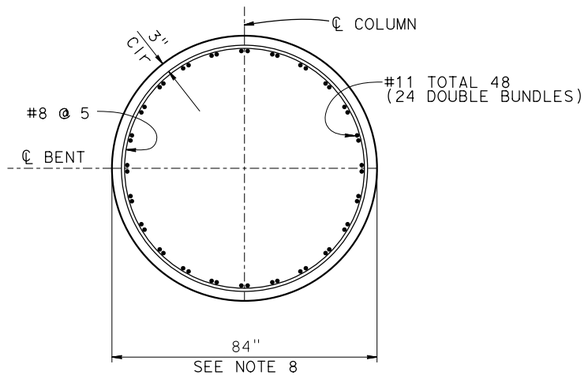
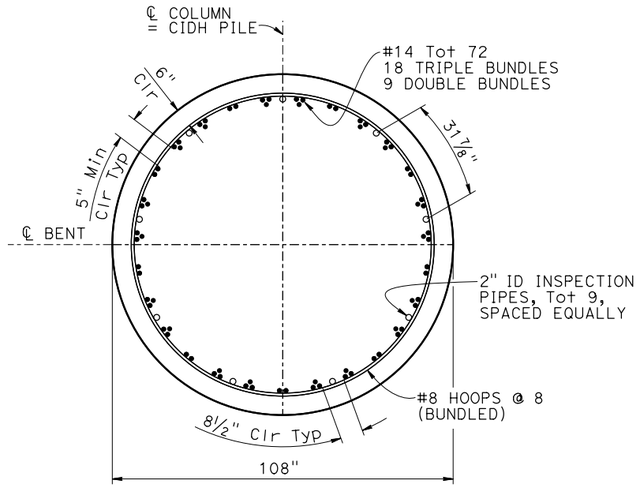


COLUMN DETAILS
3/8" = 1'-0"

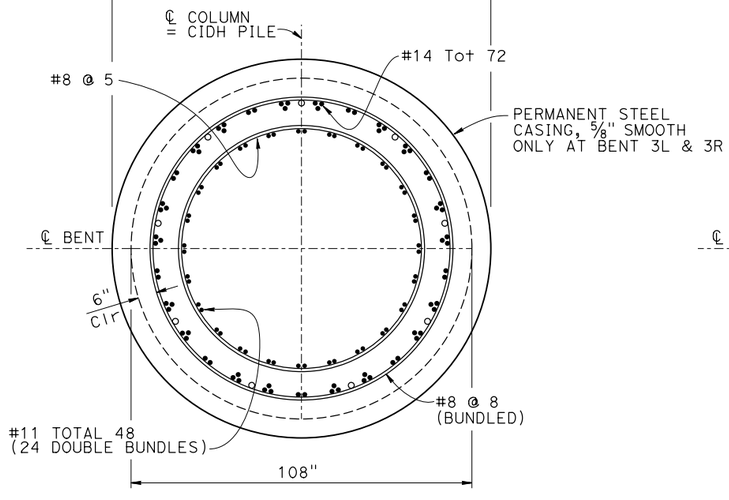
NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



SECTION N-N
1/2" = 1'-0"

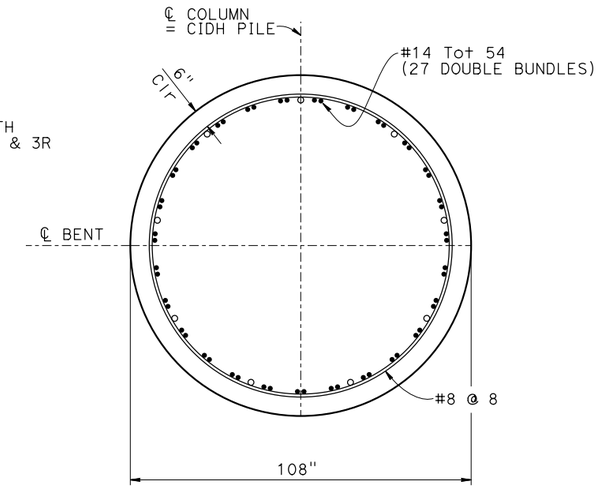


SECTION P-P
1/2" = 1'-0"



NOTE:
For details not shown, see "SECTION P-P"

SECTION O-O
1/2" = 1'-0"



NOTE:
For details not shown, see "SECTION P-P"

SECTION Q-Q
1/2" = 1'-0"

DESIGN	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY T. DOAN/A. ONODERA/T. BRADSHAW	CHECKED L. VALLA	
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	

DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
BENT 3 DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 10:13
FILE => 52-0471-j-cde+01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			SHEET	OF
1-26-23		09-28-23 08-28-23	17	65

LEGEND:

Bundled bars

NOTES:

1. Architectural treatment not shown for clarity.
2. Stagger service splices per Standard Specifications.
3. All hoops to be ultimate butt spliced.
4. For "PILE DATA TABLE" see "STRUCTURE PLAN No. 1" sheet.
5. All column and pile reinforcement not shown.
6. See Table for Top of Column Isolation Casings Elevation on "COLUMN ISOLATION CASING DETAILS No. 2" sheet.
7. For limits of column isolation casing payment details see "COLUMN ISOLATION CASING DETAILS No. 1" sheet.
8. Architectural Details not shown for clarity. For Architectural Details and Reinf, see "ARCHITECTURAL DETAILS" sheet.
9. Elevation taken from "BENT 3 AND 4 LAYOUT" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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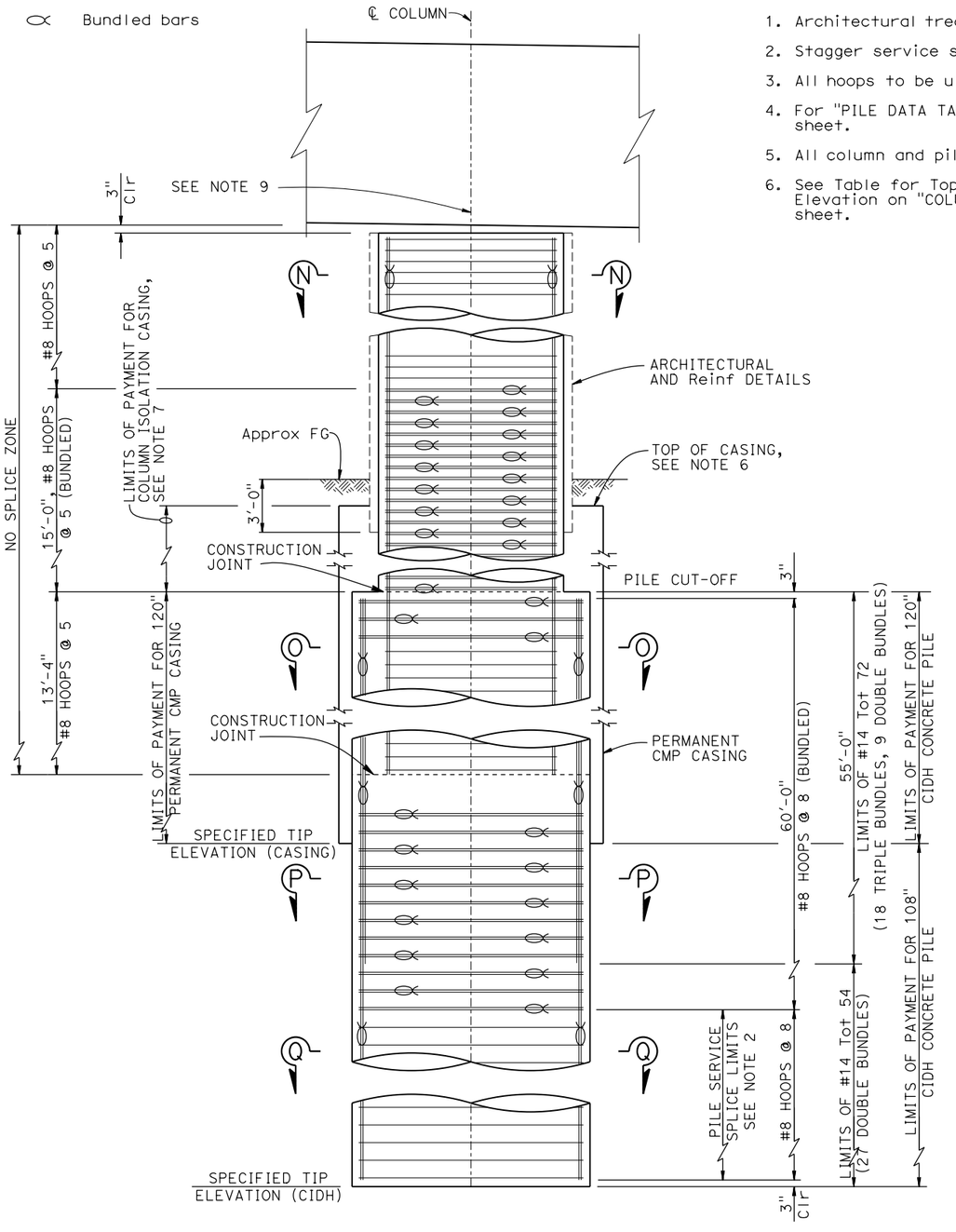
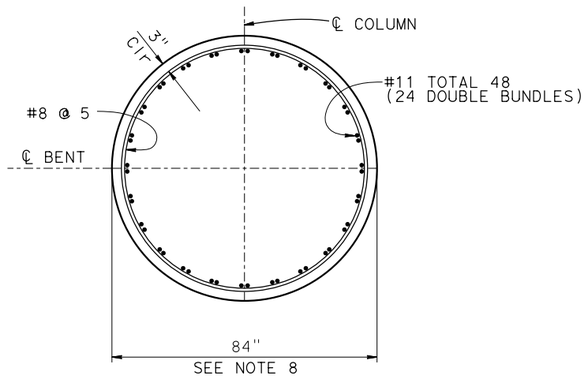
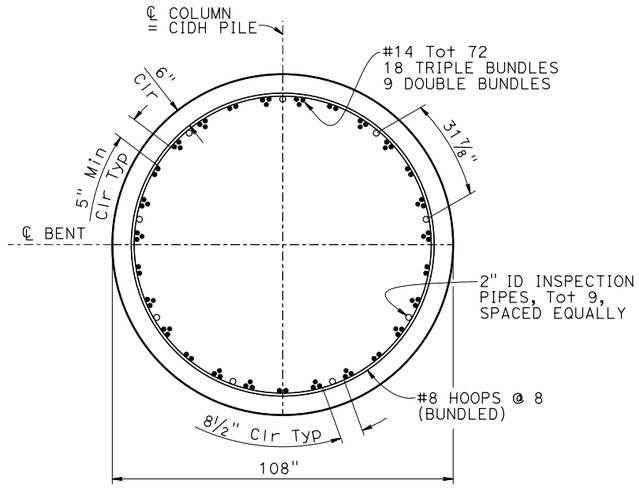


NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

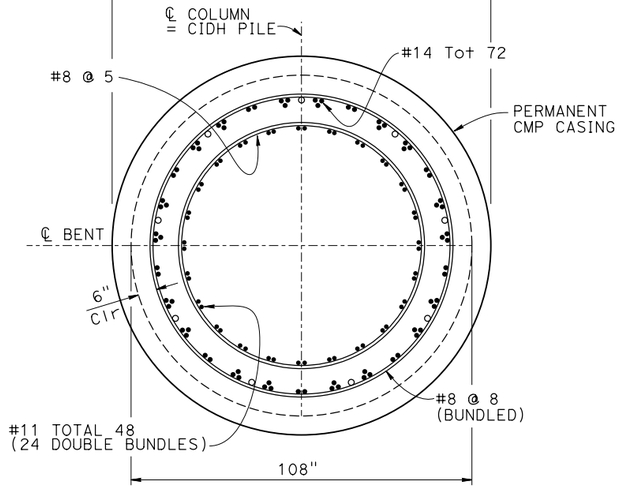
COLUMN DETAILS
3/8" = 1'-0"



SECTION N-N
1/2" = 1'-0"

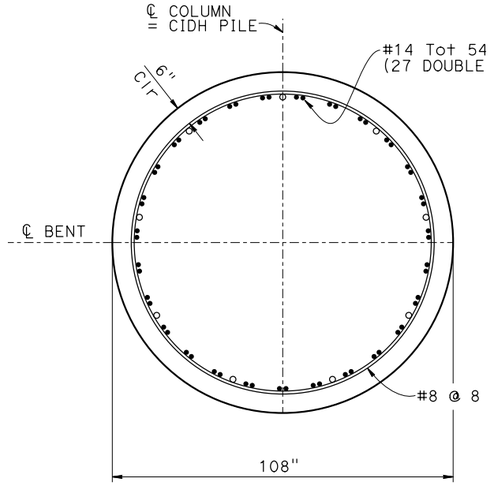


SECTION P-P
1/2" = 1'-0"



NOTE:
For details not shown, see "SECTION P-P"

SECTION O-O
1/2" = 1'-0"



NOTE:
For details not shown, see "SECTION P-P"

SECTION Q-Q
1/2" = 1'-0"

DESIGN	BY C. HENSEL	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471
DETAILS	BY T. DOAN/A. ONODERA/T. BRADSHAW	CHECKED L. VALLA			POST MILE 21.54
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ			

VENTURA OH (REPLACEMENT)
BENT 4 DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-j-cde+02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			SHEET	OF
1-26-23		8-24-23 08-28-23	18	65

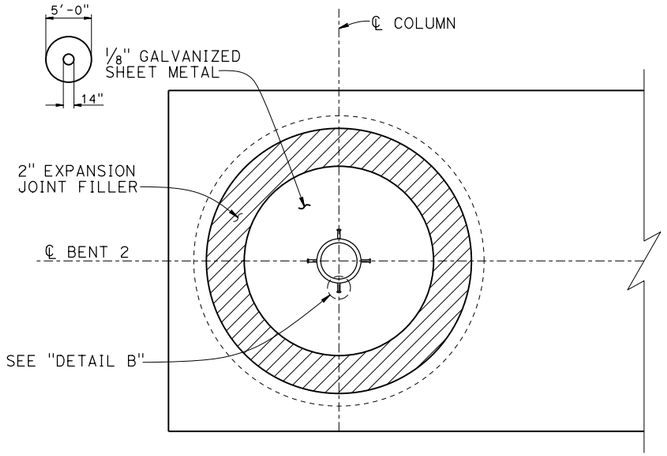
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

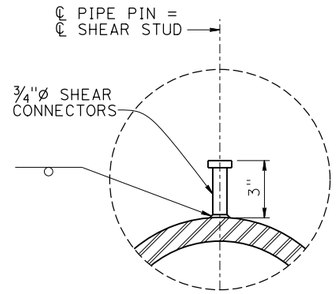
REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



COLUMN PIPE PIN DETAIL-PLAN

1/2" = 1'-0"



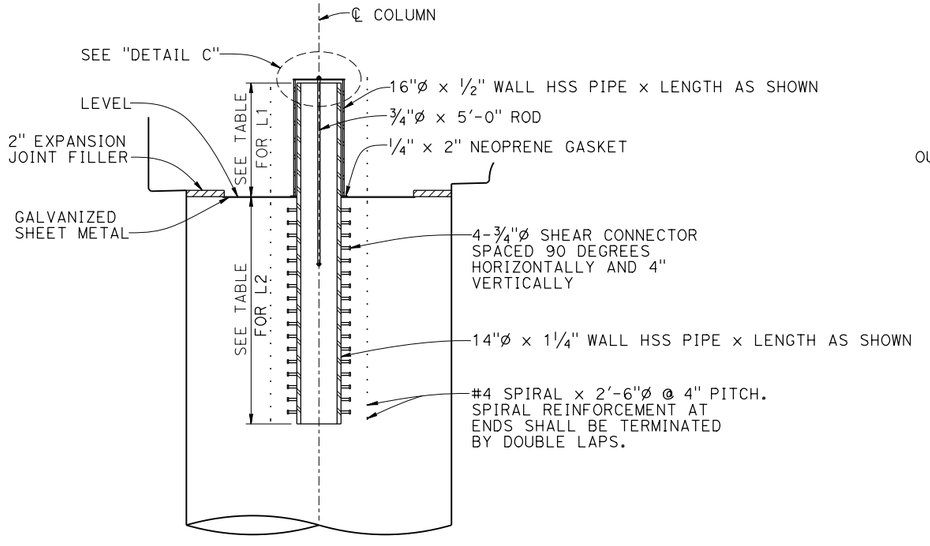
DETAIL B

3" = 1'-0"

LEGEND:

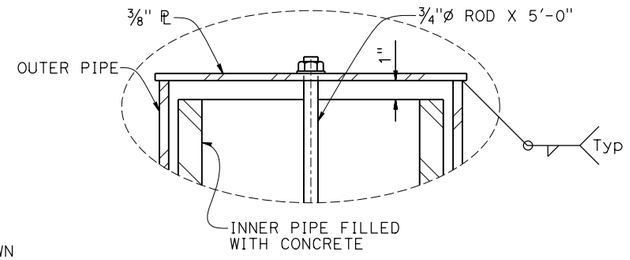
Expansion Joint Filler

LENGTH OF PIPE L1 AND L2 EMBEDDED IN CAP AND COLUMN			
Bent	Location	L1,Ft	L2,Ft
2	2L, 2R	4'-0"	8'-0"
3	3L, 3R	3'-0"	6'-0"
4	4L, 4R	3'-0"	6'-0"



COLUMN PIPE PIN

1/2" = 1'-0"



NOTES:

1. Outer pipe to seat tightly against 1/4" thick neoprene gasket, place on concrete around pipe pin.
2. Adjust spacing of main bent cap reinforcement to allow placement of pipe pin. (1" min clearance).
3. Steel pipe shall conform to A53 Grade B.
4. Wrap interior pipe with 3/8" polyethylene above seat elevation.

DETAIL C

3" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY C. HENSEL	CHECKED L. VALLA	
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA	
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

PIPE PIN DETAILS

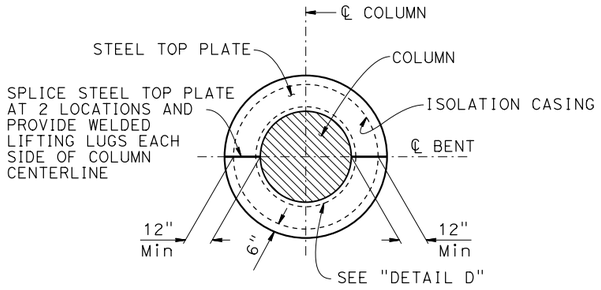
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-j-cdet03.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

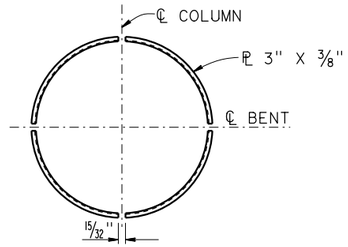
UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
01-26-23		8-21-23	07-15-23	19	65



SECTION R-R
NO SCALE



DETAIL D
NO SCALE

LEGEND:

- Limits of Structure Excavation (Bridge)
- Limits of Structure Backfill (Slury Cement)
- Limits of column section

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

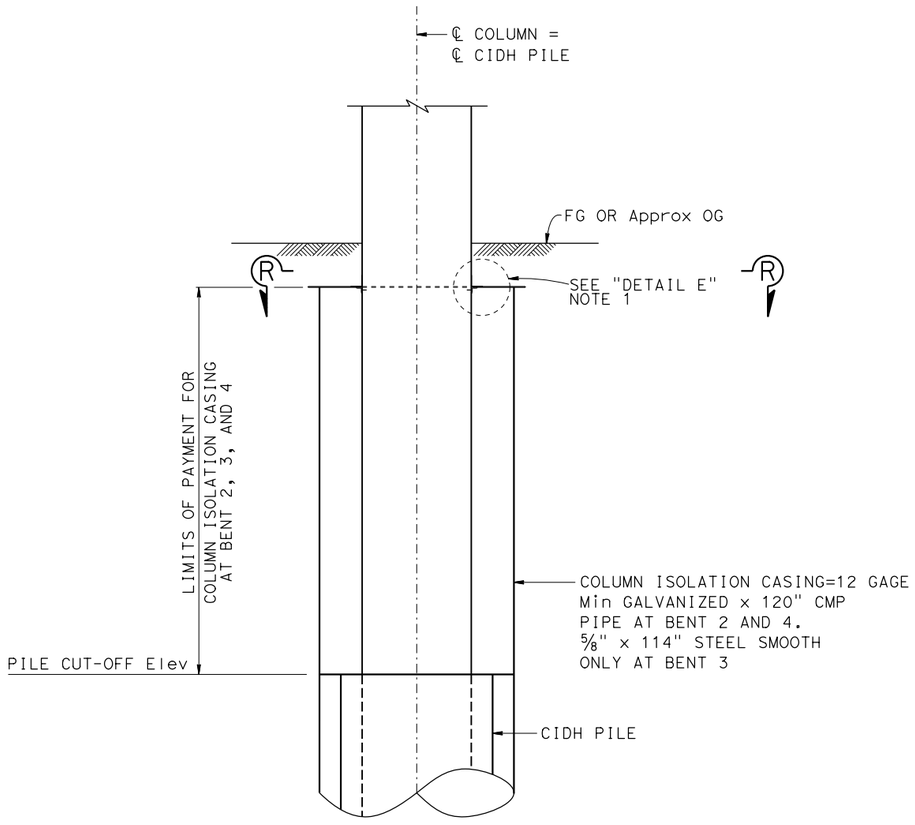
REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

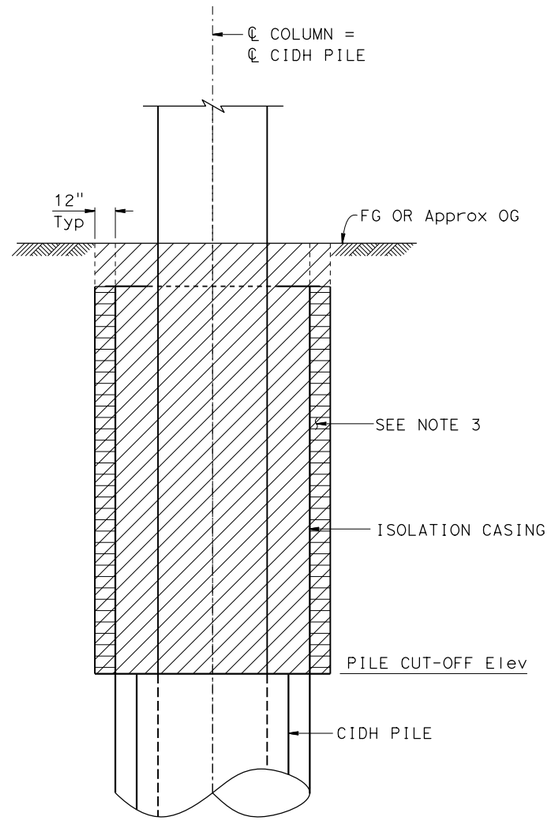
1. For "DETAIL E" See "COLUMN ISOLATION CASING DETAILS No. 2" Sheet.
2. SEE "PILE DATA TABLE" for cut-off elevations on "STRUCTURE PLAN No. 1" sheet.
3. Structure Backfill (Slury Cement) not required at Bent 3L and 3R.

TOP OF COLUMN ISOLATION CASING ELEVATION		
LOCATION	TOP OF CASING (FT±)	CIDH PILE CUT-OFF (FT)
BENT 2L/2R	14.0'/21.5'	Note 2
BENT 3L/3R	12.5'/13.0'	Note 2
BENT 4L/4R	12.0'/12.5'	Note 2



COLUMN ISOLATION CASING
NO SCALE

BENT 2 THROUGH 4



PAY LIMITS FOR COLUMN ISOLATION CASING EXCAVATION AND BACKFILL
NO SCALE

BENT 2 THROUGH 4

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	C. Hensel	L. Valla
DETAILS	T. Bradshaw	L. Valla
QUANTITIES	L. Valla	A. Quiroz

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52-0040
POST MILE 21.54

VENTURA OH (REPLACEMENT)
COLUMN ISOLATION CASING DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-j-cic01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
1-3-23		08-28-23	08-29-23	20	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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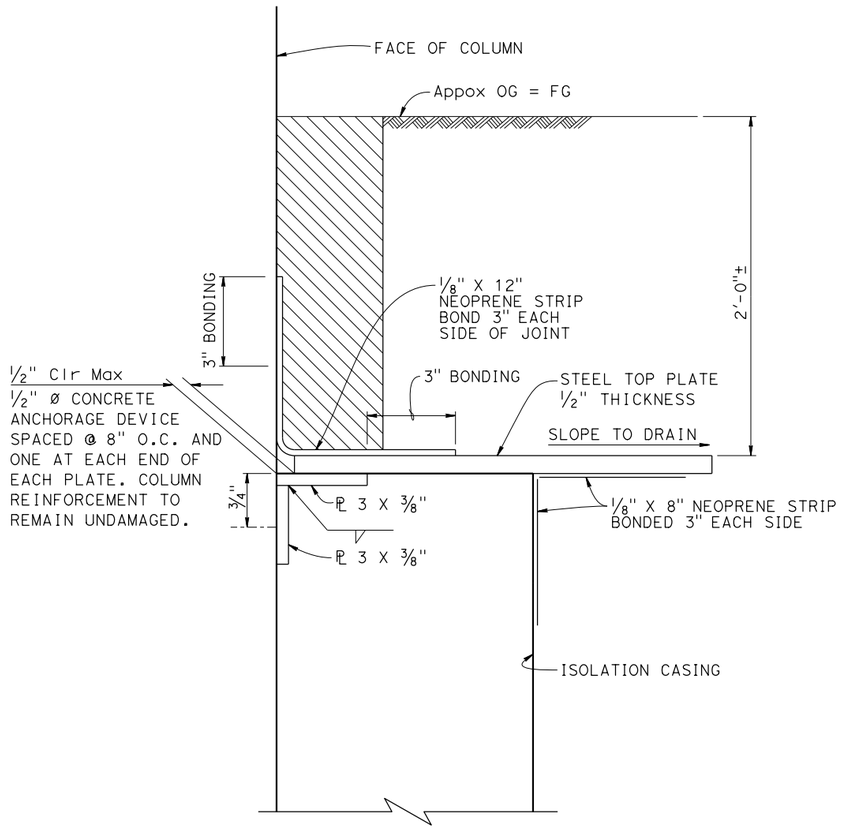
LEGEND:

Limits of 4" thick polystyrene all around columns typ except 8" at Bent 2R



NOTE: For location of "DETAIL E", see "COLUMN ISOLATION CASING DETAILS No. 1" sheet.

DETAIL E
NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	C. Hensel	L. Valla
DETAILS	T. Bradshaw	L. Valla
QUANTITIES	L. Valla	A. Quiroz

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0040
POST MILE 21.54

VENTURA OH (REPLACEMENT)
COLUMN ISOLATION CASING DETAILS No. 2

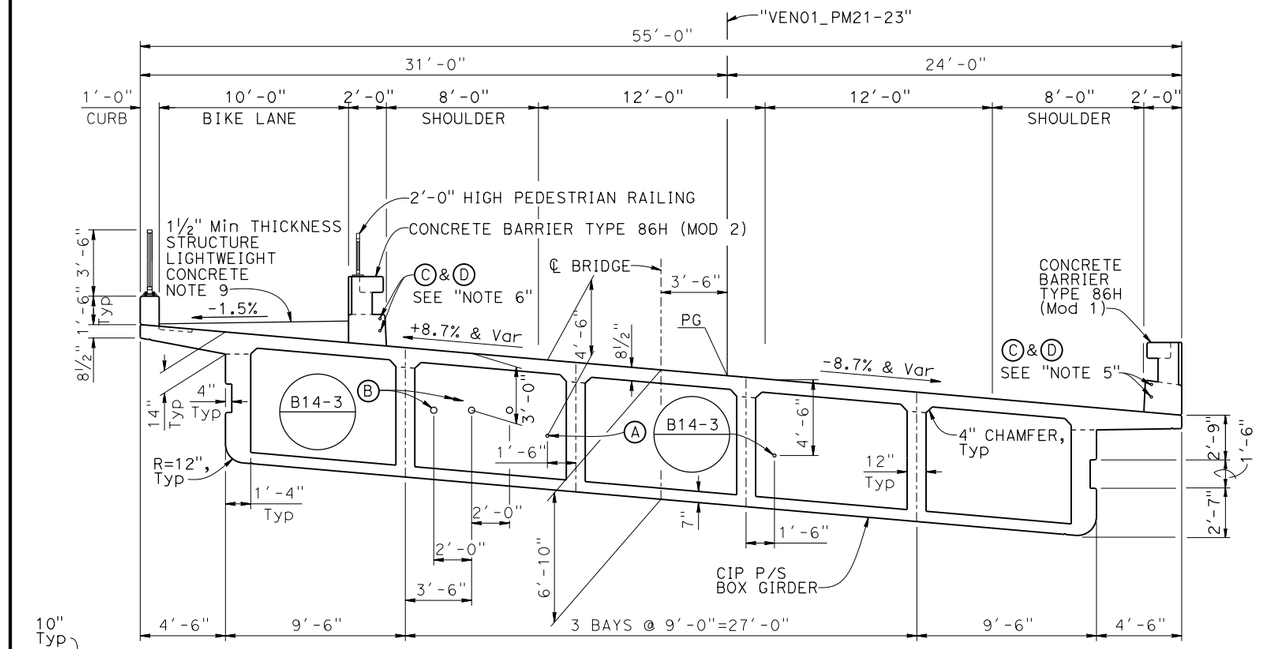
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-j-cic02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

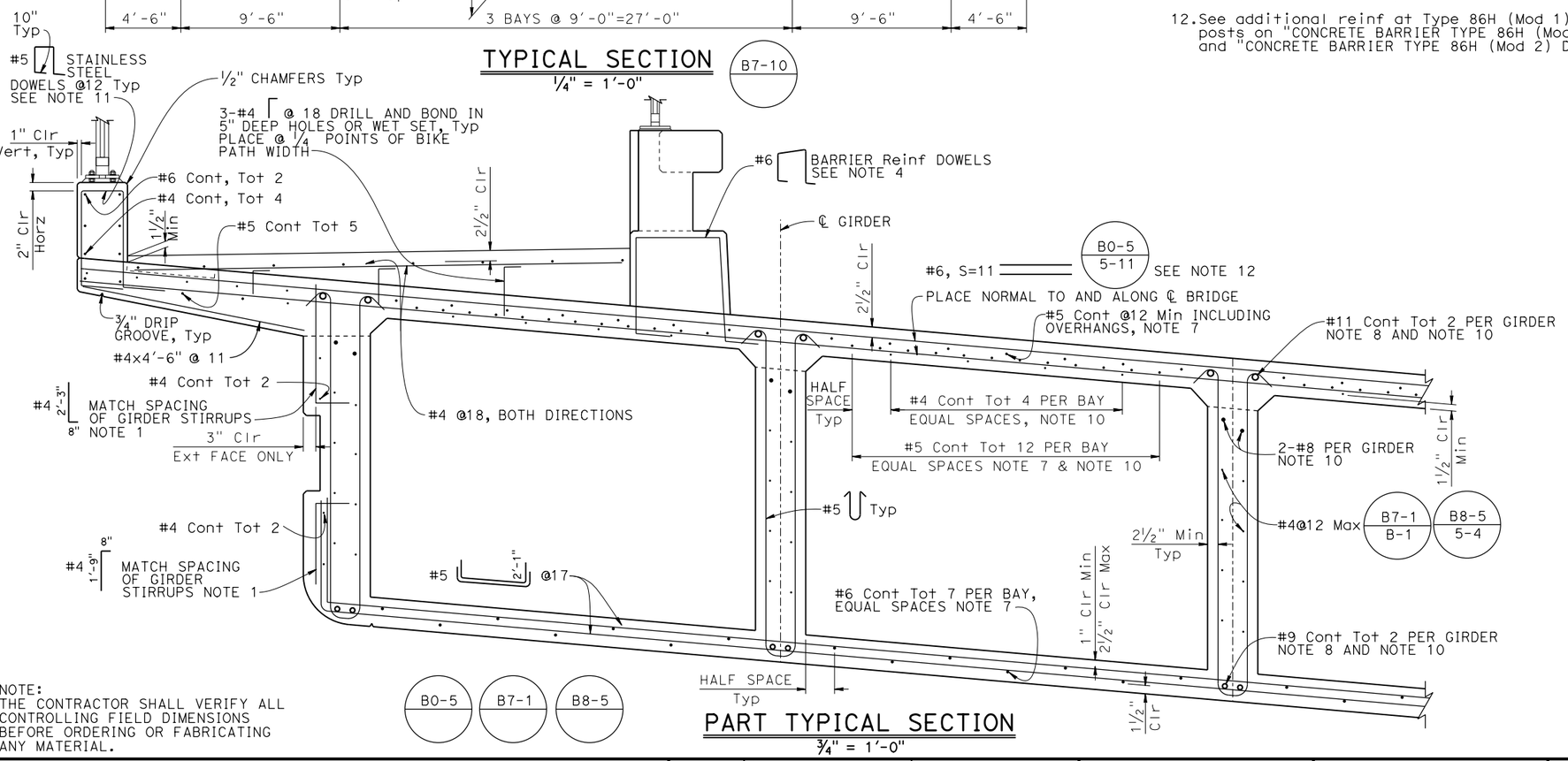
REVISION DATES				SHEET	OF
1-3-23	1-6-23	3-12-23		21	65



TYPICAL SECTION

¼" = 1'-0"

B7-10



PART TYPICAL SECTION

¾" = 1'-0"

NOTE:
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NOTES:

1. For Girder Stirrups, see "Longitudinal Section" on "GIRDER LAYOUT" sheet.
2. Falsework shall not be released less than 28 days after the last concrete has been placed.
3. For Concrete Barrier Type 86H (Mod 1) see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAIL No. 1" through "CONCRETE BARRIER TYPE 86H (Mod 1) DETAIL No. 5"sheets.
4. For Concrete Barrier Type 86H (Mod 2) see "CONCRETE BARRIER TYPE 86H (Mod 2) DETAIL No. 1" through "CONCRETE BARRIER TYPE 86H (Mod 2) DETAIL No. 4"sheets.
5. See "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 1" sheet and "ROADWAY ELECTRICAL PLANS" for limits of conduits.
6. See "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No. 1" sheet and "ROADWAY ELECTRICAL PLANS" for limits of conduits.
7. Use double lap splices on Top #5 and bottom #6 reinforcement as noted. Extend to end of Abutment Diaphragms with 90 degree hooks typical.
8. All #9 and #11 girder reinforcement to be serviced spliced. See "GIRDER REINFORCEMENT" sheet for locations.
9. Bike Lane Structure Lightweight Concrete is 1½" min above the deck and 3½" min at bottom of construction key-way block-outs. For construction key-way block-outs see "MISCELLANEOUS DETAILS" sheet.
10. Extend reinforcement to end of Abutment Diaphragm with 90° hooks, typical.
11. Use (2) sets in 12"± portion.
12. See additional reinf at Type 86H (Mod 1) and (Mod 2) barrier posts on "CONCRETE BARRIER TYPE 86H (Mod 1)DETAILS Nos 1 AND 3", and "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS Nos 1 AND 3" sheets.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

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UTILITY OPENING

LOCATION	UTILITY *	OWNER	CONDUIT SIZE	UTILITY OPENING SIZE W X H	
				ABUTMENT DIAPHRAGMS	BENTS
Ⓐ	LIGHTING	CALTRANS	2-2"ø	8"ø	6"ø
Ⓑ	COMMUNICATION CONDUIT	CALTRANS	3-4"ø	#	8"ø
Ⓒ	ELECTRICAL CONDUIT	CALTRANS	2-1½"ø	N/A	N/A
Ⓓ	SPRINKER CONTROL CONDUIT	CALTRANS	2-1½"ø	N/A	N/A

\# Use 12"Ø openings for Communication Conduits with NPS 8"Ø with ¼" Min wall thickness for steel casings.

* See ROADWAY PLANS for more details of conduits. Final locations to be approved by Engineer.

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

TYPICAL SECTION

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-k-ts.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606 COUNTY/ROUTE: Ven/01
PROJECT NUMBER & PHASE: 0716000025 & 1 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
6-16-23		8-16-23 08-18-23	22	65

PRESTRESSING NOTES

270 Ksi Low Relaxation Strand:

P_{jack}	= 14,120	(kips)
Anchor Set	= 3/8	(in)
Friction curvature coefficient μ	= 0.15	(1/rad)
Friction wobble coefficient K	= 0.0002	(1/ft)
Assumed long term losses	= 20	(ksi)
Total Number of Girders	= 6	
The final force ratio (larger divided by smaller) between any two girders shall not exceed exceed the ratio of:	= 10 to 9	

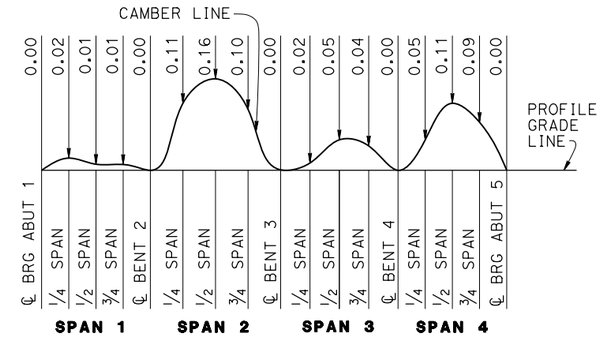
Concrete: f'_c = 6,000 psi @ 28 days

f'_{ci} 3,500 psi @ time of stressing

Contractor shall submit elongation calculations based on initial stress at

☒ = 0.717 times jacking stress.

One end stressing shall be performed from Abutment 1 end



DOES NOT INCLUDE ALLOWANCE FOR FALSEWORK SETTLEMENT

CAMBER DIAGRAM

NO SCALE

NOTES:

1. For additional details and reinforcement, see "TYPICAL SECTION" sheet.

LEGEND:

16 Girder stem width in inches

PRESTRESSING SEQUENCE:

Stressing shall not take place until the deck has been placed and reached required strength

P_{jack} to be applied in stages:

Stage 1: Stress Bent 2 Outrigger Cap to 50% P_{jack} = 8,060 Kips

Stage 2: Stress Bridge to 50% P_{jack} = 7,060 Kips

Stage 3: Stress Bent 2 Outrigger Cap to 100% P_{jack} = 16,120 Kips

Stage 4: Stress Bridge to 100% P_{jack} = 14,120 Kips

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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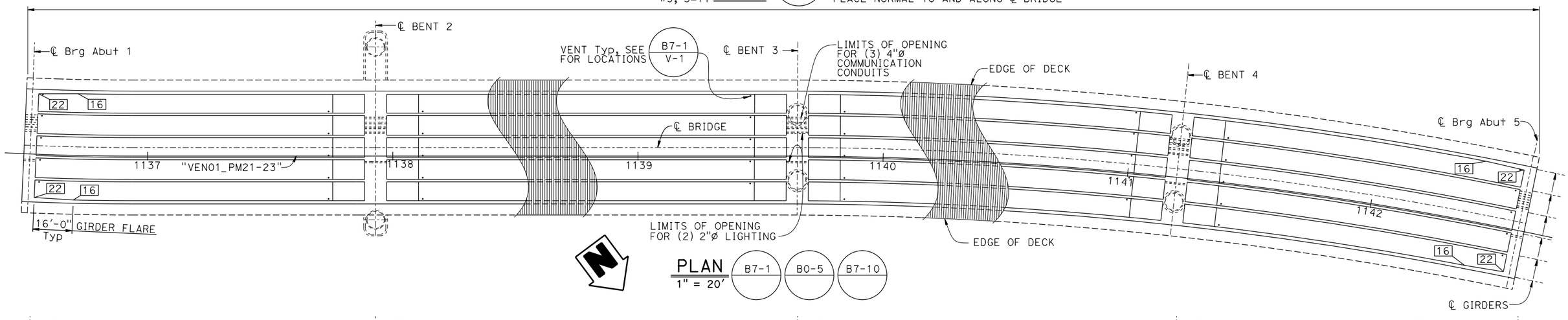
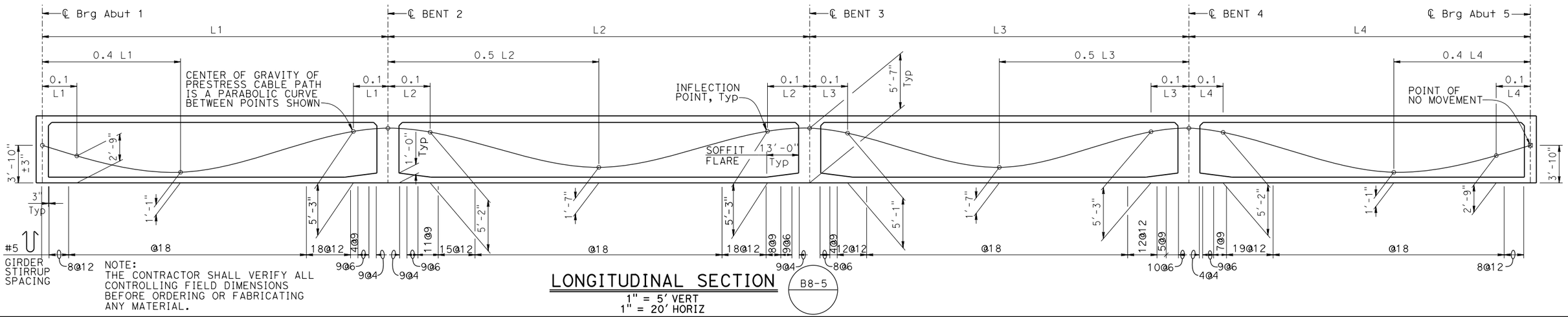
#5, S=11 ═══ B0-5 / B5-11 PLACE NORMAL TO AND ALONG ℄ BRIDGE



PLAN

1" = 20' B7-1 B0-5 B7-10



NOTE:
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LONGITUDINAL SECTION

1" = 5' VERT
1" = 20' HORIZ

B8-5

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

GIRDER LAYOUT

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-1-g_lo.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
09-20-22		8-16-23	08-18-23	23	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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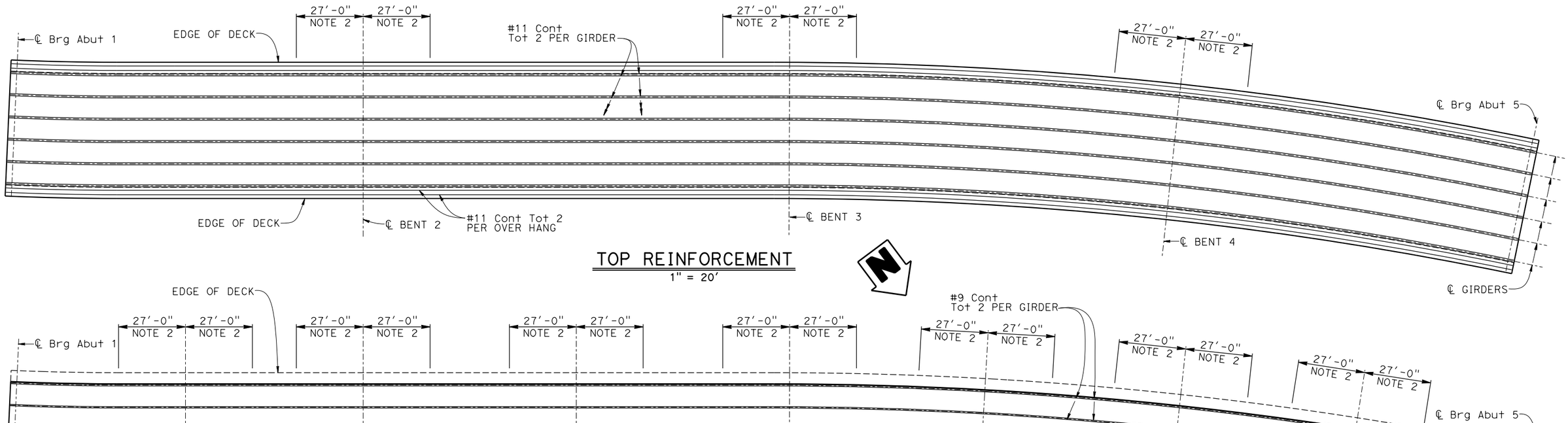
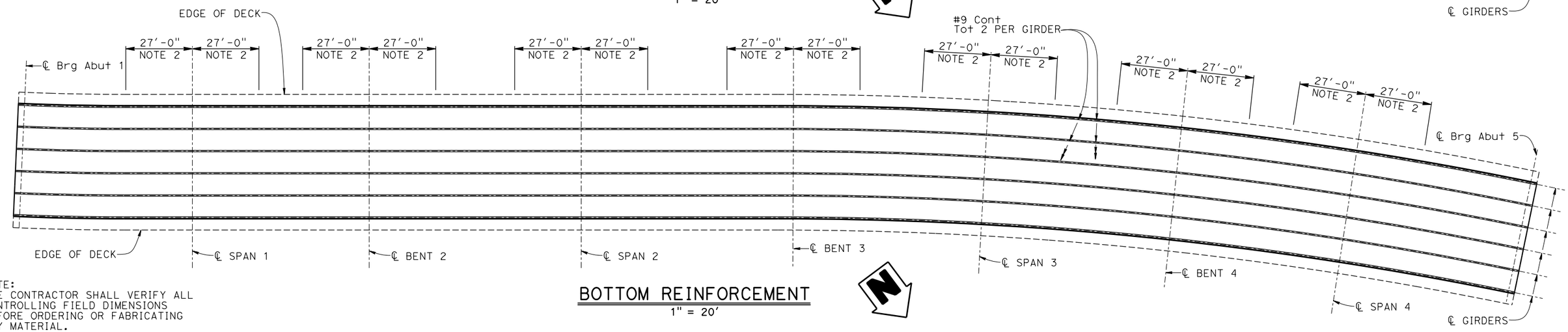
NOTES:

1. For additional details and reinforcement, see "TYPICAL SECITON" sheet.
2. No splices allowed in this zone.
3. Splices shall be "Service" butt spliced.



TOP REINFORCEMENT
1" = 20′



BOTTOM REINFORCEMENT
1" = 20′

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
GIRDER REINFORCEMENT

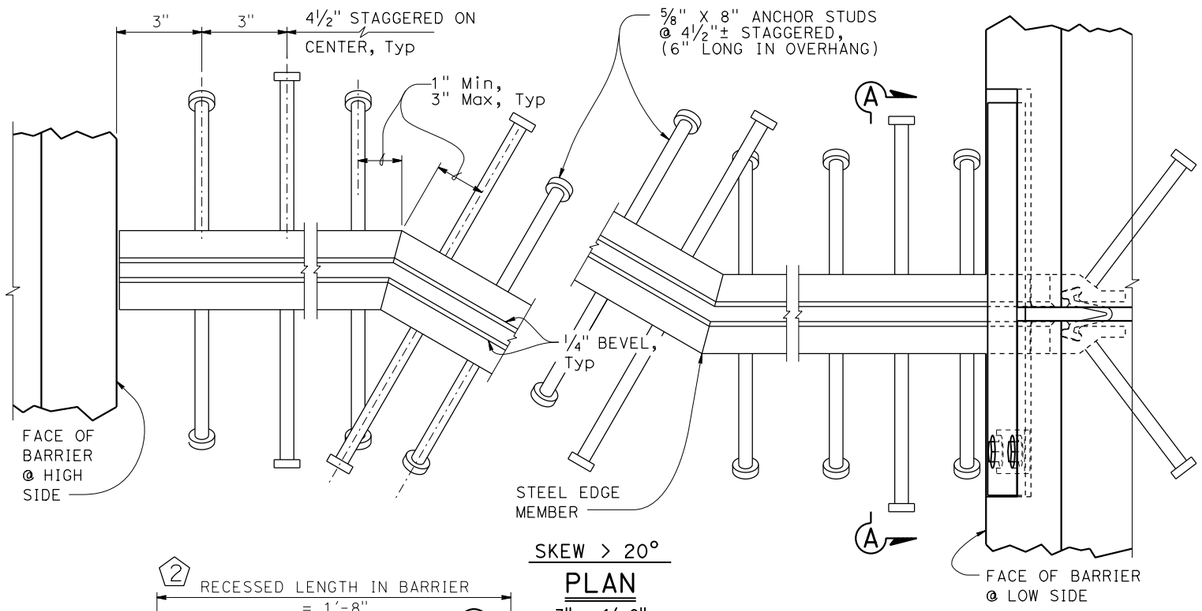
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-o-gir_rf.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

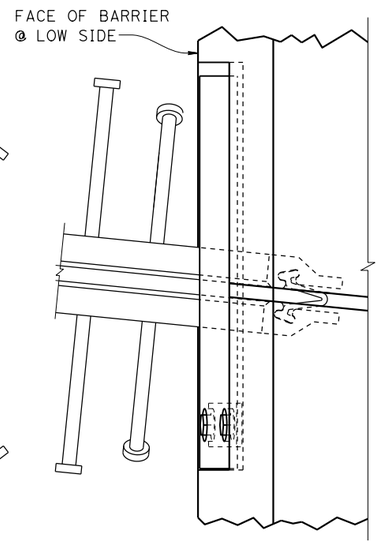
REVISION DATES				SHEET	OF
09-21-22	10-17-22	02-15-23	07-19-23	24	65



SKEW > 20°

PLAN

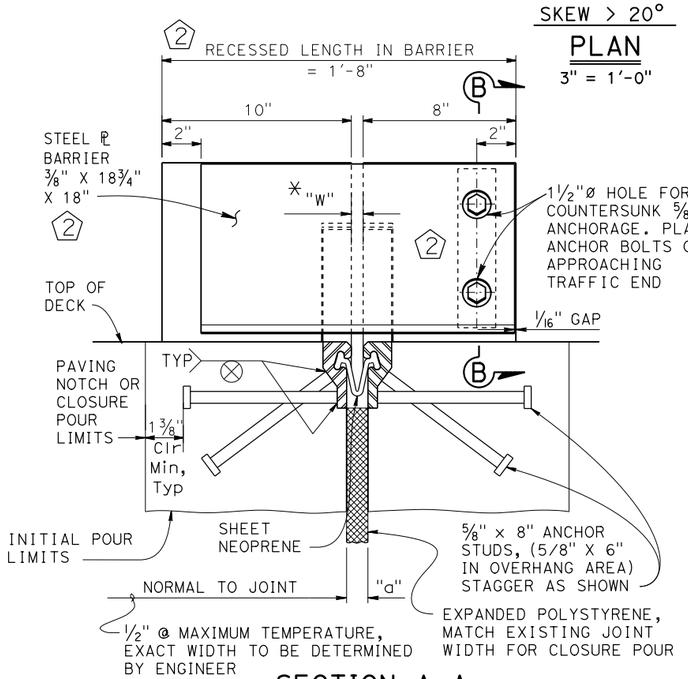
3" = 1'-0"



SKEW ≤ 20°

PLAN

3" = 1'-0"



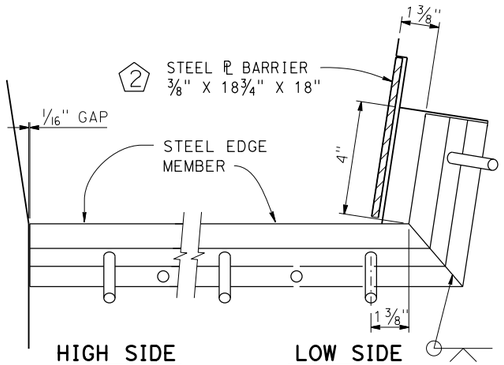
SECTION A-A SEE NOTE 11

3" = 1'-0"

* TO SET MINIMUM JOINT OPENING "W"

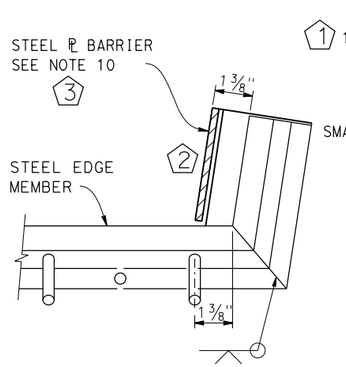
"W" = { ½"+[(Max Str temperature in °F)-(actual Str temperature in °F)]*(a or a)(12)(contributory L in feet) ; ½" Minimum ; a_C = 0.0000060 ; a_S = 0.0000065 }
c s

JOINT INFORMATION			"a" DIMENSIONS		
LOCATION	MOVEMENT RANGE (MR)	SKEW	WINTER	SPRING & FALL	SUMMER
Abut 1	4 in	0°	2 in	1½ in	1 in
Abut 5	4 in	0°	2 in	1½ in	1 in



BARRIER DETAIL

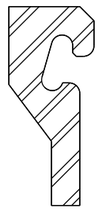
3" = 1'-0"



SIDEWALK DETAIL

3" = 1'-0"

(1) NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.



SCHEMATIC STEEL EDGE MEMBER

NO SCALE

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

The State of California or its officers or agents shall not be responsible for the accuracy or completeness of scanned copies of this plan sheet.

The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.

NOTES:

(4) 1. ~~Alternatively, fillet or complete penetration welds may be used at anchor studs.~~

2. Alternate types of anchor studs may be permitted subject to the authorization by the Engineer.
3. Joint seal assembly to be used in conjunction with closure pour. (See other sheets for limits). Closure pour shall not be placed until final deck surface is within the tolerances specified.
4. Use joint at crown of roadway, at any change in transverse slope in deck and at changes in horizontal direction. Place other joints at or near lanes. All metal parts to be painted or galvanized after fabrication.
5. Sheet Neoprene shall be fabricated in one continuous piece and shall be fabricated to bend around corners. Field splices of the neoprene are not allowed.

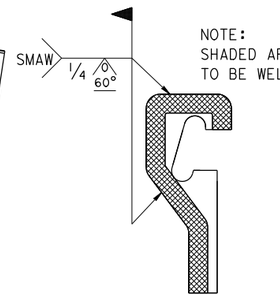
(3) 6. Insert assembly or expansion anchorage for ⅝" x 3" bolts. Use installation bolts extended ½" minimum past nut and coat with bond breaker, after concrete has cured, remove installation bolts, install HS bolts and sheet neoprene.

(4) 7. ~~Use sidewalk detail at all sidewalk joints.~~ Use barrier detail low side at both sides if the roadway is crowned, or if the difference in elevation between the ends of the seal is 6 inches or less.

8. a_C, a_S, are the thermal expansion coefficients for concrete and steel respectively.
9. Anchor studs shall conform to ASTM A108.

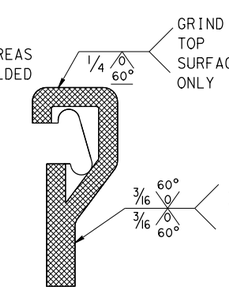
(1) 10. For curb details see "JOINT ARMOR AT CURB DETAILS" sheet.

(1) 11. For complete details see "JOINT ARMOR AT CONCRETE BARRIER TYPE 86H (Mod 1) AND (Mod 2) DETAILS" sheet.



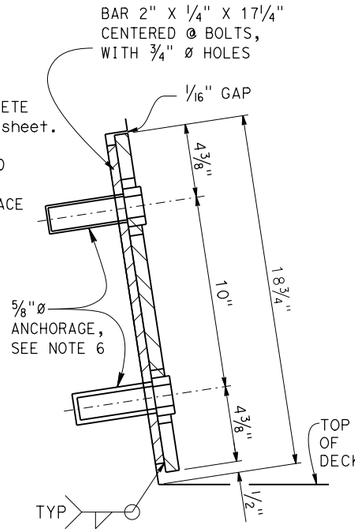
SCHEMATIC FIELD WELD DETAIL

NO SCALE



SCHEMATIC SHOP WELD DETAIL

NO SCALE



(2) SECTION B-B

NTS SEE NOTE 11

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs8-010 (FILE NO.)	January 2021 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

(1) Added Notes (3) Revised Notes
(2) Revised Details (4) Voided Notes

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.	VENTURA OH (REPLACEMENT)
52-0471	
POST MILE	STRIP JOINT SEAL ASSEMBLY (MAX MOVEMENT RATING=4")
21.54	

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52-0471-o-xs8-010.dgn
USERNAME => s128972 TIME PLOTTED => 11:36 DATE PLOTTED => 31-AUG-2023

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251 CONTRACT NO.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~6-23-14~~	~~3-17-23~~	6-8-23	6-16-23	25	65

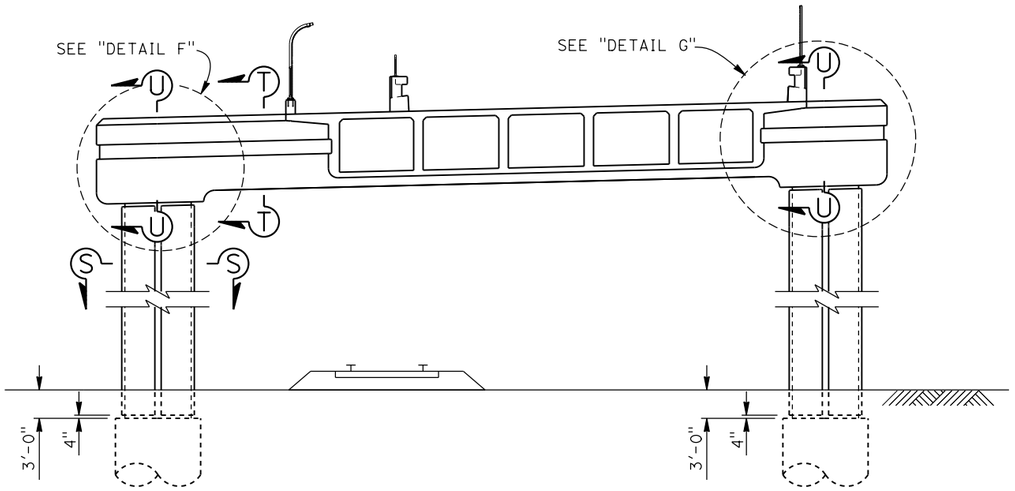
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

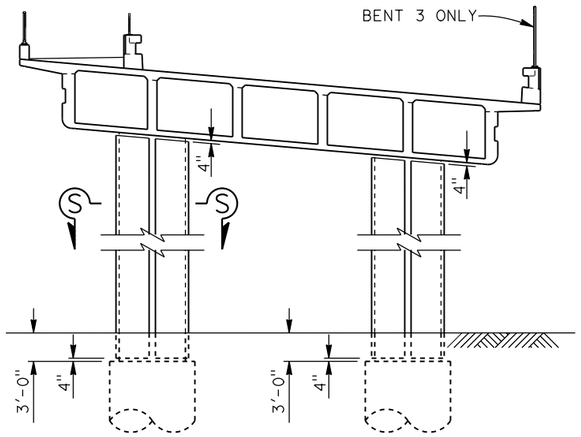
PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

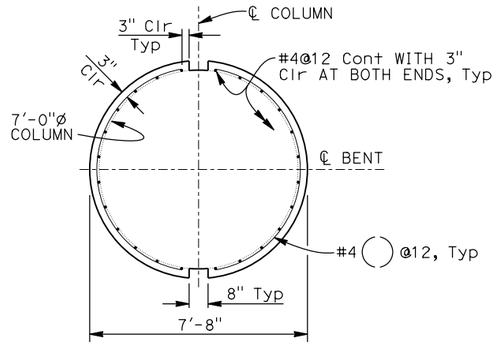


BENT 2
1/8" = 1'-0"

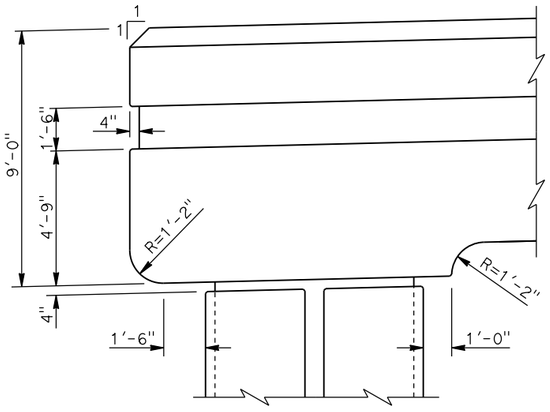


NOTE: Bent 4 shown Bent 3 similar

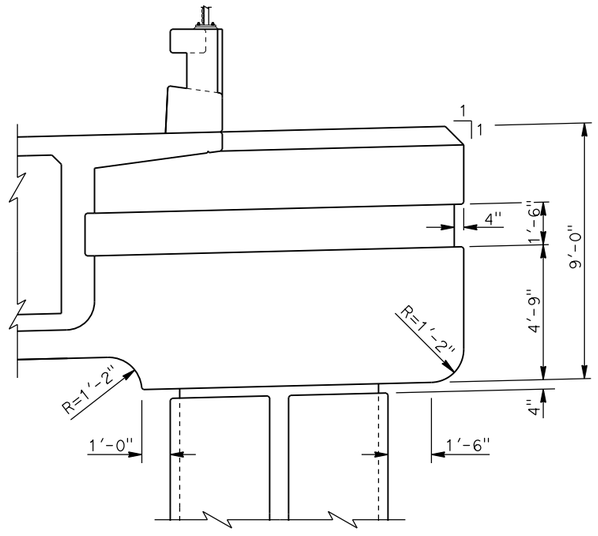
BENTS 3 & 4
1/8" = 1'-0"



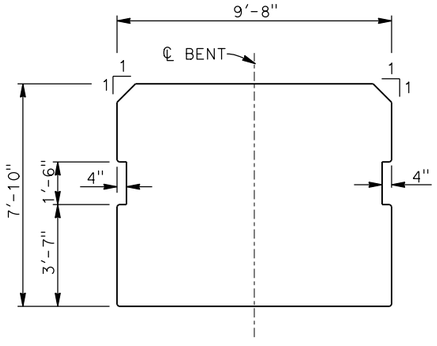
SECTION S-S
3/8" = 1'-0"



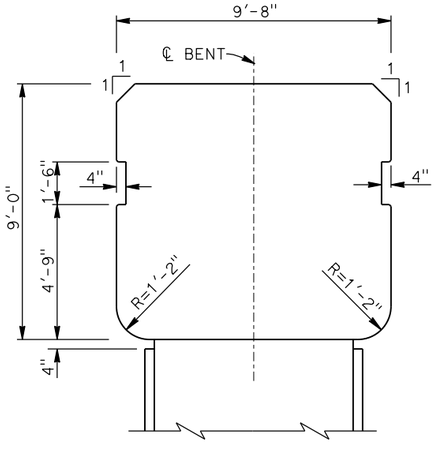
DETAIL F
3/8" = 1'-0"



DETAIL G
3/8" = 1'-0"



SECTION T-T
3/8" = 1'-0"



SECTION U-U
3/8" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

		BY	CHECKED
DESIGN		C. HENSEL	L. VALLA
DETAILS		A. Onodera	L. VALLA
QUANTITIES		L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No.	52-0471
POST MILE	21.54

VENTURA OH (REPLACEMENT)
ARCHITECTURAL DETAILS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-r-archi01.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~2-24-23~~		04-28-23	~~04-15-23~~	26	65

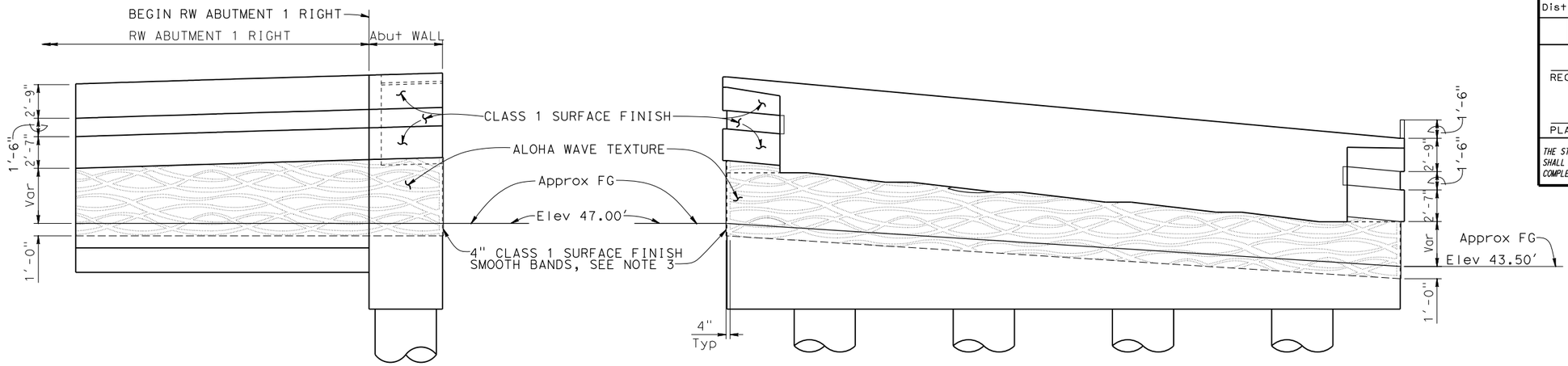
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA



PARTIAL RETAINING WALL ABUTMENT 1 RIGHT ELEVATION

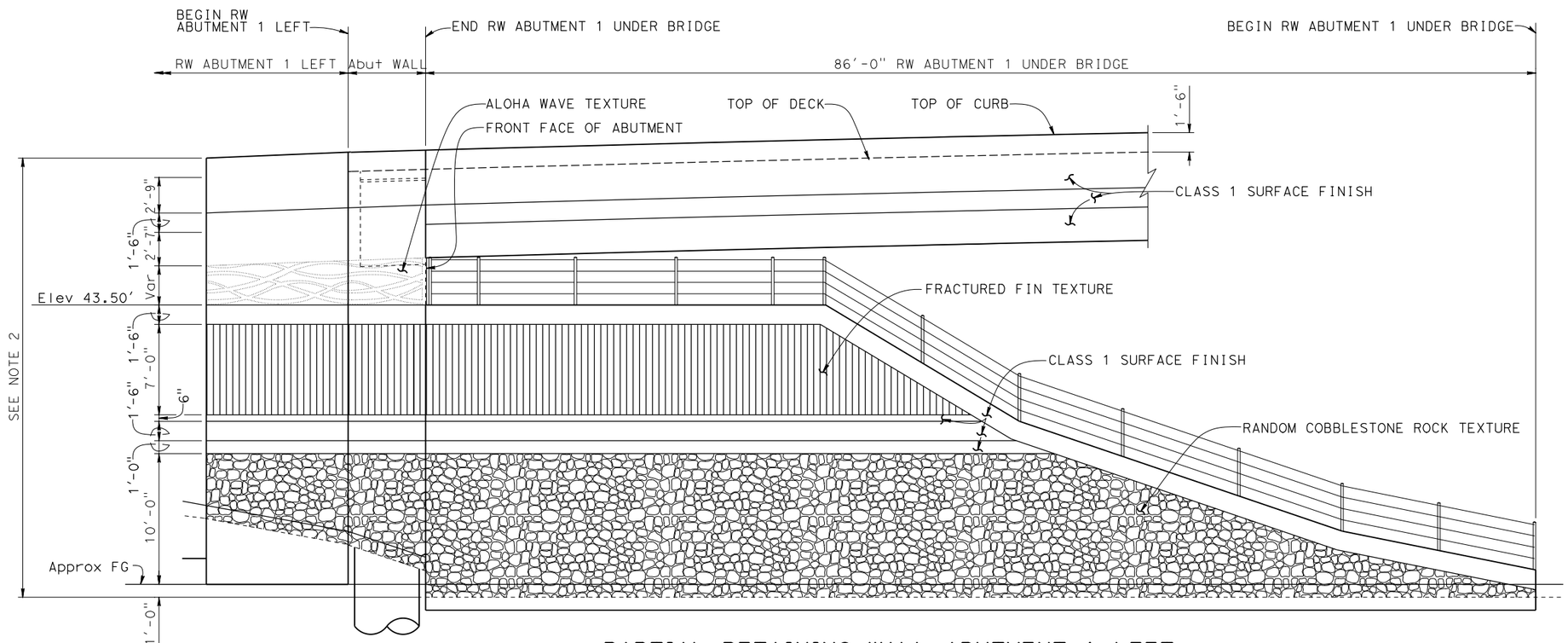
1" = 5'

NOTE: Barriers not shown for clarity

FRONT FACE ABUTMENT 1 ELEVATION

1" = 5'

NOTES:
1. Abutment 1 shown, abutment 5 similar.
2. Bike curb, bike path railing and concrete barriers not shown for clarity.
3. For more details, see "CONCRETE SURFACE TEXTURE DETAILS No. 3".



NOTES:

1. Railing not shown for clarity.
2. For Concrete Surface Texture Formed Relief section details and limits of payments see "CONCRETE SURFACE TEXTURE FORMED RELIEF DETAILS No. 1" sheet in "TYPICAL SECTION A-A" in Retaining Wall Abutment 1 Left Structure Plans.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

PARTIAL RETAINING WALL ABUTMENT 1 LEFT AND RETAINING WALL ABUTMENT 1 UNDER BRIDGE MIRRORED DEVELOPED ELEVATION

1" = 5'

DESIGN	BY A. SANCHEZ	CHECKED L. VALLA	
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA	
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE SURFACE TEXTURE DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 11-SEP-2023 TIME PLOTTED => 08:42
FILE => 52-0471-r-arch102.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
02-21-23		08-08-23	09-11-23	27	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

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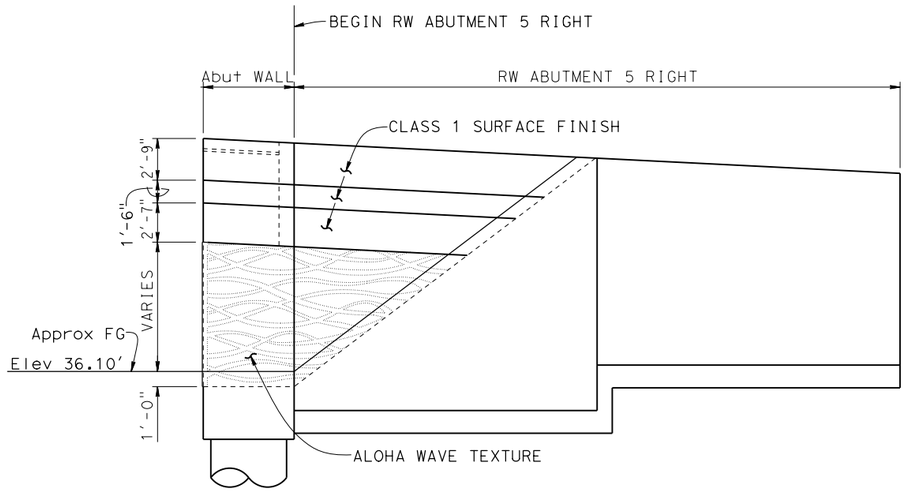
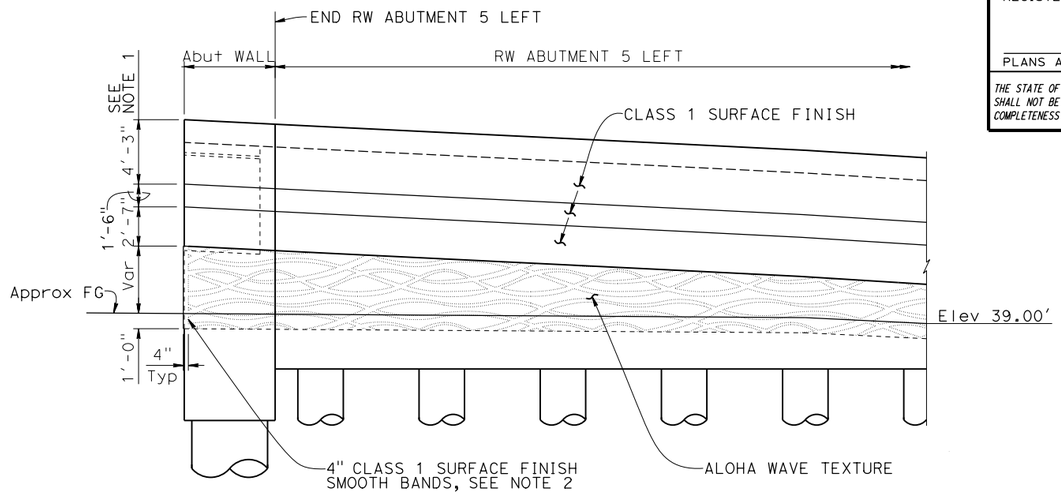
REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA



RETAINING WALL ABUTMENT 5 RIGHT ELEVATION

1" = 5'

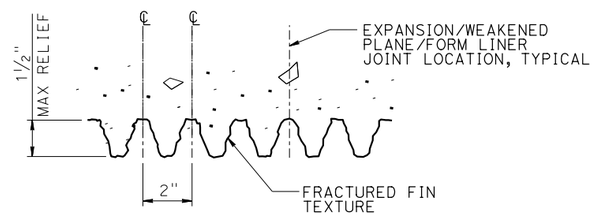
NOTE: Barriers not shown for clarity.



PARTIAL RETAINING WALL ABUTMENT 5 LEFT MIRRORED ELEVATION

1" = 5'

NOTES:
1. Railing not shown for clarity.
2. For more details see "CONCRETE SURFACE TEXTURE DETAILS No. 3" sheet.



FRACTURED FIN TEXTURE

NO SCALE

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY A. SANCHEZ	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY T. DOAN/T. BRADSHAW	CHECKED L. VALLA	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	BRIDGE No. 52-0471 POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE SURFACE TEXTURE DETAILS No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 10:13
FILE => 52-0471-r-archi03.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
2-24-23		8-9-23 09-06-23	28	65

NOTES:

1. Aloha Wave Texture must be pattern matched 1½" minimum band width and 5½" maximum band width.
2. Random Cobblestone Rock Texture must be pattern matched and puzzled together on all four sides. Rock sizes must be random, 3" minimum rock size and 1'-0" maximum rock size. Prepare and stain concrete.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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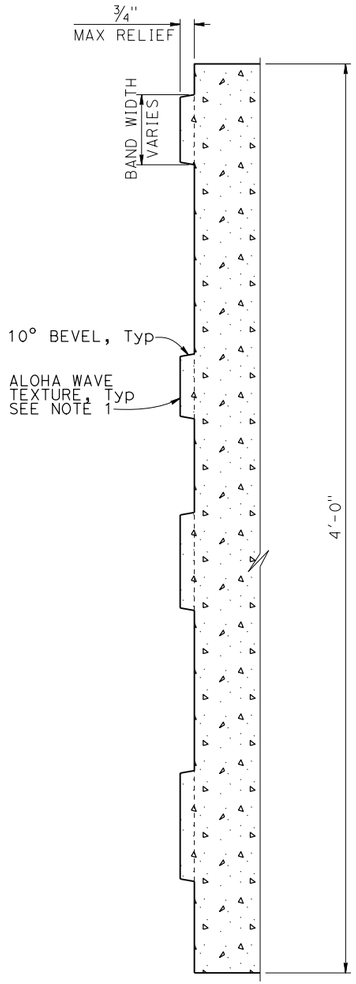
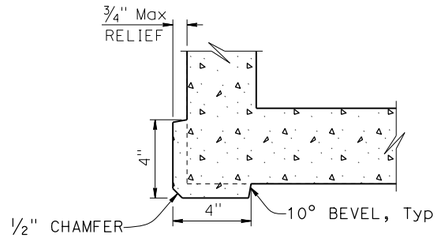
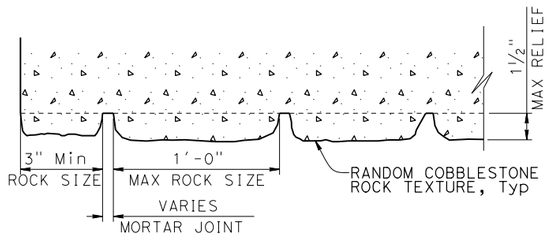


SECTION A-A
NO SCALE



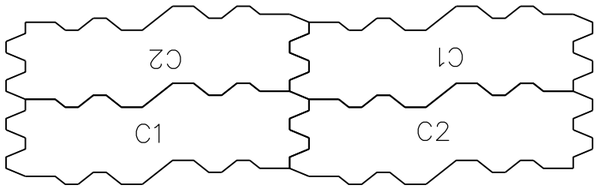
SECTION B-B
NO SCALE



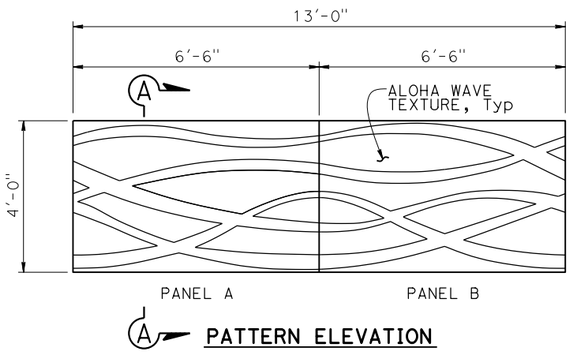
SECTION C-C
NO SCALE

A	B	A	B
A	B	A	B

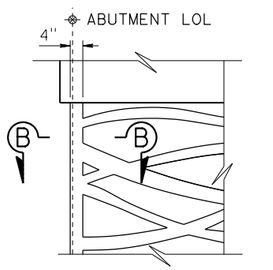
ALOHA WAVE TEXTURE PATTERN LAYOUT



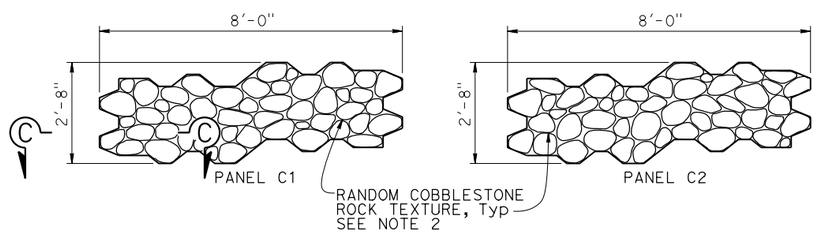
PATTERN LAYOUT



PATTERN ELEVATION



CORNER CONDITION AT ABUTMENT



PATTERN ELEVATION

ALOHA WAVE TEXTURE
½" = 1'-0"

RANDOM COBBLESTONE ROCK TEXTURE
½" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	A. SANCHEZ	L. VALLA
DETAILS	T. DOAN/T. BRADSHAW	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
CONCRETE SURFACE TEXTURE DETAILS No. 3

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

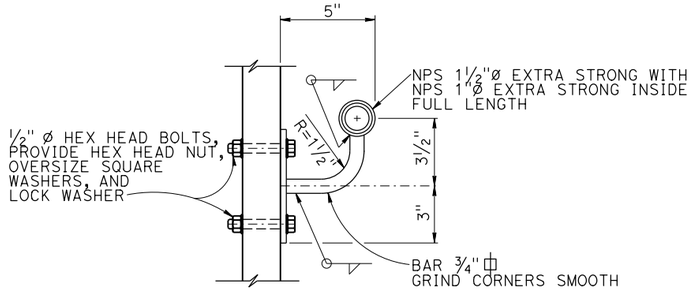
DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 15:45
FILE => 52-0471-r-archi04.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

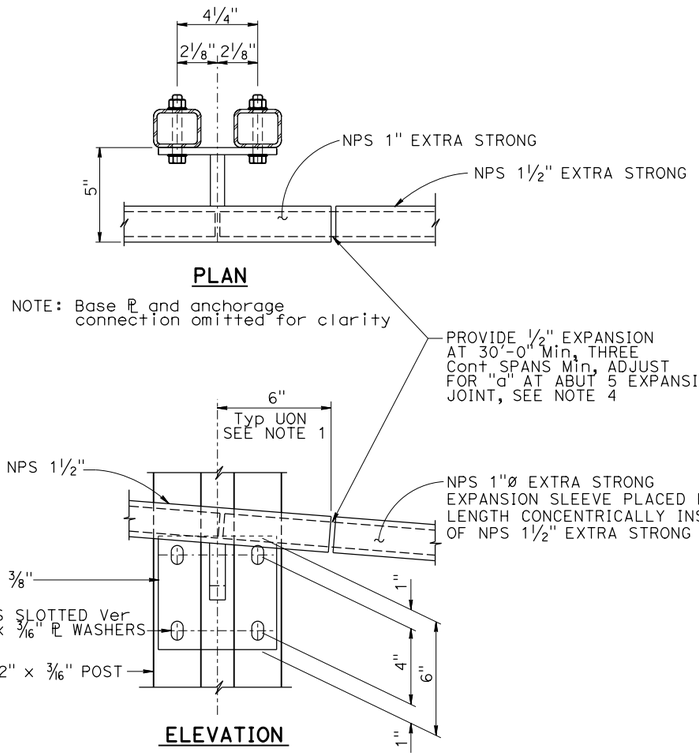
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
09-06-23				29	65



SIDE VIEW



PLAN

NOTE: Base ℄ and anchorage connection omitted for clarity

ELEVATION

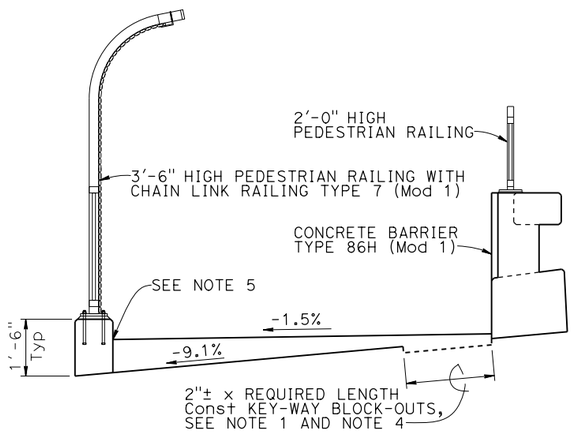
NOTES:
1. Use 8" at Abutmnet 5 expansion joint
2. UON = Unless Otherwise Noted
3. Railing and connections omitted for clarity
4. Expansion joint adjustment "a" per "STRIP JOINT SEAL ASSEMBLY MAX MOVEMENT RATING = 4" sheet.

TUBULAR HANDRAILING BRACKET DETAILS

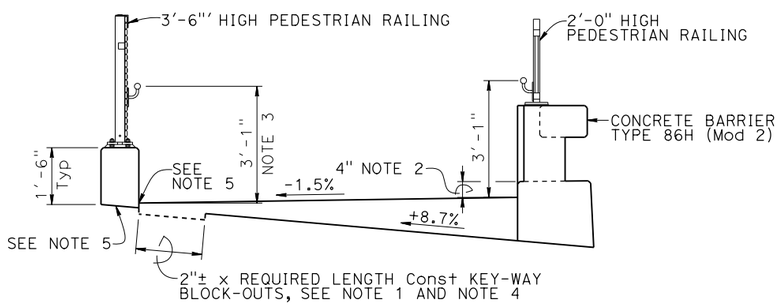
NO SCALE

NOTES:

1. Contractor to place construction key-way block-outs as required so thickness of bike path placed concrete is 3.5" min. Also so bike path longitudinal and transverse reinforcement will be placed correctly as shown on "TYPICAL SECTION" sheet. Construction key-way block-outs will be the widest where bridge cross slope is 0°± and will be narrower as the bridge cross slope varies from 0° to +10° and 0° to -8.7°.
2. Contractor to hold 4" min curb height dimension on high side of bike path bridge limits at 20'-0" Lt Station 1139+70± through 1144+60± "VEN01_21-23".
3. Limits for hand rail are from lowside of Bike Path: 30'-0" Lt Station 1141+90 through 1145+00 "VEN01_21-23". Highside of Bike Path: 20'-0" Lt Station 1141+90 through 1145+00 "VEN01_21-23".
4. Bridge Longitudinal Section can be prestressed before construction key-way block-outs and Bike Path are placed.
5. Curb is to have Joint armor over "W" and 1/2" expansion joints. Use expansion joint filler between joint armor at curb and bike path per "JOINT ARMOR AT CURB DETAILS" sheet. "W" per "STRIP JOINT SEAL ASSEMBLY MAX MOVEMENT RATING=4" sheet.



BB AT ABUT 1 BRIDGE SLOPE = -9.1%



EB AT ABUT 5 BRIDGE SLOPE = +8.7%

CURB HEIGHT AND BIKE PATH TRANSITION

½" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

MISCELLANEOUS DETAILS

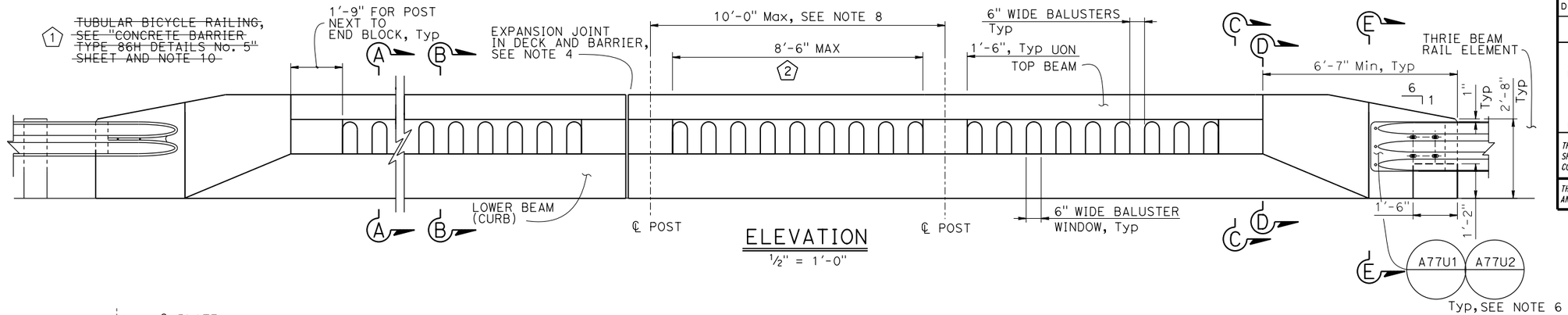
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:36
FILE => 52-0471-u-miscdt.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

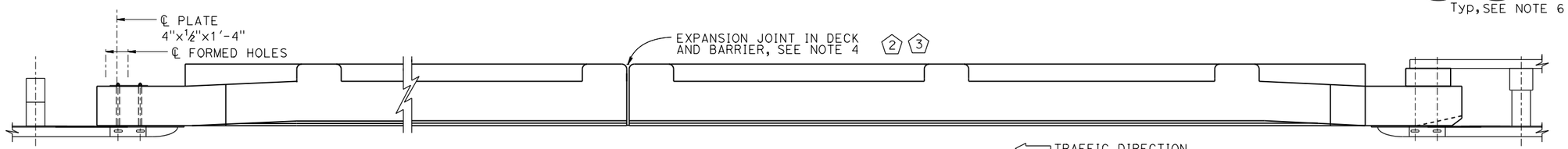
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
03-20-23		06-07-23	07-20-23	30	65



ELEVATION

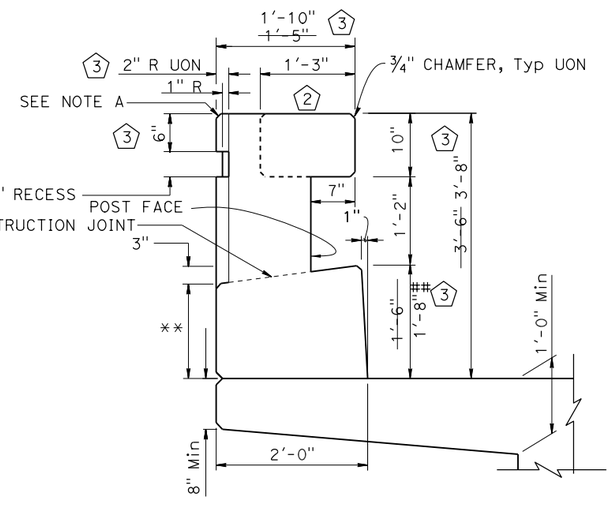
½" = 1'-0"



PLAN

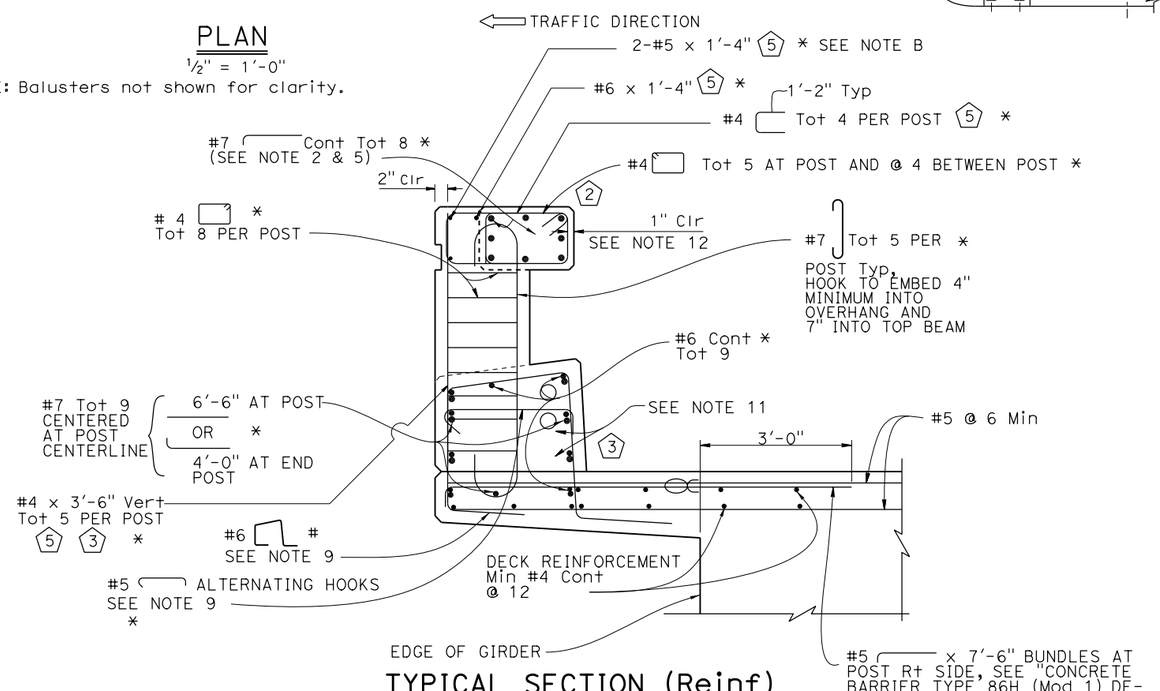
½" = 1'-0"

NOTE: Balusters not shown for clarity.



TYPICAL SECTION (GEOMETRY)

NTS 6



TYPICAL SECTION (Reinf)

NTS 6

SEE NOTE C

1 4 ## Dimension must be 1'-8" above top of Bridge Deck or FG (including overlay). ~~Increase lower beam (curb) height by 2" Max to match overlay depth.~~

4 ** Dimension determined by bridge cross-slope.

4 NOTE A: Use ½" chamfer on Posts which support Roadway Signs.

5 4 NOTE B: Use 2-#6 x 1'-4" at 6'-6"± high Chain Link Railing Type 7 (Mod 2) Posts and Posts where Roadway Signs are connected.

UON = Unless otherwise noted

4 NOTE C: Rt side barrier at bridge shown. Lt side detail similar without hook on additional #5 transverse reinforcement. Lt side reinf length starts at Overhang.

LEGEND: * = Prefabricated Epoxy Coated Reinforcement in Barrier only 3

= Stainless Steel Barrier Dowels 3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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NOTES:

1. If departure end block is within the Clear Recovery Zone (CRZ, 30 feet for expressways and freeways and 20 feet for conventional highways) of opposing traffic, then use the approach end block at departure end.
2. Longitudinal reinforcing steel to stop at all expansion joints.
3. The front face dimensions are to be constant above the finished roadway profile, but the overall height will vary with certain thicknesses of surfacing and roadway slopes.
4. Bridge rail expansion joint to match deck joint, 1" Minimum.
5. Butt welds are acceptable alternative splice to lap splicing #7 bars. No portion of a lap splice can encroach on the post location.
6. For typical metal railing connection details not shown, see Standard Plans A77U1 and A77U2.
7. Chain link railing is not allowed on Type 86H (Mod 1) Barriers, except over railroads and for locations with security concerns.
8. Posts to be spaced equally, ~~typically~~ 10'-0" spacing. Post 4 spacing may be reduced where location of expansion joints or the length of wingwalls will not accommodate the 10'-0" spacing. Maximum see-through availability is to be strived for, while maintaining 6" clear opening, where 10'-0" post spacing can not be achieved.
9. For additional reinforcement 4 details, see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 3".
10. ~~Tubular bicycle railing to extend to where level bench elevation along exterior face of wing wall is within 1'-0" of roadway shoulder FG.~~ 1
11. The maximum number of conduits is limited to two 1½" ø and must be placed in the front half of the lower beam curb. See also Standard Plan B14-3, "CONDUIT IN BRIDGE RAILING" detail.
12. 1" clearance, typical for bridge rail except for 2" clearance at traffic face and back side of lower beam (curb).
13. For "SECTION C-C", "SECTION D-D" & "SECTION E-E" see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 2" sheet. 4
14. For "SECTION A-A" & "SECTION B-B" see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 4" sheet. 4

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-1 FILE NO.	JULY 2022 APPROVAL DATE	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

1 VOIDED NOTES 3 REVISED DIMENSIONS AND DETAILS 5 ADDED REINF
2 DELETED BIKE TUBULAR RAILING 4 REVISED NOTES 6 CHANGED SCALE

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 1

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 14:14
FILE => 52-0471-y-xs16-127-01-1.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

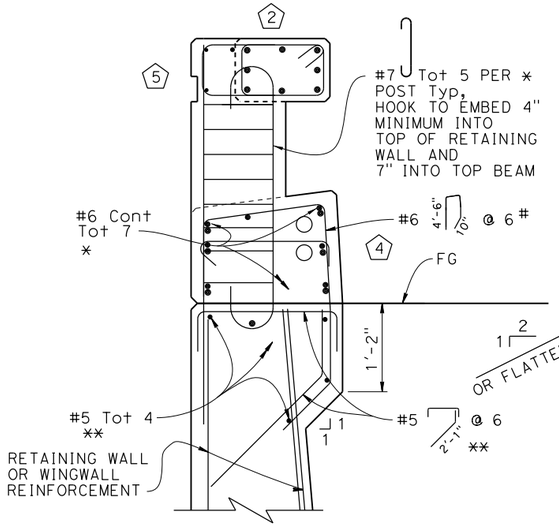
UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES

SHEET 31 OF 65

(1) ~~TUBULAR BICYCLE RAILING~~



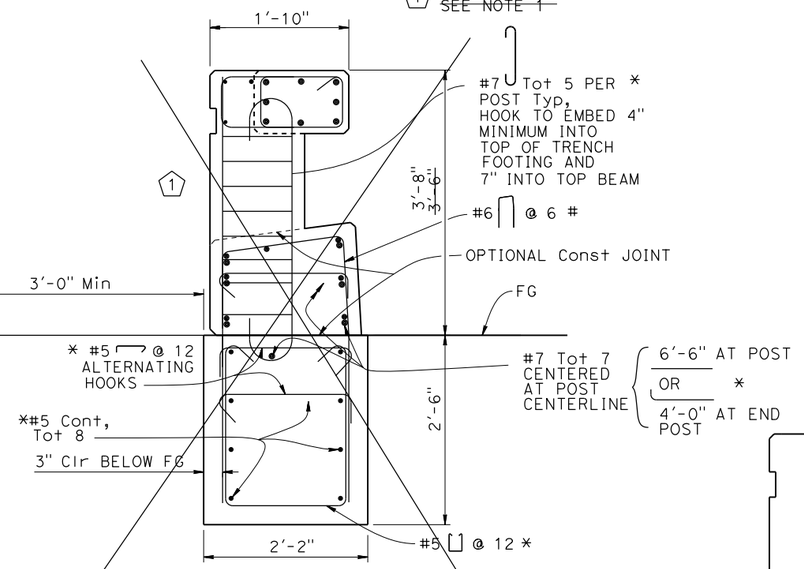
TYPE 86HA (Mod 1)

NTS (6)

(3)

NOTE: For Type 86HA (Mod 1) locations see Structure Plans "RW Abut 1 RIGHT" AND "RW Abut 5 RIGHT".

(1) ~~TUBULAR BICYCLE RAILING SEE NOTE 1~~



TYPE 86HB (Mod 1)

NTS (6)

NOTES: (3)

(1) ~~1. Tubular bicyc e railing optional for Type 86HB.~~
2. 40'-0" minimum length for Type 86HA (Mod 1)
3. For geometry and reinf not called out see "TYPICAL SECTION" on "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No 1" sheet.
4. For details not shown, see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No 1" & " CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No 3" sheets.
5. For "SECTION C-C","SECTION D-D" AND "SECTION E-E" locations see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No 1" sheet.
6. Walls are to be backfilled before the barrier is placed.
7. Only the reinforcing for post transition is shown.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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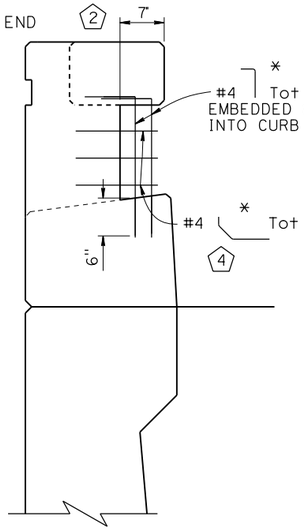
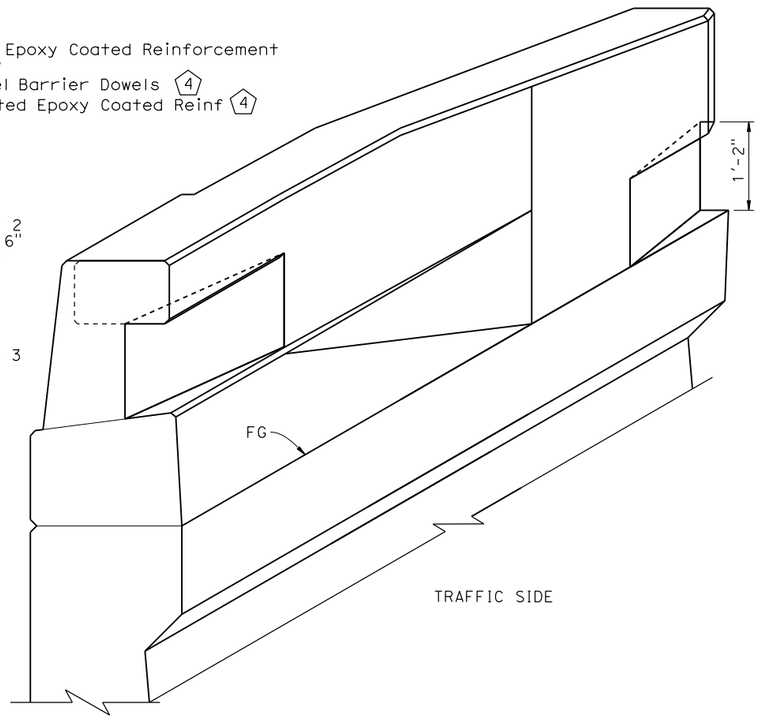
LEGEND:

* = Prefabricated Epoxy Coated Reinforcement in Barrier only (4)
\# = Stainless Steel Barrier Dowels (4)
** = Post-fabricated Epoxy Coated Reinf (4)

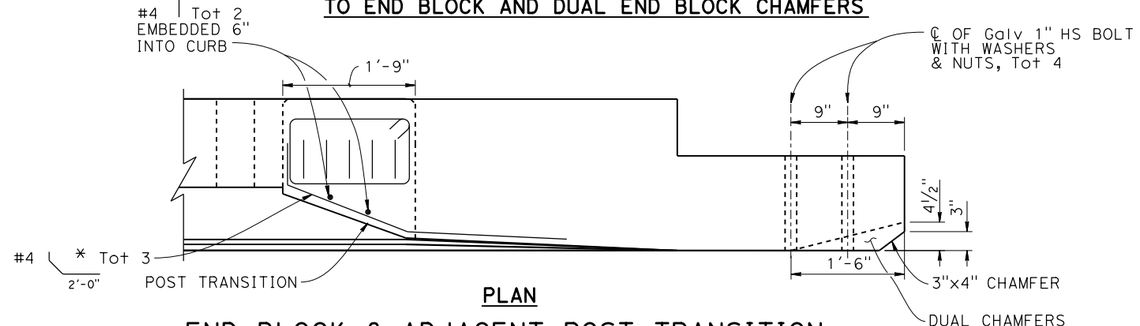


SECTION C-C

NOTE: See Note 7.



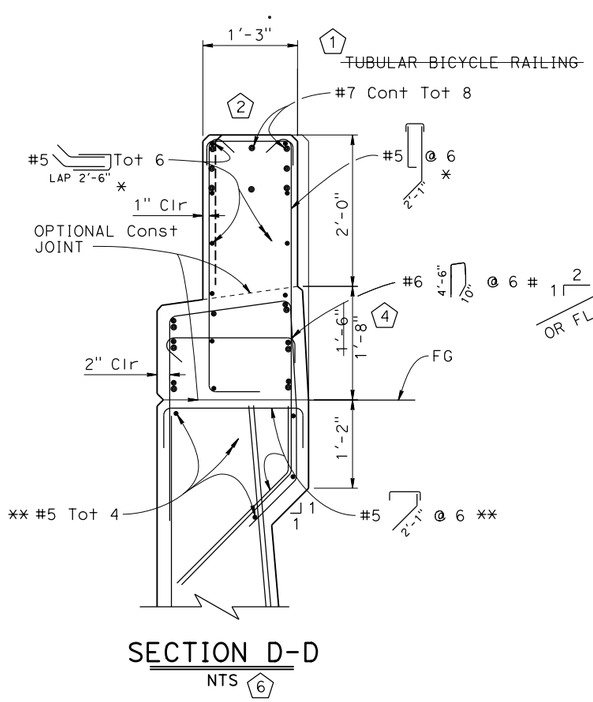
PERSPECTIVE OF POST FACE TRANSITION TO END BLOCK AND DUAL END BLOCK CHAMFERS



PLAN

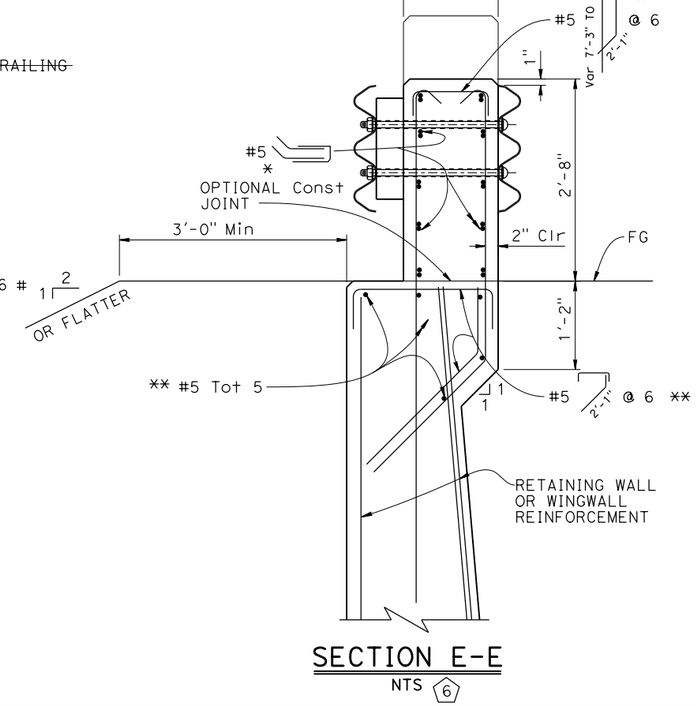
END BLOCK & ADJACENT POST TRANSITION

1" = 1'-0"



SECTION D-D

NTS (6)



SECTION E-E

NTS (6)

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-2 (FILE NO.)	JULY 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

(1) VOIDED NOTES AND DETAILS (3) REVISED NOTES (5) ADDED REINF (6) CHANGED SCALE
(2) DELETED BIKE TUBULAR RAILING (4) REVISED DIMENSION AND DETAILS

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No.	VENTURA OH (REPLACEMENT)
52-0471	
POST MILE 21.54	CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 2

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => $DATE
FILE => $REQUEST
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ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
07-20-23	07-24-23			32	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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NOTES:

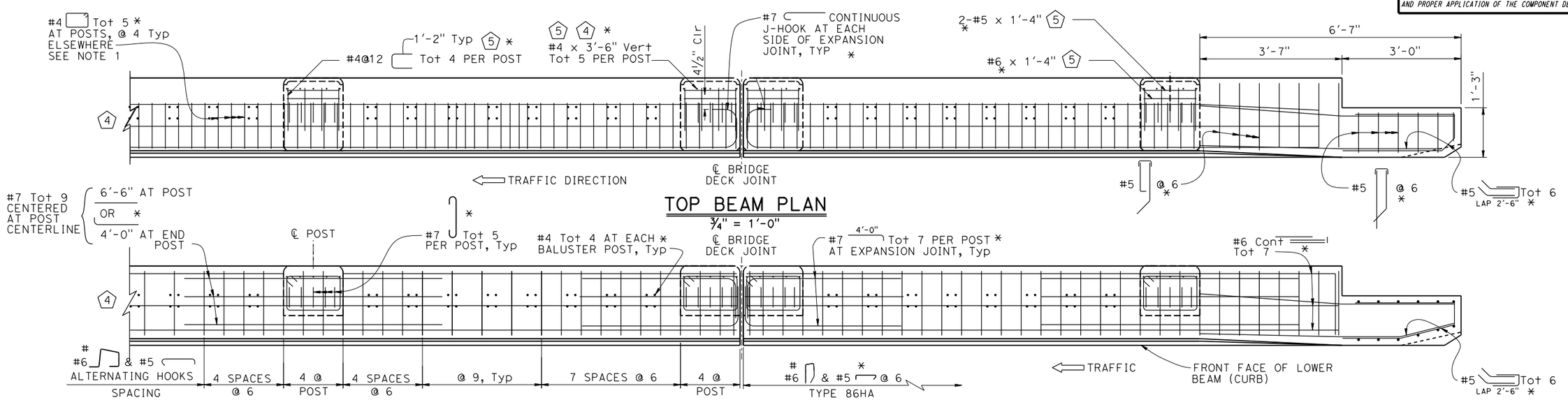
(1) 1. Adjust spacing of #4 hoops at post locations where hex head anchor bolts are placed for railing HSS.

2. For details and reinf not shown see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS Nos. 1-2" sheets.

LEGEND:

* = Prefabricated Epoxy Coated Reinforcement in Barrier only (4)

= Stainless Steel Barrier Dowels (4)

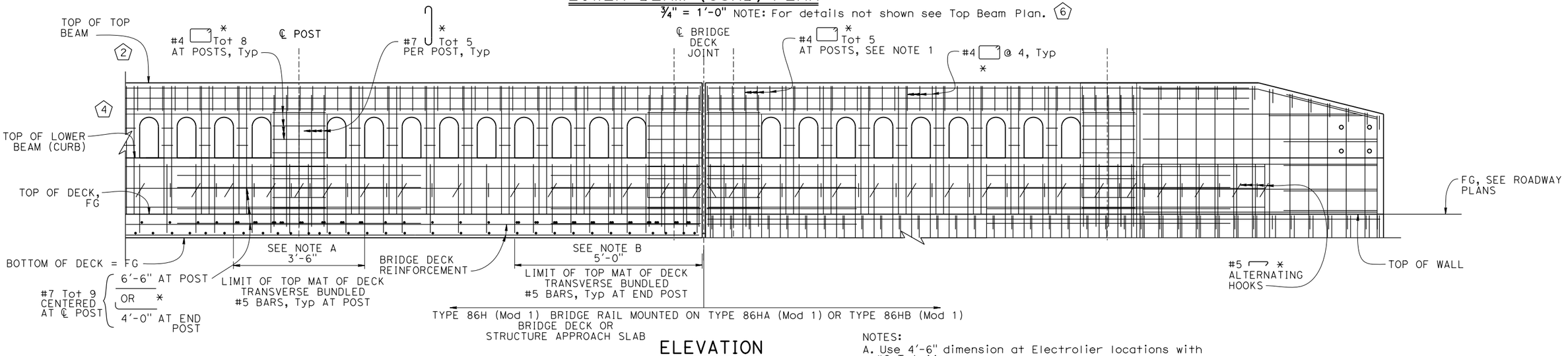


TOP BEAM PLAN

¾" = 1'-0"

LOWER BEAM (CURB) PLAN

¾" = 1'-0" NOTE: For details not shown see Top Beam Plan. (6)



ELEVATION

NTS (3) (4)

NOTES:

A. Use 4'-6" dimension at Electrolier locations with #6 Tot 11.

B. Detail is not required on Abutment End Diaphragms.

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-3 FILE NO.	JULY 2022 APPROVAL DATE	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

(1) REVISED NOTES (3) CHANGED SCALE (5) ADDED REINF (6) ADDED NOTES
(2) DELETED BIKE TUBULAR RAILING (4) REVISED DIMENSION AND DETAILS

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 3

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

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USERNAME => $USER
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-30-23				33	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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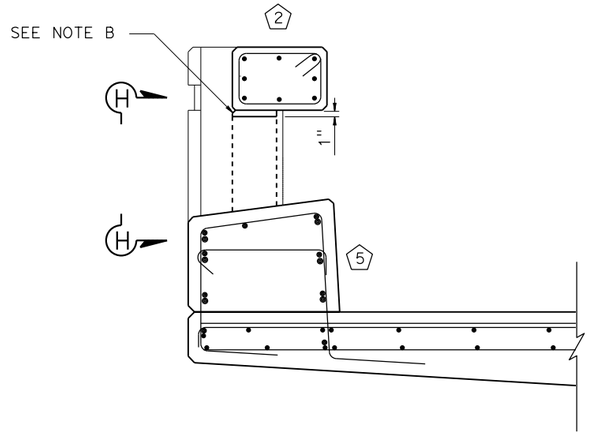
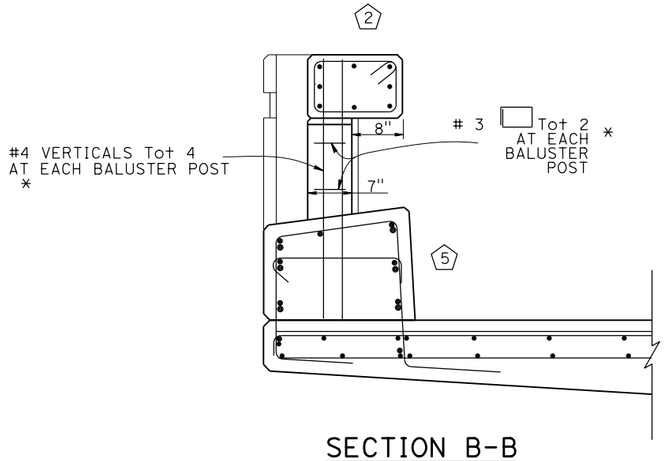


SECTION A-A
NTS (6)



SECTION B-B
NTS (6)

NOTES:
(7) A. For all details not shown, see "SECTION B-B".
B. Use ½" chamfers between top of Arch shape and bottom head of barrier.

LEGEND:

* = Prefabricated Epoxy Coated Reinforcement in Barrier only (5)

~~NOTES:~~
~~1. For details not shown, see "TYPE86HB".~~
~~2. For Type 86HA (Mod 1) locations see Structure Plans "RW ABUT 1 RIGHT".~~

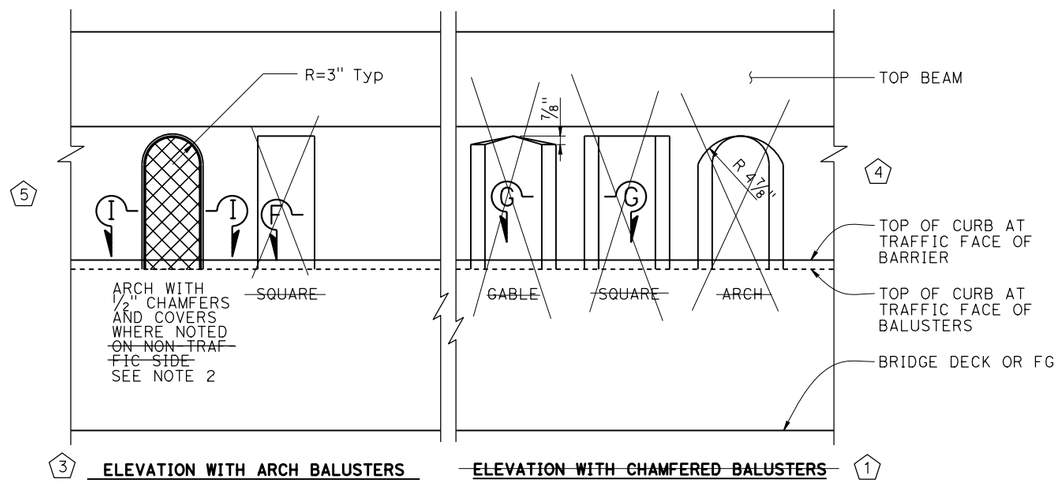
NOTES:

(3)
1. For "SECTION A-A" and " SECTION B-B" location see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No 1" sheet.

~~2. For details not shown, see other sheets.~~

2. Limits of Arch Covers are at same locations as 3'-6" High Pedestrian Railing with Chain Link Railing Type 7 (Mod) 2.

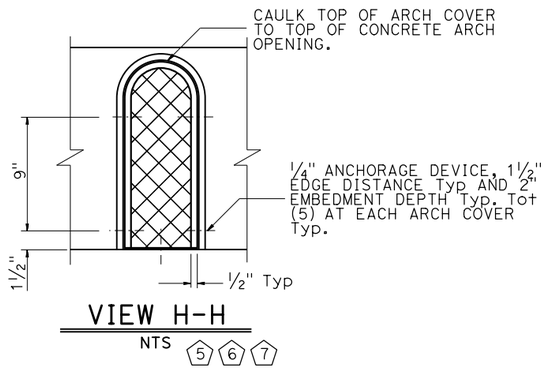
3. For details not shown see other sheets.



(3) **ELEVATION WITH ARCH BALUSTERS** ~~ELEVATION WITH CHAMFERED BALUSTERS~~ (1)

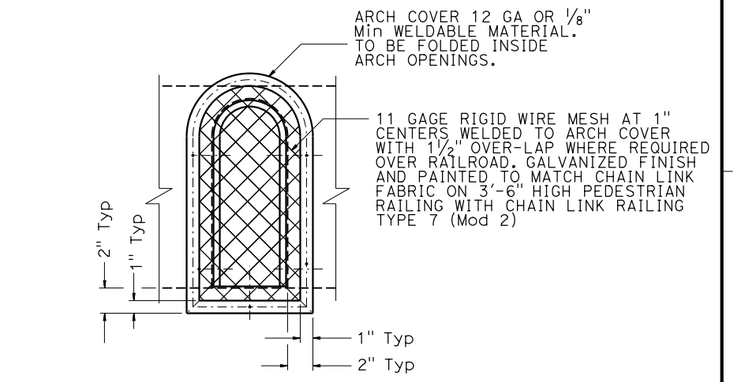
SHAPE OPTIONS OF CLEAR OPENINGS & BALUSTERS
3/16" = 1'-0"

NOTE: Only one shape option shall be used per project.

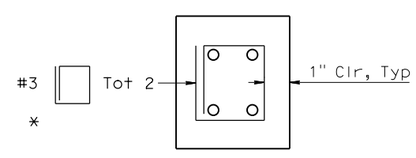


VIEW H-H
NTS (5) (6) (7)

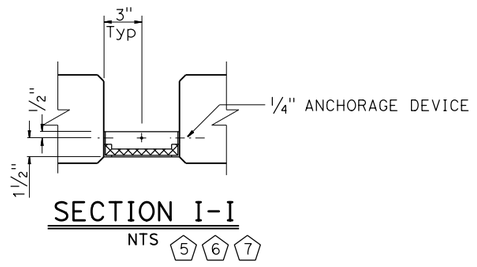
NOTE: For limits of Arch Covers see Note 2



VIEW H-H UNFOLDED PATTERN
NTS (5) (6) (7)



SECTION F-F
1" = 1'-0"



SECTION I-I
NTS (5) (6) (7)

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-4 (FILE NO.)	JULY 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

(1) VOIDED NOTES (3) REVISED NOTES (5) REVISED DIMS AND DETAILS (6) CHANGED SCALE
(2) DELETED BIKE TUBULAR RAILING (4) VOIDED DETAILS (7) ADDED NOTES

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471 — POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 4

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-details-sheets/index.html

DATE PLOTTED => 15-SEP-2023 TIME PLOTTED => 15:26
FILE => 52-0471-y-xs16-127-01-4.dgn USERNAME => s128972

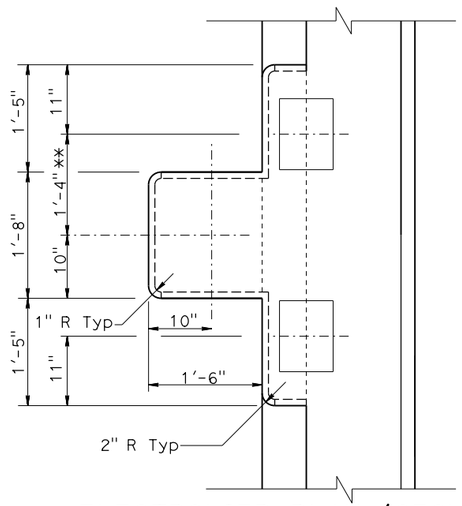
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

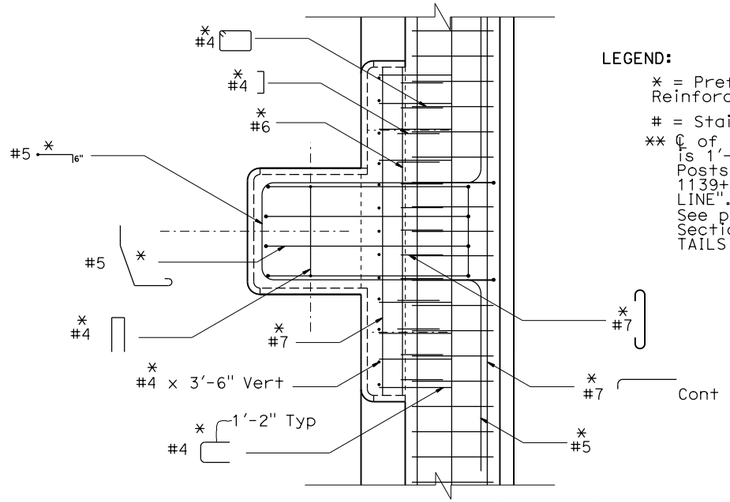
REVISION DATES: ~~7-20-23~~ ~~8-9-23~~ 9-15-23

SHEET 34 OF 65



ELECTROLIER PLAN (GEOMETRY)

SEE NOTE B NTS (6)



ELECTROLIER PLAN (Reinf)

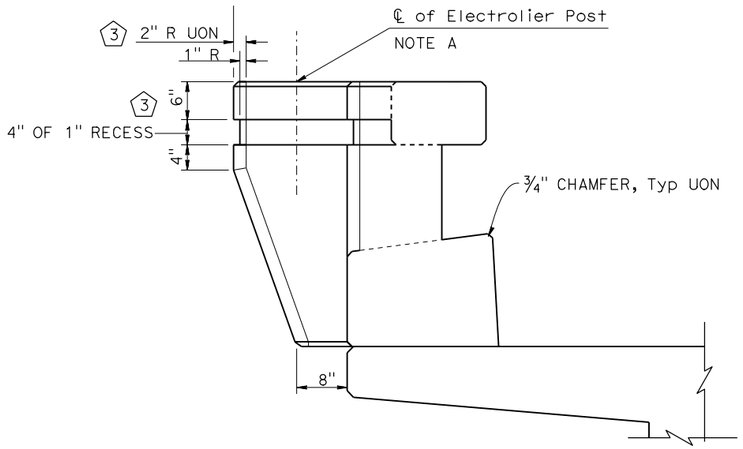
NTS (3)(5)(6)
SEE NOTE B

LEGEND:

* = Prefabricated Epoxy Coated (3) Reinforcement in Barrier only

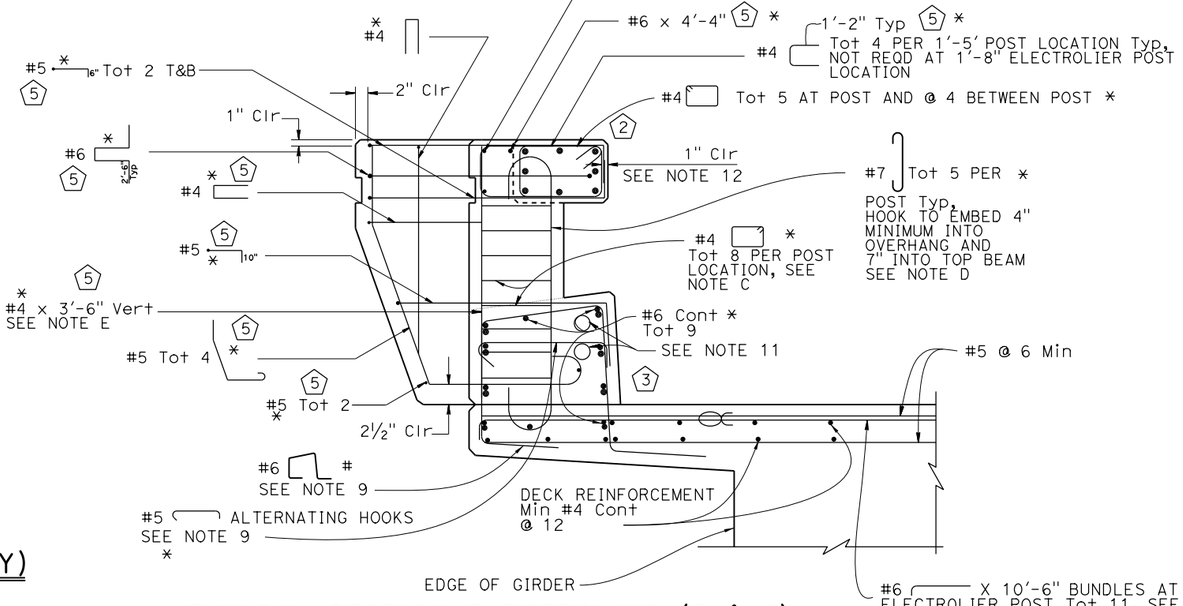
\# = Stainless Steel Barrier Dowels (3)

** ℄ of 2- HSS 3" x 2½" x 3/16 Post is 1'-4" away from ℄ of Electrolier Posts at Sta 1138+00.00 and 1139+20.00 24'-0" Rt "VEN01_PM21-23 LINE".
See post connection to barrier in Section Z-Z on "BRIDGE RAILING DETAILS No. 8" sheet. (3)



TYPICAL SECTION ELECTROLIER (GEOMETRY)

SEE NOTE B NTS (6)



TYPICAL SECTION ELECTROLIER (Reinf)

SEE NOTE B NTS (6)

NOTES:

(4) A. At Sta 1138+00.00, 1139+20.00, 1140+50.00, and 1141+80.00 24'-0" Rt "VEN01_PM21-23" LINE.

B. For details not shown see " CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 1 and No. 3" sheets.

C. Use #4 Tot 8 at 1'-8" Electrolier Post and #4 Tot 4 on 1'-5" Posts Typ.

D. Use #4] Tot 4 at 1'-5" Post Location Typ, does not embedd in bridge deck.

E. Use 5-#4 at 1'-8" Electrolier Post location and 4-#4 at 1'-5" Post location Typ.

UON = Unless otherwise noted

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.

NOTES:

1. If departure end block is within the Clear Recovery Zone (CRZ, 30 feet for expressways and freeways and 20 feet for conventional highways) of opposing traffic, then use the approach end block at departure end.
2. Longitudinal reinforcing steel to stop at all expansion joints.
3. The front face dimensions are to be constant above the finished roadway profile, but the overall height will vary with certain thicknesses of surfacing and roadway slopes.
4. Bridge rail expansion joint to match deck joint, 1" Minimum.
5. Butt welds are acceptable alternative splice to lap splicing #7 bars. No portion of a lap splice can encroach on the post location.
6. For typical metal railing connection details not shown, see Standard Plans A77U1 and A77U2.
7. Chain link railing is not allowed on Type 86H (Mod 1) Barriers, except over railroads and for locations with security concerns.
8. Posts to be spaced equally, ~~typically~~ 10'-0" spacing. (4) Post spacing may be reduced where location of expansion joints or the length of wingwalls will not accommodate the 10'-0" spacing. Maximum see-through availability is to be strived for, while maintaining 6" clear opening, where 10'-0" post spacing can not be achieved.
9. (4) For additional reinforcement details, see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 3".
10. ~~Tubular bicycle railing to extend to where level bench elevation along exterior face of wing wall is within 1'-0" of roadway shoulder FG.~~ (1)
11. The maximum number of conduits is limited to two 1 ½" Ø and must be placed in the front half of the lower beam curb. See also Standard Plan B14-3, "CONDUIT IN BRIDGE RAILING" detail.
12. 1" clearance, typical for bridge rail except for 2" clearance at traffic face and back side of lower beam (curb).
13. (4) For "SECTION C-C", "SECTION D-D" & "SECTION E-E" see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 2" sheet.
14. (4) For "SECTION A-A" & "SECTION B-B" see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 4" sheet.

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-1 (FILE NO.)	JULY 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

(1) VOIDED NOTES (3) REVISED DIMENSIONS AND DETAILS (5) ADDED REINF
(2) DELETED BIKE TUBULAR RAILING (4) REVISED NOTES (6) CHANGED SCALE

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471 — POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 5

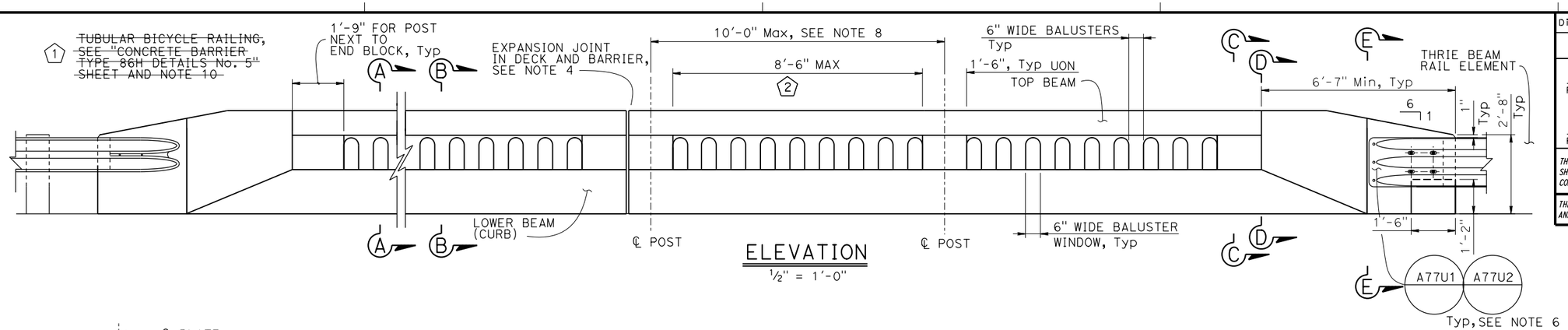
Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 14:15
FILE => 52-0471-y-xs16-127-01-5.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

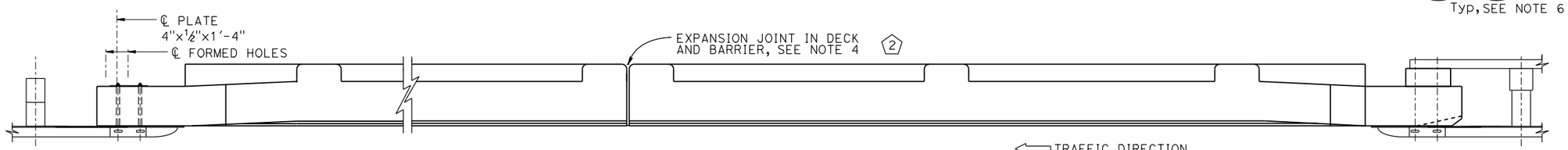
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
8-21-23				35	65



ELEVATION

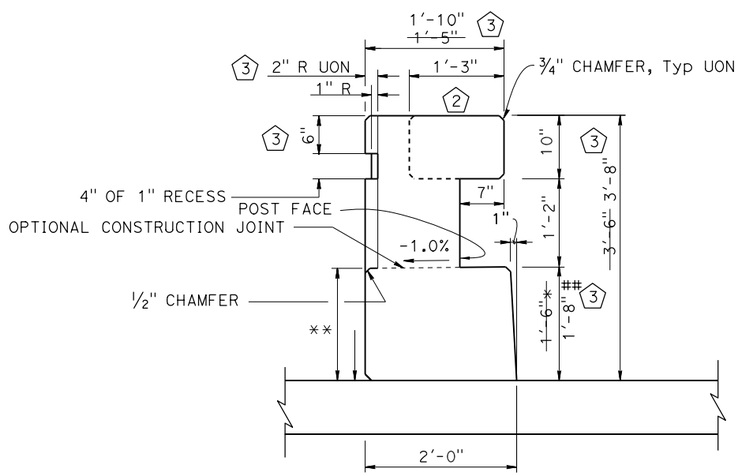
½" = 1'-0"



PLAN

½" = 1'-0"

NOTE: Balusters not shown for clarity.



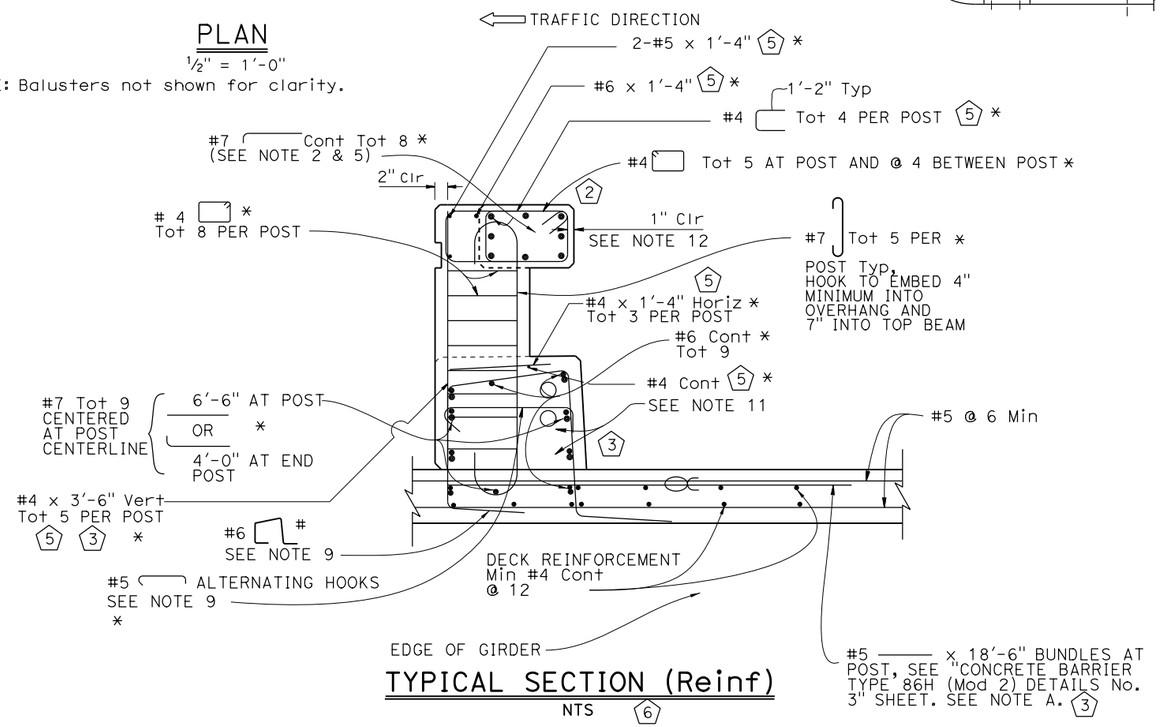
TYPICAL SECTION (GEOMETRY)

NTS 6

1 4 ## Dimension must be 1'-8" above top of Bridge Deck or FG (including overlay). ~~Increase lower beam (curb) height by 2" Max to match overlay depth.~~

4 ** Dimension determined by bridge cross-slope.

4 UON = Unless otherwise noted



TYPICAL SECTION (Reinf)

NTS 6

4 NOTE C: Reinf length starts at Overhang.

LEGEND: * = Prefabricated Epoxy Coated Reinforcement in Barrier only 3
= Stainless Steel Barrier Dowels 3

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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NOTES:

1. If departure end block is within the Clear Recovery Zone (CRZ, 30 feet for expressways and freeways and 20 feet for conventional highways) of opposing traffic, then use the approach end block at departure end.
2. Longitudinal reinforcing steel to stop at all expansion joints.
3. The front face dimensions are to be constant above the finished roadway profile, but the overall height will vary with certain thicknesses of surfacing and roadway slopes.
4. Bridge rail expansion joint to match deck joint, 1" Minimum.
5. Butt welds are acceptable alternative splice to lap splicing #7 bars. No portion of a lap splice can encroach on the post location.
6. For typical metal railing connection details not shown, see Standard Plans A77U1 and A77U2.
7. Chain link railing is not allowed on Type 86H (Mod 2) Barriers, except over railroads and for locations with security concerns.
8. Posts to be spaced equally, ~~typically~~ 10'-0" spacing. Post 4 spacing may be reduced where location of expansion joints or the length of wingwalls will not accommodate the 10'-0" spacing. Maximum see-through availability is to be strived for, while maintaining 6" clear opening, where 10'-0" post spacing can not be achieved.
9. For additional reinforcement 4 details, see "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No. 3".
10. ~~Tubular bicycle railing to extend to where level bench elevation along exterior face of wing wall is within 1'-0" of roadway shoulder FG.~~ 1
11. The maximum number of conduits is limited to two 1½" ø and must be placed in the front half of the lower beam curb. See also Standard Plan B14-3, "CONDUIT IN BRIDGE RAILING" detail.
12. 1" clearance, typical for bridge rail except for 2" clearance at traffic face and back side of lower beam (curb).
13. For "SECTION C-C", "SECTION D-D" & "SECTION E-E" see "CONCRETE 4 BARRIER TYPE 86H (Mod 2) DETAILS No. 2" sheet.
14. For "SECTION A-A" & "SECTION B-B" see "CONCRETE BARRIER TYPE 86H 4 (Mod 2) DETAILS No. 4" sheet.

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-1 (FILE NO.)	JULY 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

1 VOIDED NOTES 3 REVISED DIMENSIONS AND DETAILS 5 ADDED REINF
2 DELETED BIKE TUBULAR RAILING 4 REVISED NOTES 6 CHANGED SCALE

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.	POST MILE
52-0471	21.54

VENTURA OH (REPLACEMENT)

CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No. 1

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

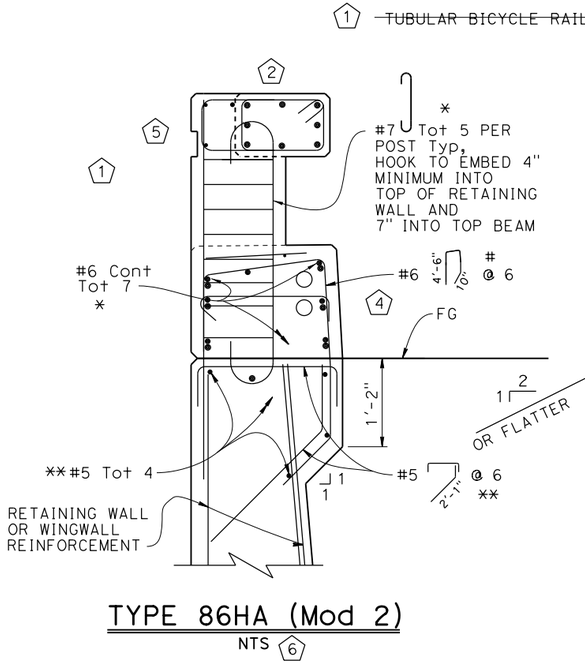
DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 14:15
FILE => 52-0471-y-xs16-127-02-1.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

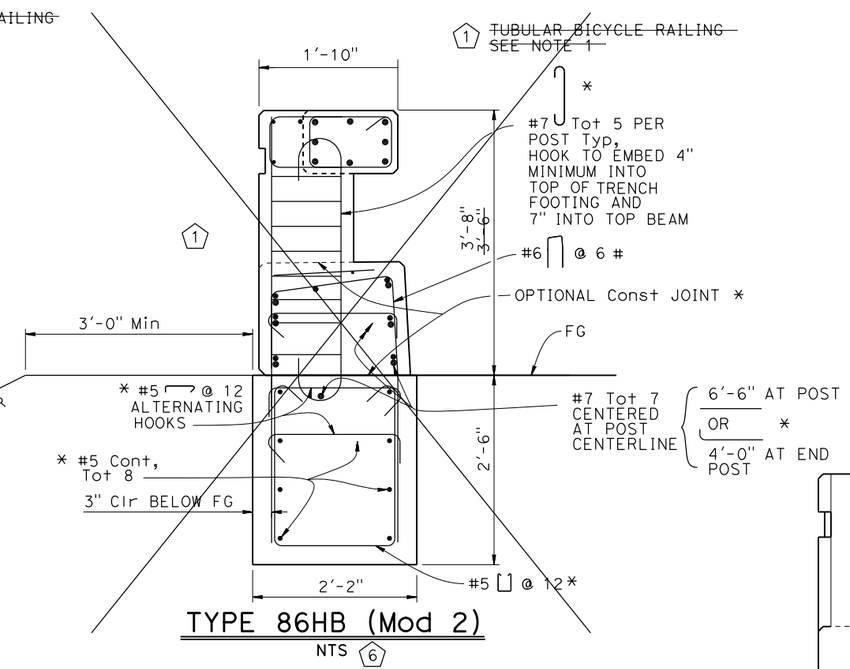
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
				36	65



TYPE 86HA (Mod 2)

NTS (6)



TYPE 86HB (Mod 2)

NTS (6)

NOTES: (3)

1. ~~1. Tubular bicycle railing optional for Type 86HB.~~
2. 40'-0" minimum length for Type 86HA.(Mod 2)
3. For geometry and reinf not called out, see "TYPICAL SECTION" on "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS NO 1" sheet.
4. For details not shown, see "CONCRETE BARRIER TYPE 86H(Mod 2) DETAILS No 1" & " CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No 3" sheets.
5. For "SECTION C-C","SECTION D-D" AND "SECTION E-E" locations see "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS NO 1" sheet.
6. Walls are to be backfilled before the barrier is placed.
7. Only the reinforcing for post transition is shown.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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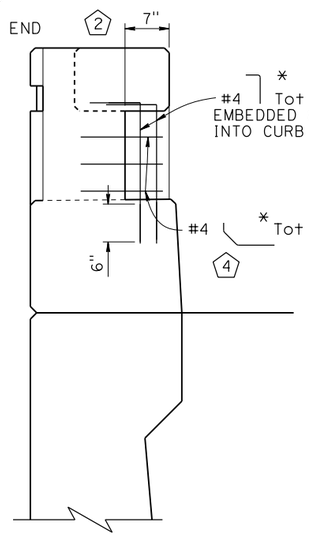
LEGEND:

* = Prefabricated Epoxy Coated Reinforcement in Barrier only (4)

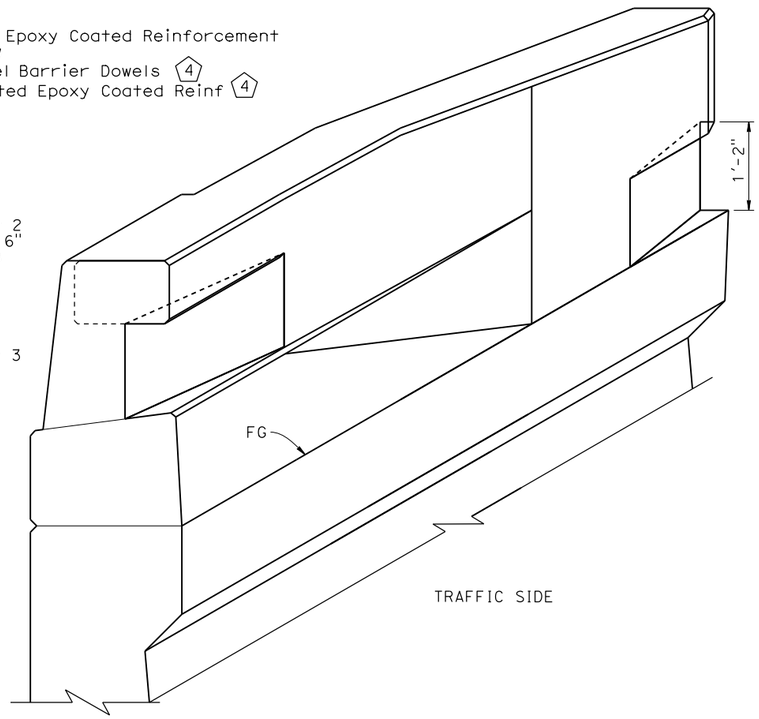
= Stainless Steel Barrier Dowels (4)

** = Post-fabricated Epoxy Coated Reinf (4)

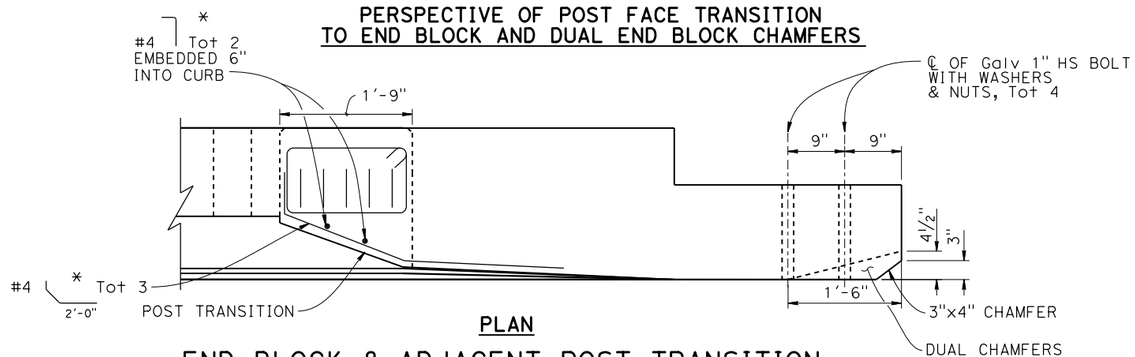


SECTION C-C

NOTE: See Note 7.



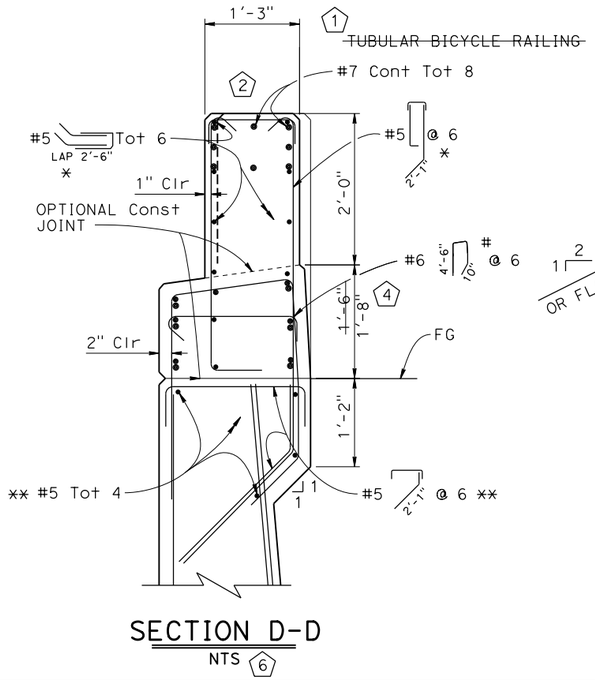
PERSPECTIVE OF POST FACE TRANSITION TO END BLOCK AND DUAL END BLOCK CHAMFERS



PLAN

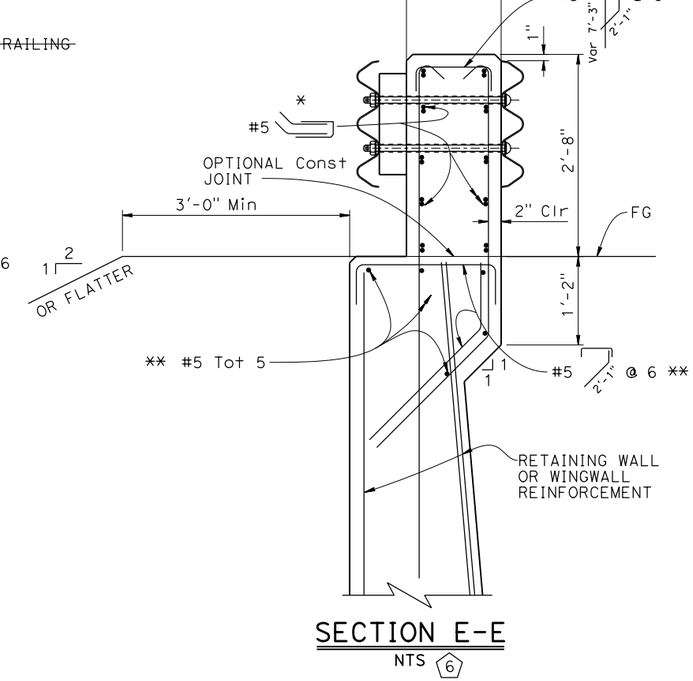
END BLOCK & ADJACENT POST TRANSITION

1" = 1'-0"



SECTION D-D

NTS (6)



SECTION E-E

NTS (6)

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-2 (FILE NO.)	JULY 2022 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

(1) VOIDED NOTES AND DETAILS (3) REVISED NOTES (5) ADDED REINF (6) CHANGED SCALE

(2) DELETED BIKE TUBULAR RAILING (4) REVISED DIMENSION AND DETAILS

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No.	VENTURA OH (REPLACEMENT)
52-0471	
POST MILE 21.54	CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No. 2

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-details-sheets/index.html

DATE PLOTTED => $DATE FILE => $REQUEST TIME PLOTTED => $TIME USERNAME => $USER ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606 PROJECT NUMBER & PHASE: 0716000025 & 1 COUNTY/ROUTE: Ven/01 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
07-20-23	07-24-23			37	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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NOTE:

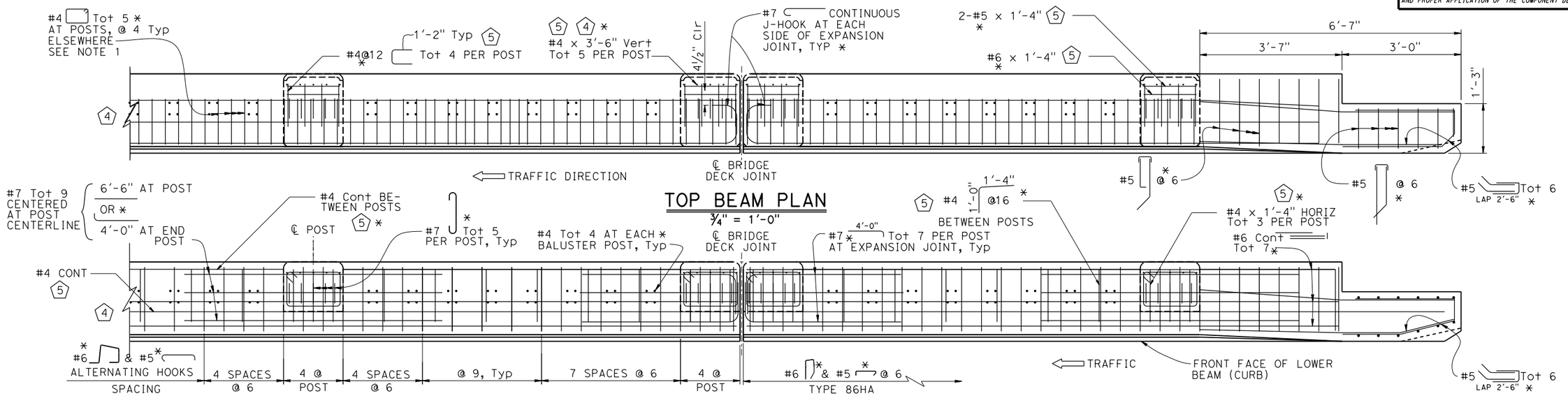
(1) 1. Adjust spacing of #4 hoops at post locations where hex head anchor bolts are placed for railing HSS.

2. For details and reinf not shown see "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS Nos. 1-2" sheets.

LEGEND:

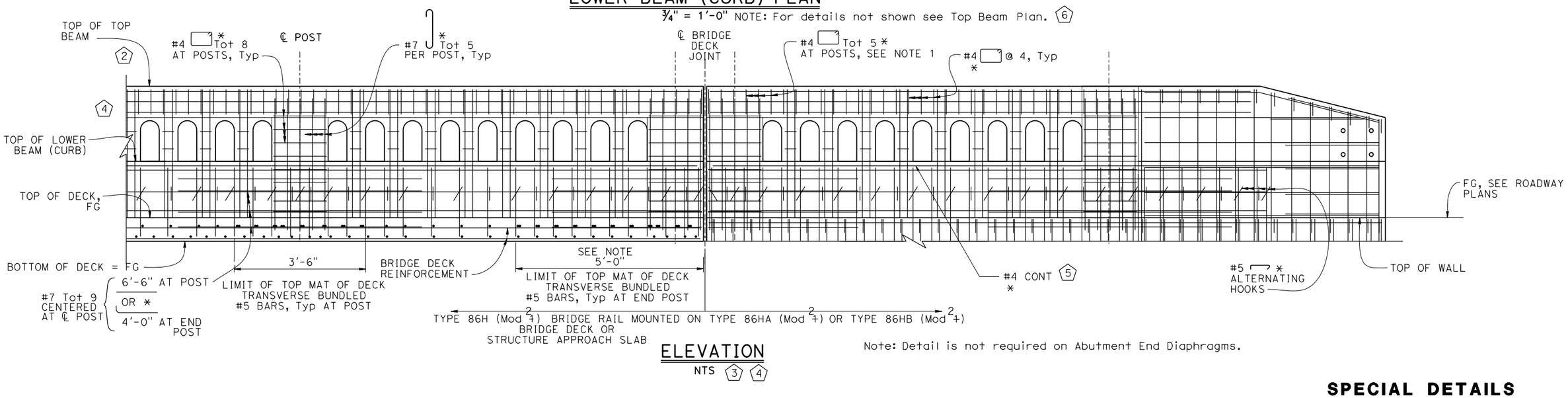
* = Prefabricated Epoxy Coated Reinforcement in Barrier only (4)

= Stainless Steel Barrier Dowels (4)



TOP BEAM PLAN

3/4" = 1'-0"



LOWER BEAM (CURB) PLAN

3/4" = 1'-0" NOTE: For details not shown see Top Beam Plan. (6)

ELEVATION

NTS (3) (4)

Note: Detail is not required on Abutment End Diaphragms.

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-3 (FILE NO.)	JULY 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

(1) REVISED NOTES (3) CHANGED SCALE (5) ADDED REINF (6) ADDED NOTES
(2) DELETED BIKE TUBULAR RAILING (4) REVISED DIMENSION AND DETAILS

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471 | POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No. 3

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => $DATE FILE => $REQUEST TIME PLOTTED => $TIME USERNAME => $USER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606 PROJECT NUMBER & PHASE: 0716000025 & 1

COUNTY/ROUTE: Ven/01 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES

SHEET 38 OF 65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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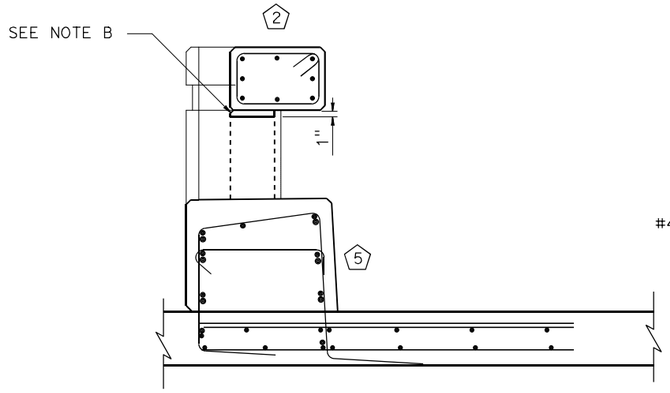
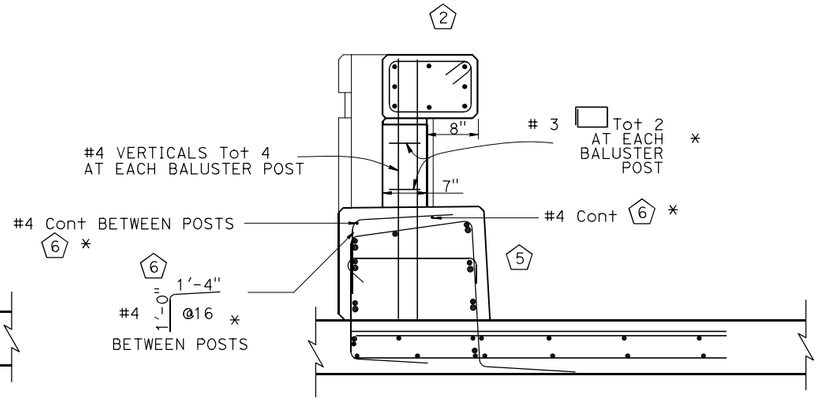


SECTION A-A
NTS (7)



SECTION B-B
NTS (7)

NOTES:

(3) 1. For "SECTION A-A" and " SECTION B-B" location see "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No 1" sheet.

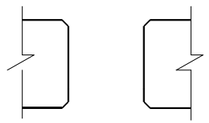
2. For details not shown, see other sheets.

NOTES:

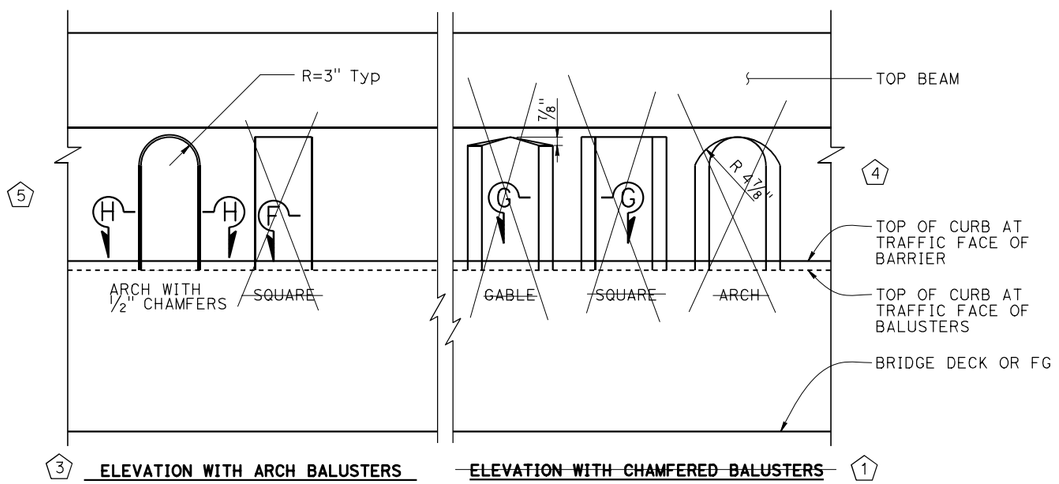
(7) A. For all details not shown, see "SECTION B-B".
(7) B. Use ½" chamfers between top of Arch shape and bottom head of barrier.

LEGEND:

* = Prefabricated Epoxy Coated Reinforcement in Barrier only (5)

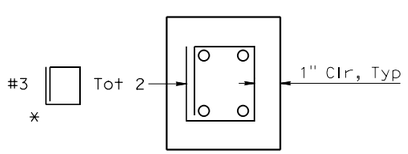


SECTION H-H
NTS (5) (7)

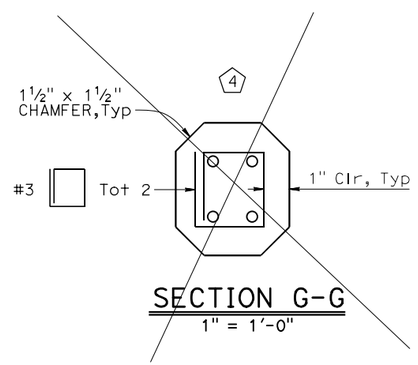


SHAPE OPTIONS OF CLEAR OPENINGS & BALUSTERS
3/16" = 1'-0"

NOTE: Only one shape option shall be used per project.



SECTION F-F
1" = 1'-0"



SECTION G-G
1" = 1'-0"

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-4 (FILE NO.)	JULY 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

(1) VOIDED NOTES (3) REVISED NOTES (5) REVISED DIMS AND DETAILS (7) CHANGED SCALE
(2) DELETED BIKE TUBULAR RAILING (4) VOIDED DETAILS (6) ADDED REINF (8) ADDED NOTES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS No. 4

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 15-SEP-2023 TIME PLOTTED => 15:01
FILE => 52-0471-y-xs16-127-02-4.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
09-15-23				39	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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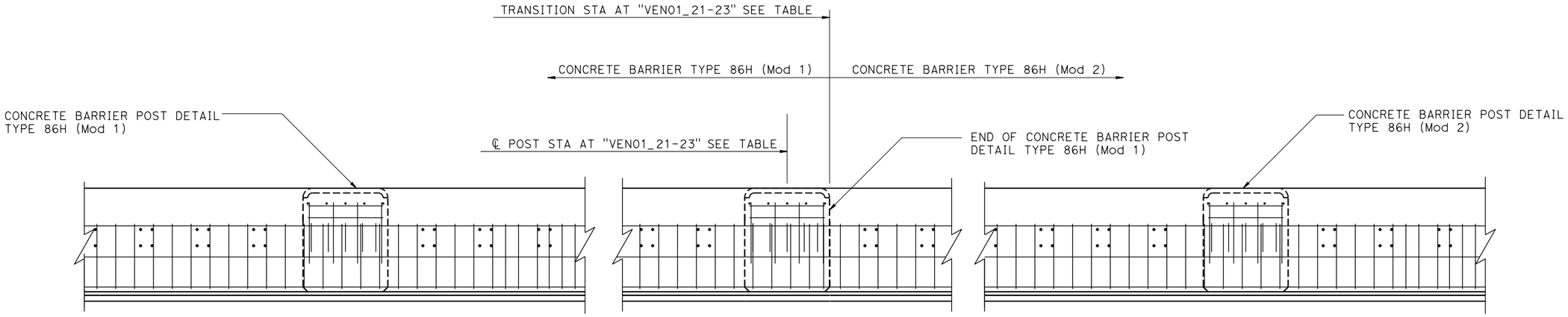

CONCRETE BARRIER TYPE 86H (Mod 1) AND (Mod 2) TOP BEAM TRANSITION PLAN VIEW

1" = 1'-0"

℄ POST AND TRANSITION STA AT "VEN01_21-23"		
LOCATION	℄ POST STA	TRANSITION STA
20' LT "VEN01_21-23"	1139+70.00	1139+70.75
20' LT "VEN01_21-23"	1144+60.00	1143+59.25

NOTES:

1. All Type 86H Barriers are (Mod 1) except where noted in Table.
2. For all reinforcement and details not shown see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS Nos 1-5" and "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS Nos 1-4" sheets.
3. Post spacing for both barrier types must be constant at 10'-0" except at expansion joints.

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS

xs16-127-3	JULY 2022	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*
FILE NO.	APPROVAL DATE	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

CONCRETE BARRIER TYPE 86H (Mod 1) AND (Mod 2) TRANSITION DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-details-sheets/index.html

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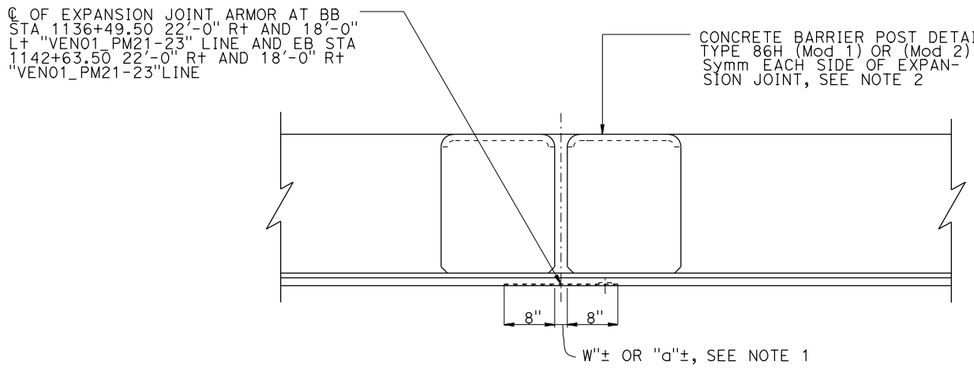
FILE => $REQUEST
TIME PLOTTED => $TIME
USERNAME => $USER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
07-20-23				40	65

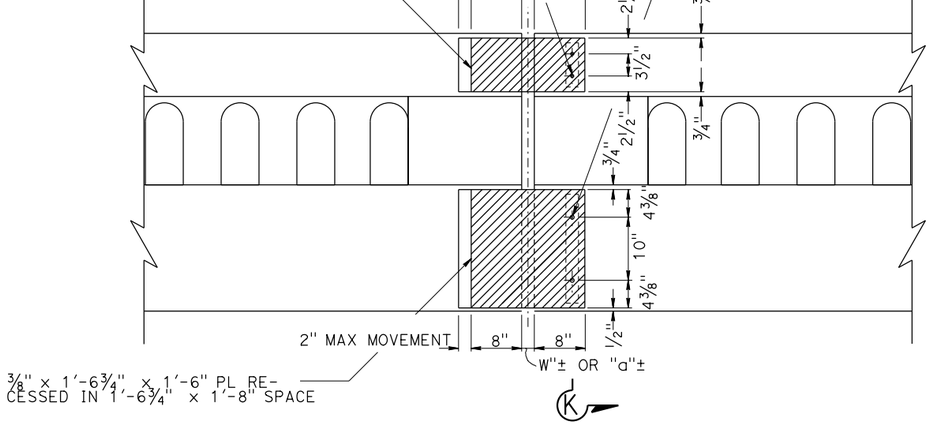


CONCRETE BARRIER TYPE 86H (Mod 1) AND (Mod 2) EXPANSION JOINT ARMOR TOP BEAM PLAN VIEW

1" = 1"-0"

NOTES:

1. "W" or "a" is calculated per "STRIP JOINT SEAL ASSEMBLY MAX MOVEMENT RATING=4" sheet.
2. 2' High railing posts omitted for clarity.

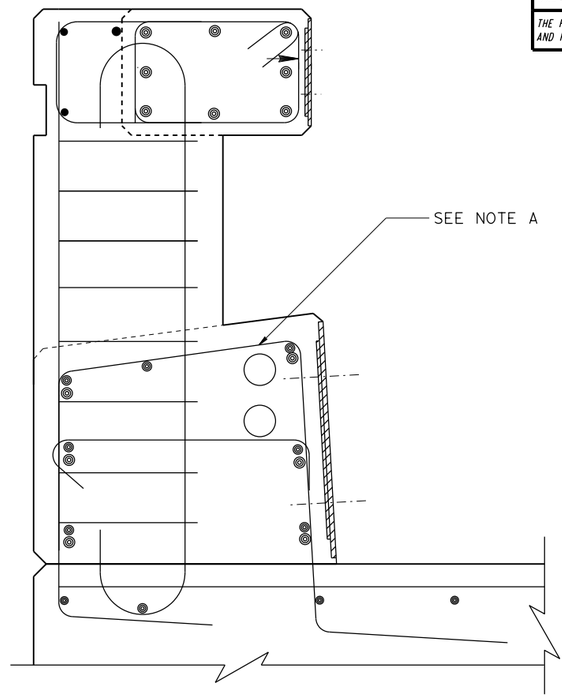


CONCRETE BARRIER TYPE 86H (Mod 1) AND (Mod 2) EXPANSION JOINT ARMOR ELEVATION VIEW

1" = 1"-0"

LEGEND:

Limits of Expansion Joint Armor at Type 86H Conc Barrier (Mod 1) and (Mod 2)



SECTION K-K AT CONC BARRIER TYPE 86H (Mod 1) AND (Mod 2)

1" = 6"-0"

NOTES:

A. For all reinforcement and details not shown see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS Nos 1 AND 3" sheets, and "CONCRETE BARRIER TYPE 86H (Mod 2) DETAILS Nos 1 AND 3" sheets.
B. Post spacing for barrier must be constant at 10'-0" except at expansion joints.
C. Joint Armor at Concrete Barrier Type 86H (Mod 1) shown, Concrete Barrier Type 86H (Mod 2) similar.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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REVISED BRIDGE STANDARD DETAILS		
xs16-127-3 (FILE NO.)	JULY 2022 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471 — POST MILE 21.54

VENTURA OH (REPLACEMENT)

JOINT ARMOR AT CONCRETE BARRIER TYPE 86H (Mod 1) and (Mod 2)

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => $DATE — TIME PLOTTED => $TIME
FILE => $REQUEST — USERNAME => $USER
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-15-23				41	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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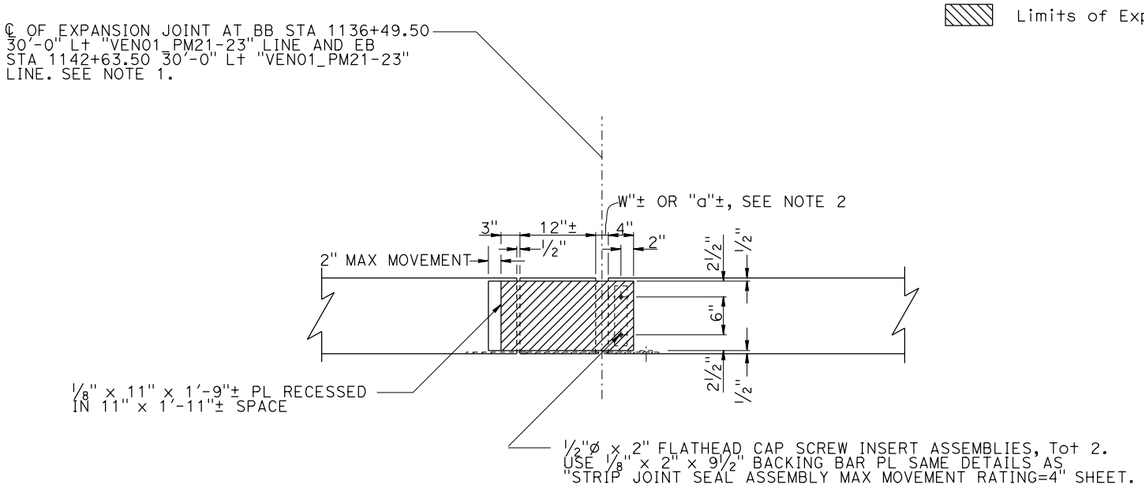
LEGEND:

Limits of Expansion Joint Armor at Curb

Limits of Expansion Joint Filler

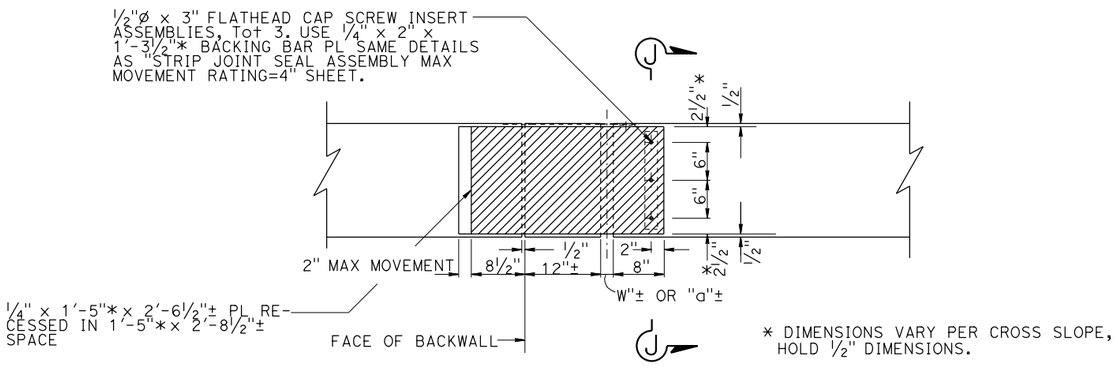


CURB EXPANSION JOINT ARMOR TOP BEAM PLAN VIEW

1" = 1'-0"

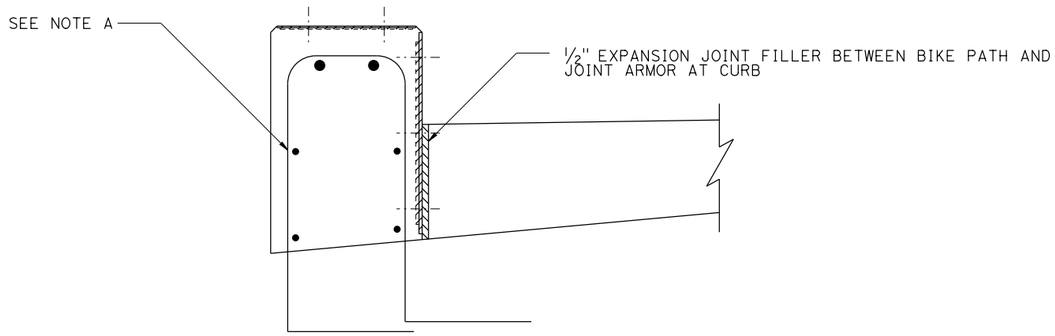
NOTES:

1. Expansion Joint at BB shown, Expansion Joint at EB similar and opposite hand.
2. "W" or "a" is calculated per "STRIP JOINT SEAL ASSEMBLY MAX MOVEMENT RATING=4" sheet.



CURB EXPANSION JOINT ARMOR ELEVATION VIEW

1" = 1'-0"



SECTION J-J AT CURB

1" = 6"

A. For all reinforcement and details not shown see "TYPICAL SECTION" and "BRIDGE RAILING DETAILS No 4" sheets.

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-127-3 (FILE NO.)	JULY 2022 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No. 52-0471 — POST MILE 21.54

VENTURA OH (REPLACEMENT)

JOINT ARMOR AT CURB DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-details-sheets/index.html

DATE PLOTTED => $DATE — TIME PLOTTED => $TIME
FILE => $REQUEST — USERNAME => $USER

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 0716000025 & 1
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-15-23				42	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

MM/DD/YYYY
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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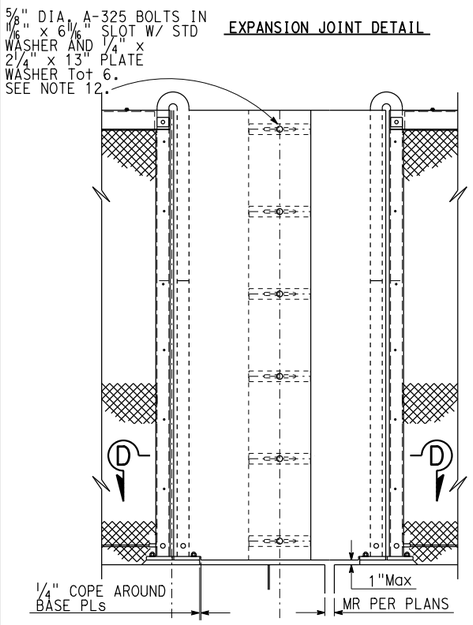
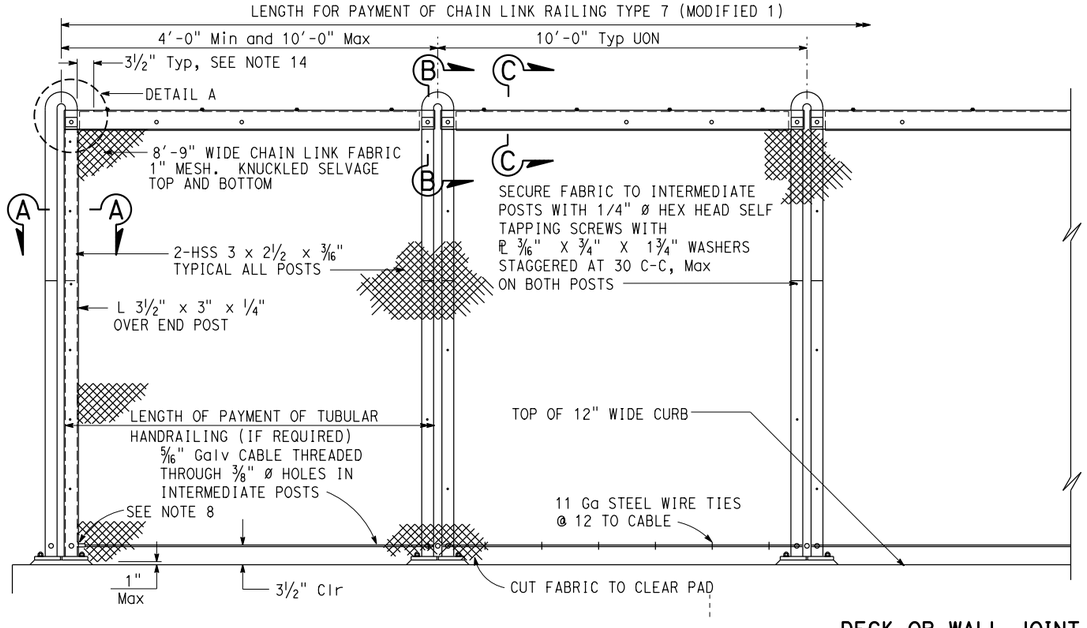


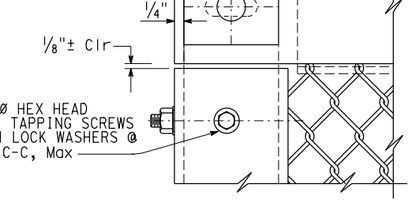


END POST

DECK OR WALL JOINT

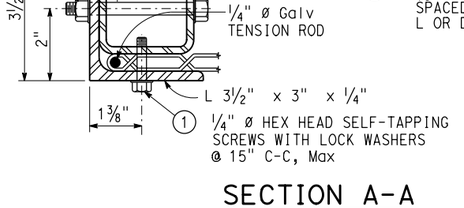
PROJECTED ELEVATION

3/4" = 1'-0'
SEE NOTE 13



DETAIL A

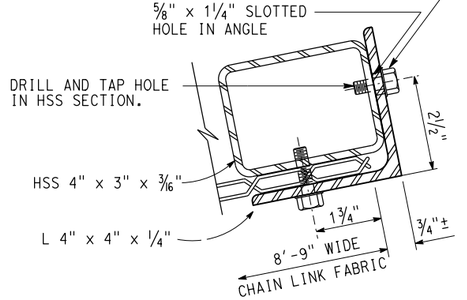
6" = 1'-0'



SECTION A-A

6" = 1'-0'

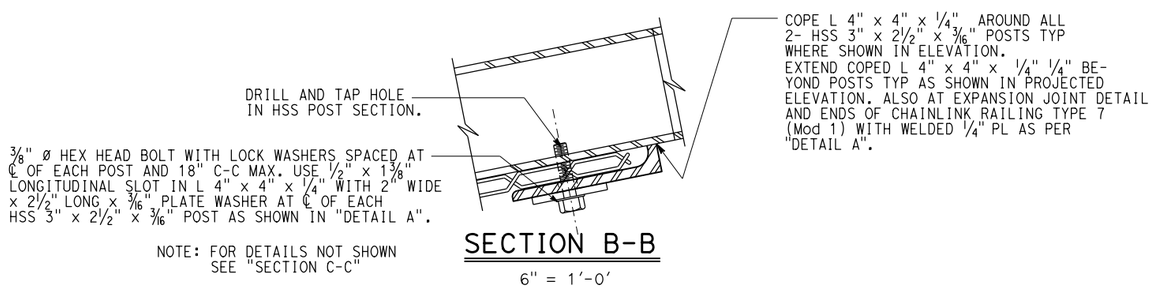
(2) → 3/8" Ø HEX HEAD BOLT WITH LOCK WASHERS SPACED AT 15" C-C MAX. WELD NUTS TO L OR DRILL AND TAP HOLES IN SECTION.



SECTION C-C

6" = 1'-0'

NOTE: FOR DETAILS NOT SHOWN SEE "SECTION B-B"



SECTION B-B

6" = 1'-0'

NOTE: FOR DETAILS NOT SHOWN SEE "SECTION C-C"

NOTES:

1. Railing assembly except chain link fabric to be galvanized after fabrication
2. Railing must conform to horizontal and vertical alignment. Post must be vertical. Horizontal angle must be bent to conform to horizontal alignment if radius is 150'-0" or less.
3. When railing is placed on curved horizontal alignment with radius of 150'-0" or less, drill 1/2"Ø x 3" deep hole in slab and set in epoxy adhesives 3/8"Ø welded eyebolt for 5/16" cable to limit the mid-ordinate distance between the 5/16" cable and curve to be 1" Max.
4. Place fabric parallel to slope.
5. Alternative details may be submitted by the Contractor for Engineer's approval.
6. Provide thimbles at all cable loops.
7. Peen any exposed bolts.
8. Anchor 5/16" galvanized cable at end post and end posts adjacent to electrolier openings of deck or wall joints with 1/2"Ø stud socket assembly or 1/2"Ø welded eyebolt and crimped sleeve clamp. Provide 1 1/2" minimum take-up at each anchorage.
9. Design valid for bridges with the top of chain link railing type 7 (Mod) equal to or less than 260' height above surrounding ground surfaces.
10. The contractor shall verify any controlling field dimensions before ordering or fabricating any material.
11. For "Section D-D" see "3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 MOD 1 DETAILS No 2".
12. Place bolt in slot so bridge will move 4" in compression when it shrinks and 2" in tension when it ex-pands. Bolts are spaced 4" from top and bottom and 5 equal spaces in-between.
13. 3'-6" high Pedestrian Railing omitted for clarity.
14. Start cope of L 4" x 4" x 1/4" around HSS 3" x 2 1/2" x 3/16" Post as shown in Section B-B.
15. UON = Unless otherwise noted

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-220-1 (FILE NO.)	July 2020 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO.	VENTURA OH (REPLACEMENT)
52-0471	
POST MILE	3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (MOD 1) DETAILS No. 1
21.54	

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:37
FILE => 52-0471-y-xs16-220-01a.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
07-26-23		08-30-23	07-01-20	43	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — X — DATE

MM/DD/YYYY
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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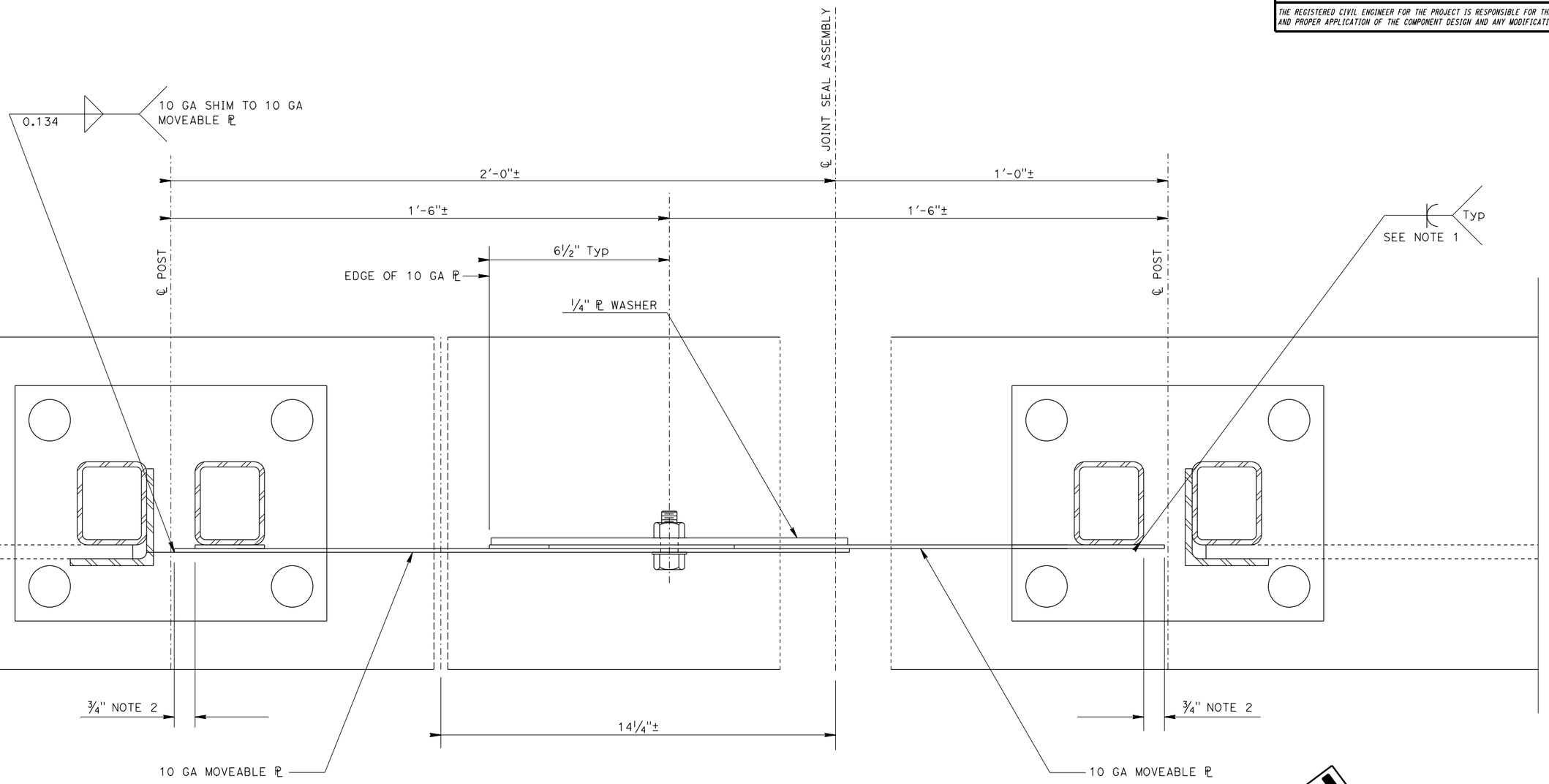

SECTION D-D
6" = 1'-0"

NOTES:
1. Weld 10 GA moveable ℄ to HSS 3" x 2½" x 3/16" Post and 10 GA shim.
2. Extend 10 GA moveable ℄ ¾" past HSS 3" x 2½" x 3/16" Post and/or 10 GA shim.

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-220-1 (FILE NO.)	July 2020 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No.	VENTURA OH (REPLACEMENT)
52-0471	
POST MILE 21.54	3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (MOD 1) DETAILS No. 2

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

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FILE => 52-0471-y-xs16-220-01b.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
~~6-13-23~~		08-30-23	~~8-14-23~~	44	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE — MM/DD/YYYY

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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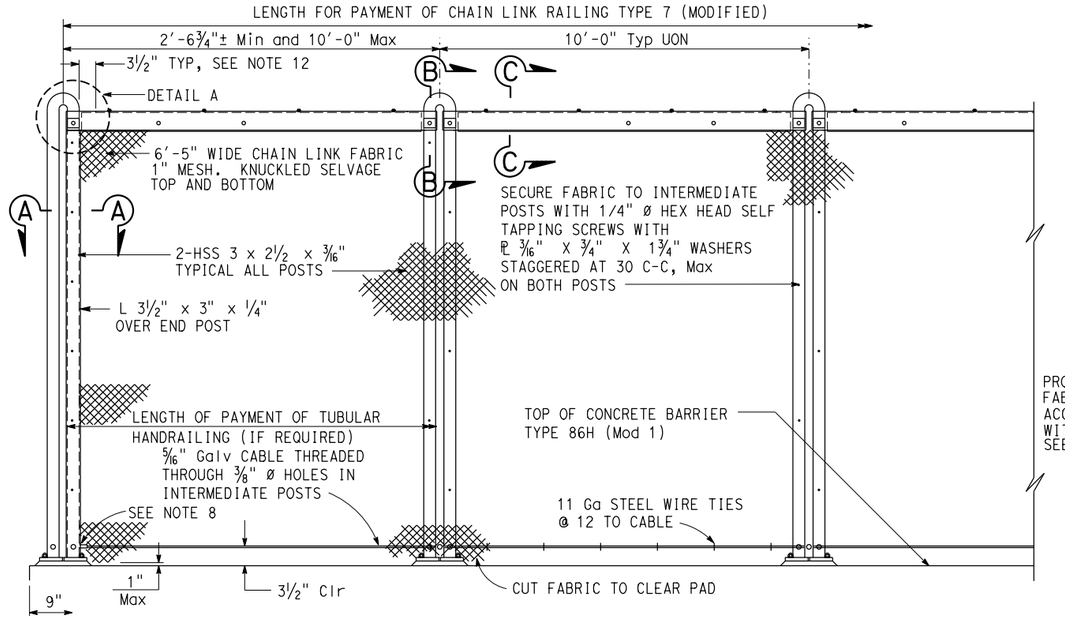
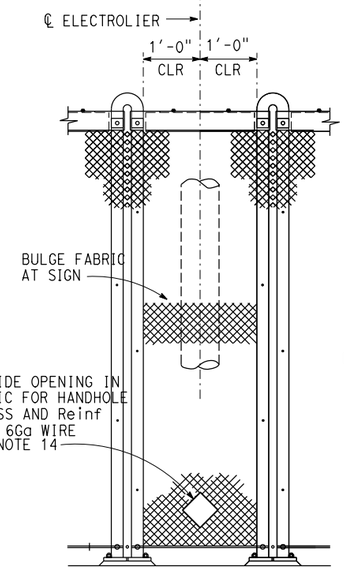


END POST

ELEVATION

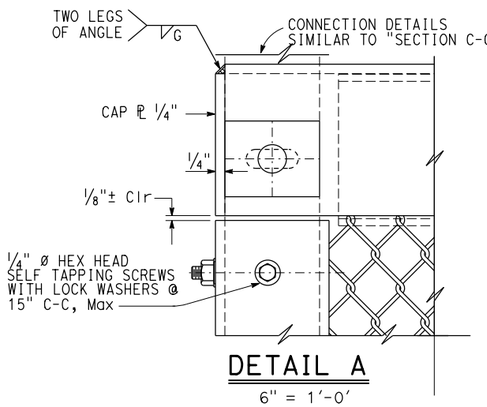
¾" = 1'-0"
SEE NOTE 11



SIGN PANEL OR ELECTROLIER

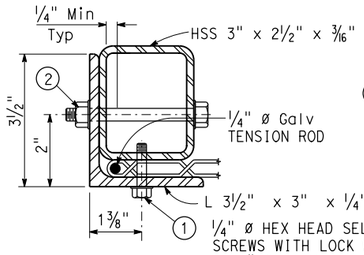
NOTES:

1. Railing assembly except chain link fabric to be galvanized after fabrication
2. Railing must conform to horizontal and vertical alignment. Post must be vertical. Horizontal angle must be bent to conform to horizontal alignment if radius is 150'-0" or less.
3. When railing is placed on curved horizontal alignment with radius of 150'-0" or less, drill ½"ø x 3" deep hole in slab and set in epoxy adhesives ⅜"ø welded eyebolt for 5/16" cable to limit the mid-ordinate distance between the 5/16" cable and curve to be 1" Max.
4. Place fabric parallel to slope.
5. Alternative details may be submitted by the Contractor for Engineer's approval.
6. Provide thimbles at all cable loops.
7. Peen any exposed bolts.
8. Anchor 5/16" galvanized cable at end post and end posts adjacent to electrolier openings of deck or wall joints with ½"ø stud socket assembly or ½"ø welded eyebolt and crimped sleeve clamp. Provide 1½" minimum take-up at each anchorage.
9. Design valid for bridges with the top of chain link railing type 7 (Mod) equal to or less than 260' height above surrounding ground surfaces.
10. The contractor shall verify any controlling field dimensions before ordering or fabricating any material.
11. 3'-6" high Pedestrian Railing omitted for clarity.
12. Start cope of L 4" x 4" x ¼" around HSS 3" x 2½" x 3/16" Post as shown in Section B-B.
13. UON = Unless Otherwise Noted.
14. Sandwich (2) 12 gage ℞s back to back with (4) ⅜" hex head bolts with nut, standard washer, and lock washer to close handhole. Do not peen bolts unless approved by Engineer.



DETAIL A

6" = 1'-0"



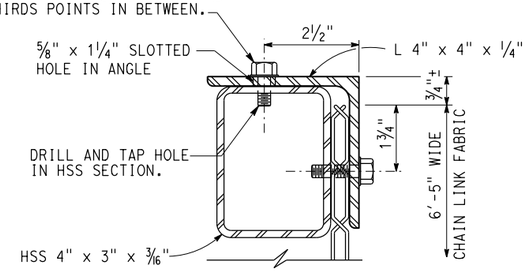
SECTION A-A

6" = 1'-0"

② ⅜" ø HEX HEAD BOLT WITH LOCK WASHERS SPACED AT 15" C-C MAX. WELD NUTS TO L OR DRILL AND TAP HOLES IN SECTION.

DECK OR WALL JOINT

⅜" ø HEX HEAD BOLT WITH OVER-SIZED WASHERS SPACED AT 6" FROM END OF HSS SECTION AND THIRDS POINTS IN BETWEEN.

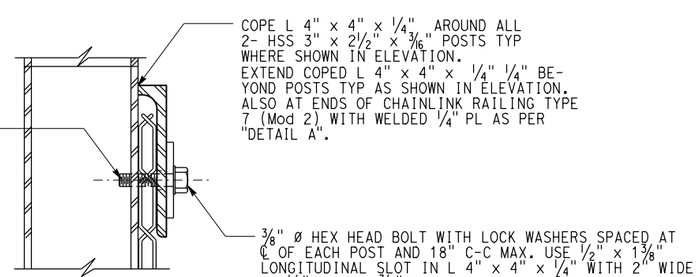


SECTION C-C

6" = 1'-0"

NOTE: FOR DETAILS NOT SHOWN SEE "SECTION B-B"

NOTE: FOR DETAILS NOT SHOWN SEE "SECTION C-C"



SECTION B-B

6" = 1'-0"

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs16-220-1 (FILE NO.)	July 2020 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

STATE OF CALIFORNIA — DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 52-0471

POST MILE 21.54

VENTURA OH (REPLACEMENT)

3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (MOD 2) DETAILS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:37
FILE => 52-0471-y-xs16-220-02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
12-31-19		05-22-20	8-16-23	45	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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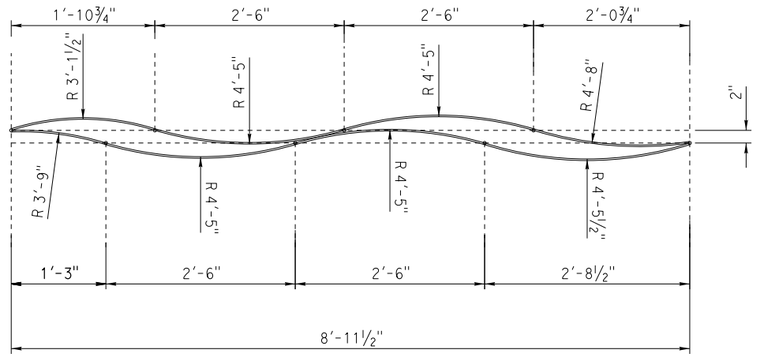


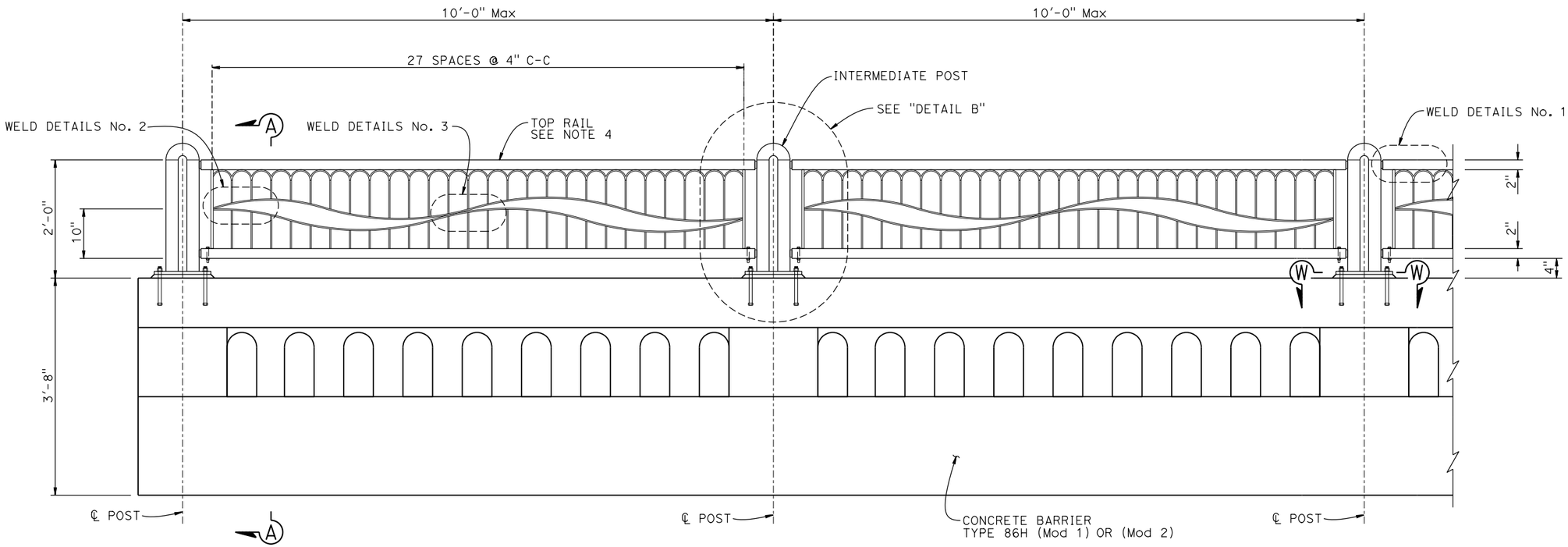
WAVE RADII ELEVATION

1" = 1'-0"

SEE NOTE 1

NOTES:

1. Typical for all 2'-0", 3'-6", and 4'-0" high railing.
2. For "SECTION W-W", see "BRIDGE RAILING DETAILS No. 8" sheet.
3. For "DETAIL B", see "BRIDGE RAILING DETAILS No. 5" sheet.
4. Top of Rail = 4'-0" Min from top of bike path.
5. For weld details 1 through 3 see "BRIDGE RAILING DETAILS No. 5" sheet.
6. For "SECTION A-A", see "BRIDGE RAILING DETAILS No. 8" sheet.
7. For 4'-0" high railing see ROADWAY PLANS.



PART ELEVATION FOR 2'-0" HIGH PEDESTRIAN RAILING

1" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY A. Sanchez	CHECKED L. VALLA	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION
DETAILS	BY A. Onodera/T. Doan/T. Bradshaw	CHECKED L. VALLA	
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	

DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

BRIDGE RAILING DETAILS No. 1

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 16:43
FILE => 52-0471-z-a-rail1.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-2-23		09-27-23	8-9-23	46	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

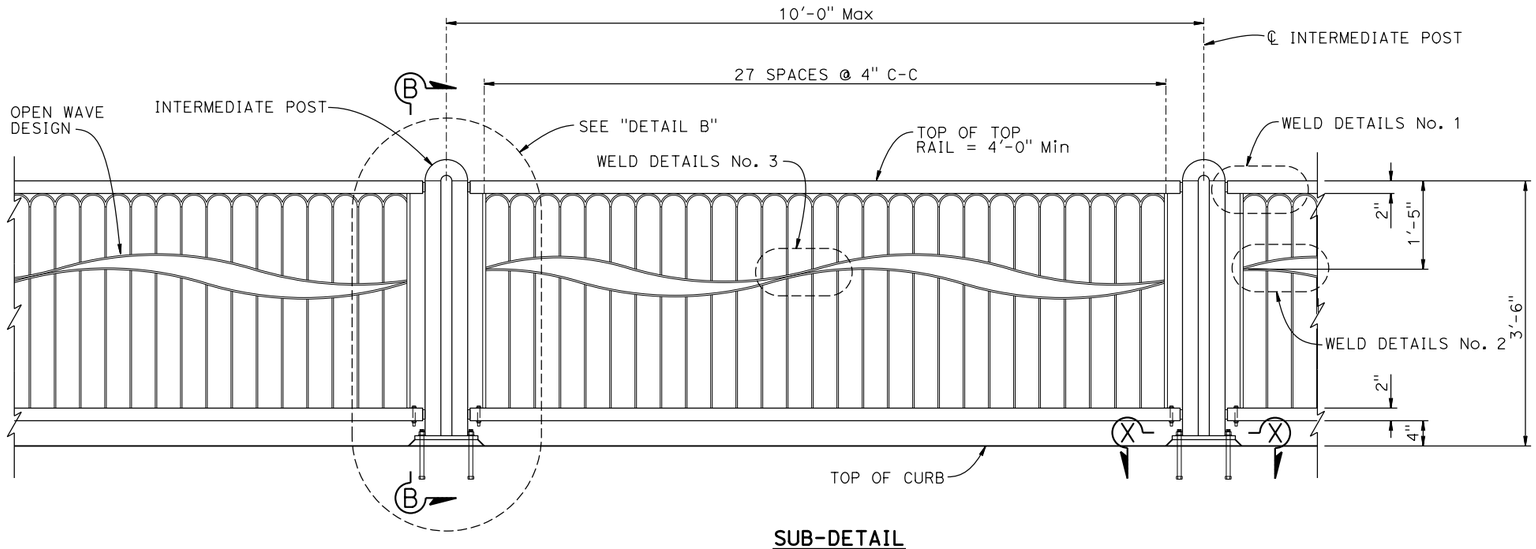
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

NOTES:

1. For "DETAIL B", see "BRIDGE RAILING DETAILS No. 5" sheet.
2. For "SECTION X-X", see "BRIDGE RAILING DETAILS No. 8" sheet.
3. For weld details 1 through 3 see "BRIDGE RAILING DETAILS No. 5" sheet.
4. For "SECTION B-B", see "BRIDGE RAILING DETAILS No. 8" sheet.



SUB-DETAIL

PART ELEVATION FOR 3'-6" HIGH PEDESTRIAN RAILING

1" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	A. Sanchez	L. VALLA
DETAILS	A. Onodera/T. Doan	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
BRIDGE RAILING DETAILS No. 2

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail2.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES: 2-24-23 | 06-13-23 | 06-01-23

SHEET 47 OF 65

NOTES:

1. For "DETAIL C", see "BRIDGE RAILING DETAILS No. 6" sheet.
2. For "SECTION Z-Z", see "BRIDGE RAILING DETAILS No. 8" sheet.
3. See "3'-6 HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 2) DETAILS" sheet.
4. For "SECTION C-C", see "BRIDGE RAILING DETAILS No. 8" sheet.
5. For "ARCH COVER" detail see "VIEW H-H" on "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS No. 4" sheet.

LEGEND:

Limits of Chain Link Railing

Limits of Chain Link Mesh anchored Baluster Covers

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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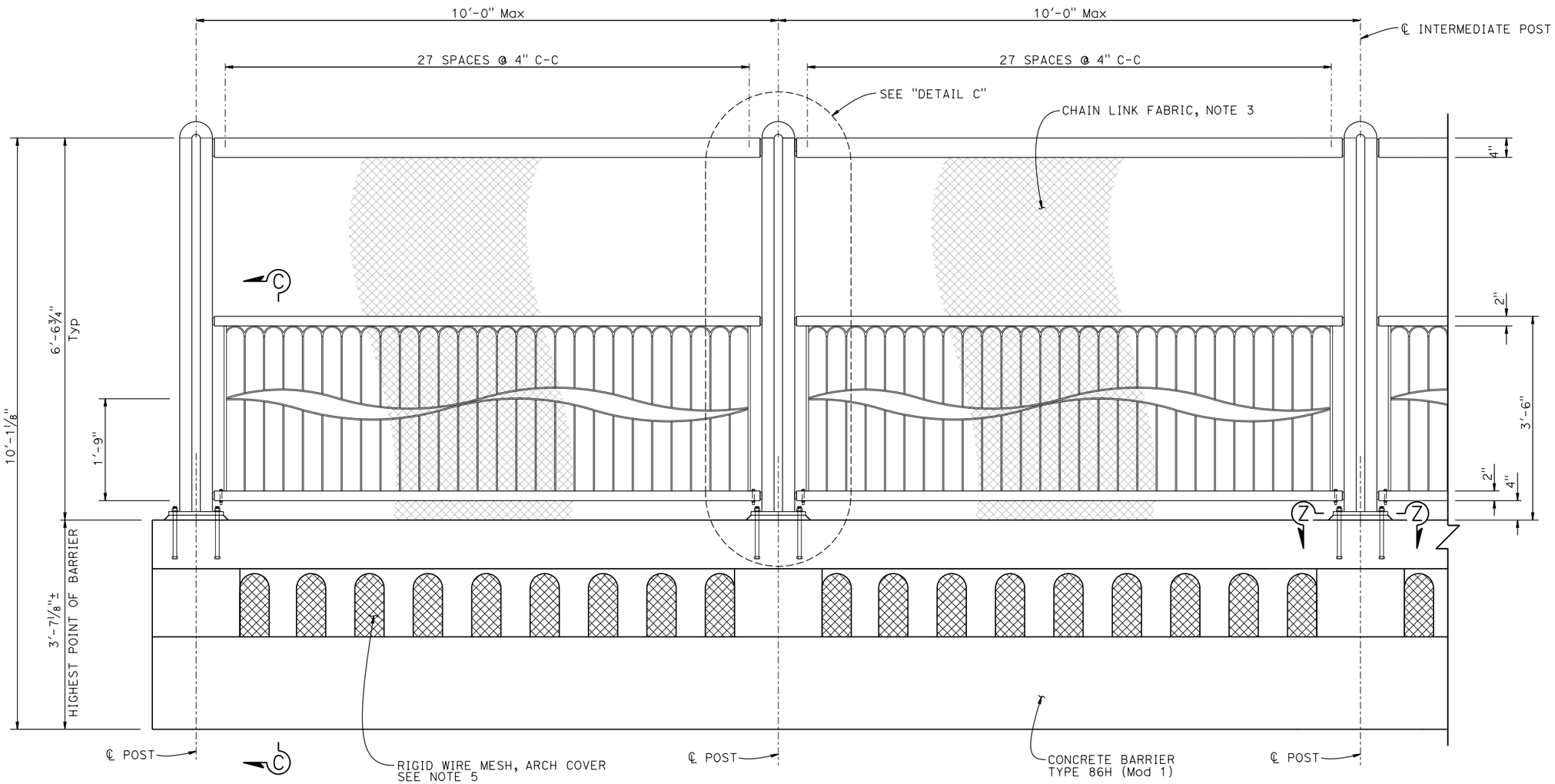

PART ELEVATION FOR 3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 2)

1" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	A. Sanchez	L. VALLA
DETAILS	A. Onodera/T. Doan	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

BRIDGE RAILING DETAILS No. 3

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail3.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-24-23		07-20-23	06-13-23	48	65

NOTES:

1. For "DETAIL D" and "DETAIL E", see "BRIDGE RAILING DETAILS No. 7" sheet.
2. For "SECTION Y-Y", see "BRIDGE RAILING DETAILS No. 8" sheet.
3. See "3'-6 HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 1) DETAILS No 1" and "3'-6 HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 1) DETAILS No 2"sheets.
4. 1"± Mortar Pad with ¾" leveling nuts. ¾" Base Plate with (4) ¾"ø hex head anchor bolts.
5. Use #4 ⌐¬ Tot 5 at each post for RW Abutment 1 Left. For "RETAINING WALL ABUTMENT 1 LEFT" reinforcement and details see Structure Plans.

LEGEND:

Limits of Chain Link Mesh

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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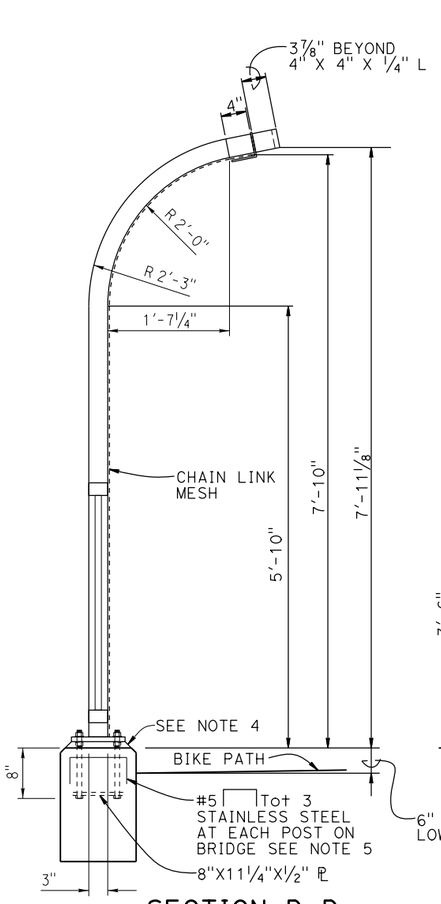
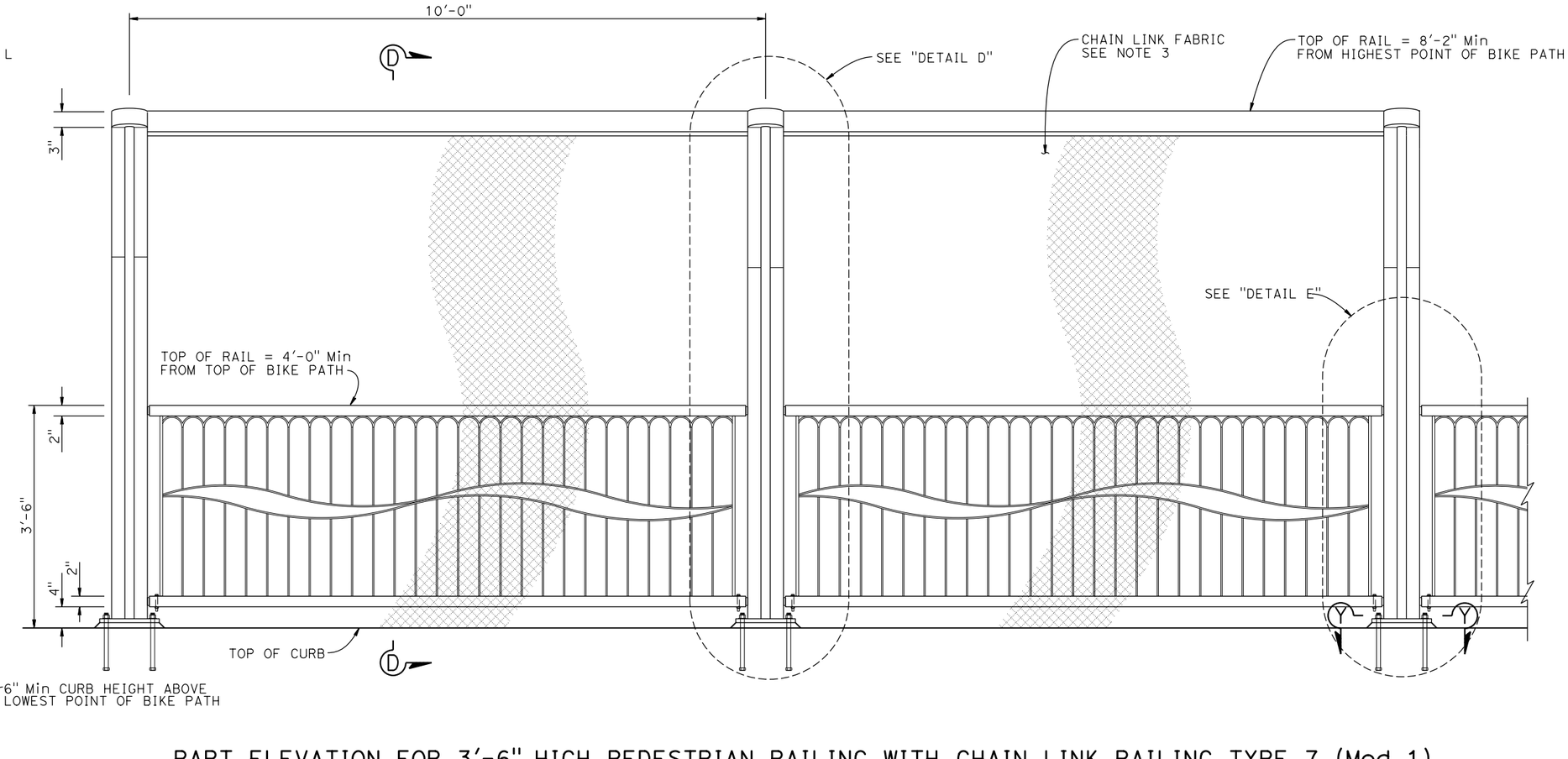


SECTION D-D

1" = 1'-0"



PART ELEVATION FOR 3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 1)

1" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DESIGN	BY A. Sanchez	CHECKED L. VALLA	
DETAILS	BY A. Onodera/T. Doan	CHECKED L. VALLA	
QUANTITIES	BY L. VALLA	CHECKED A. QUIROZ	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No.	52-0471
POST MILE	21.54

VENTURA OH (REPLACEMENT)

BRIDGE RAILING DETAILS No. 4

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail4.dgn USERNAME => s128972

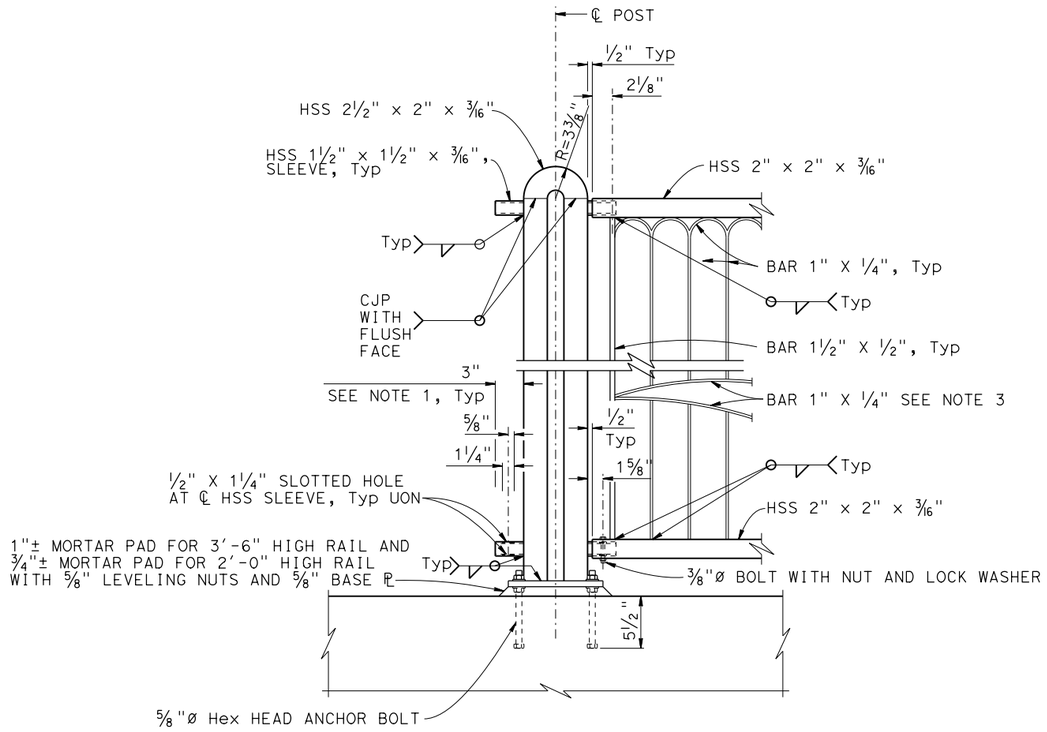
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

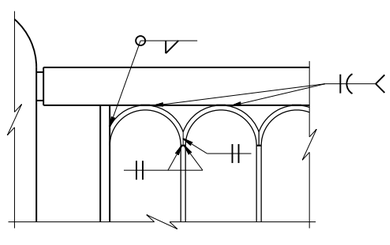
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-24-23		06-15-23	07-20-23	49	65

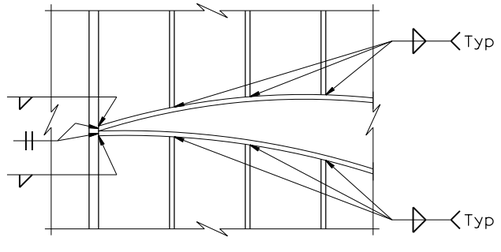


DETAIL B
1½" = 1'-0"

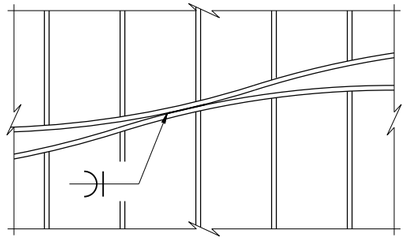
NOTES:
1. Use 8" long HSS Sleeve at Expansion Joints without bolted connection at top and bottom rails, typical.
2. UON = Unless otherwise noted.
3. For 3'-6" and 2'-6' high Pedestrian Railing that is not fabricated at 10'-0' centers where the spacing is not possible to meet at expansion joints and end conditions; it must still be fabricated with welded pickets at 4" centers and be a multiple of 4". For these span conditions less than 10'-0" centers, the "WAVE RADII ELEVATION" on "BRIDGE RAILING DETAILS No. 1" sheet is not required.
4. See "WELD DETAILS No. 1 ALTERNATIVE" on "BRIDGE RAILING DETAILS No. 6" sheet.



WELD DETAILS NO. 1
3" = 1'-0"
SEE NOTE 4



WELD DETAILS NO. 2
3" = 1'-0"



WELD DETAILS NO. 3
3" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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	BY	CHECKED
DESIGN	L. VALLA	W. ADDLESPURGER
DETAILS	A. ONODERA/T. DOAN/T. BRADSHAW	W. ADDLESPURGER
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
BRIDGE RAILING DETAILS No. 5

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail5.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
2-24-23		8-16-23	7-24-23	50	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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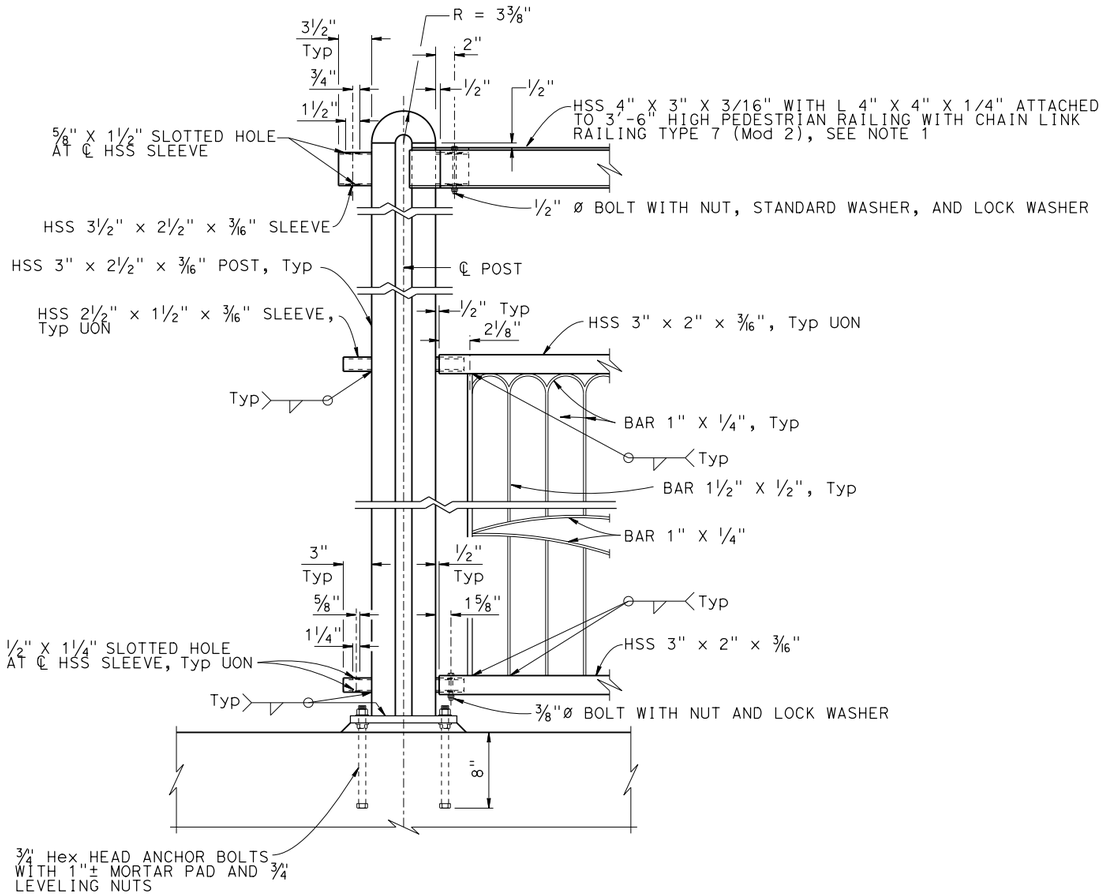
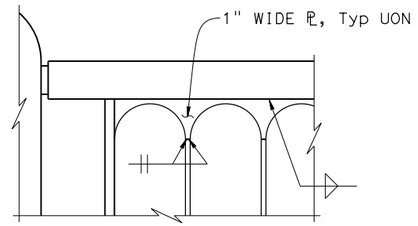


DETAIL C
1½" = 1'-0"

NOTES:

1. Chain Link Railing Type 7 (Mod 2) fabric not shown for clarity. For details and connections see "3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 2) DETAILS" sheet.
2. For welding details not shown see "DETAIL B" ON "BRIDGE RAILING DETAILS NO. 5" sheet.
3. UON = Unless otherwise noted.



WELD DETAILS No. 1 ALTERNATIVE
3" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	L. VALLA	W. ADDLESPURGER
DETAILS	A. ONODERA/T. DOAN/T. BRADSHAW	W. ADDLESPURGER
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
BRIDGE RAILING DETAILS No. 6

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail6.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
4-12-23		7-28-23	8-10-23	51	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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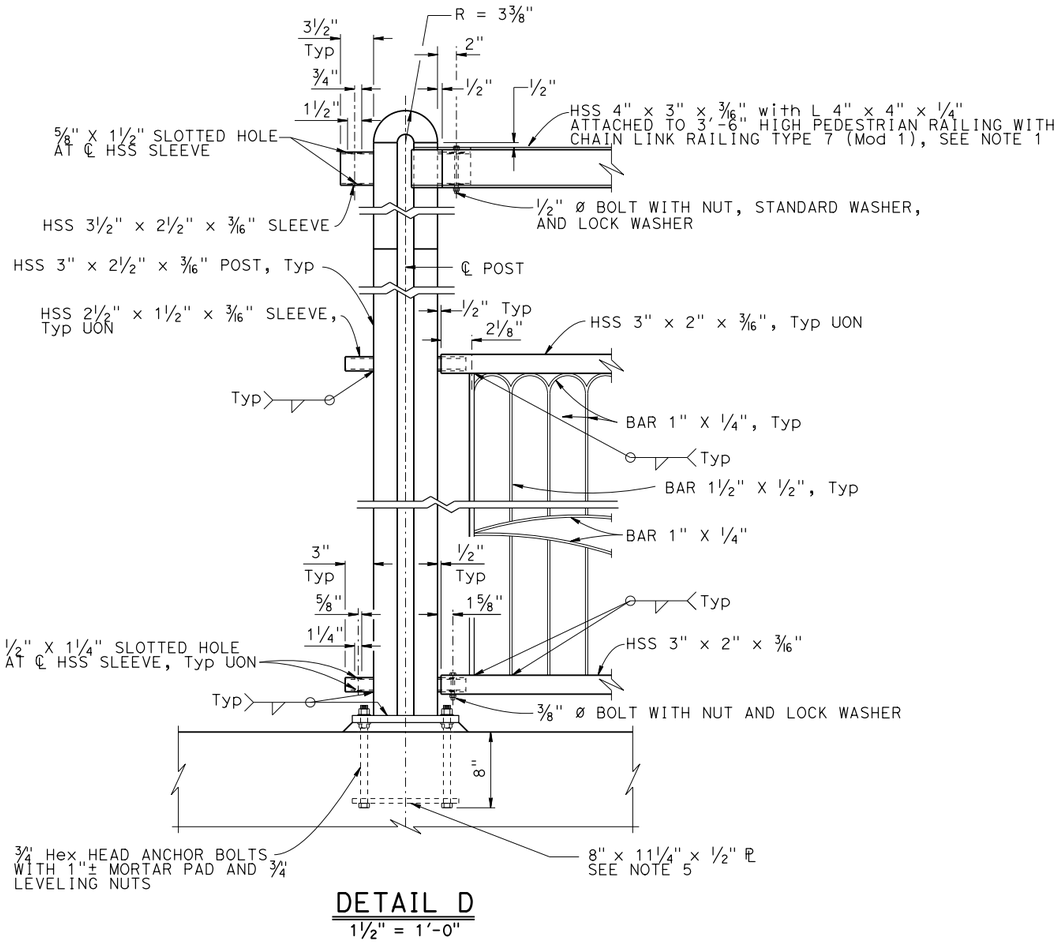
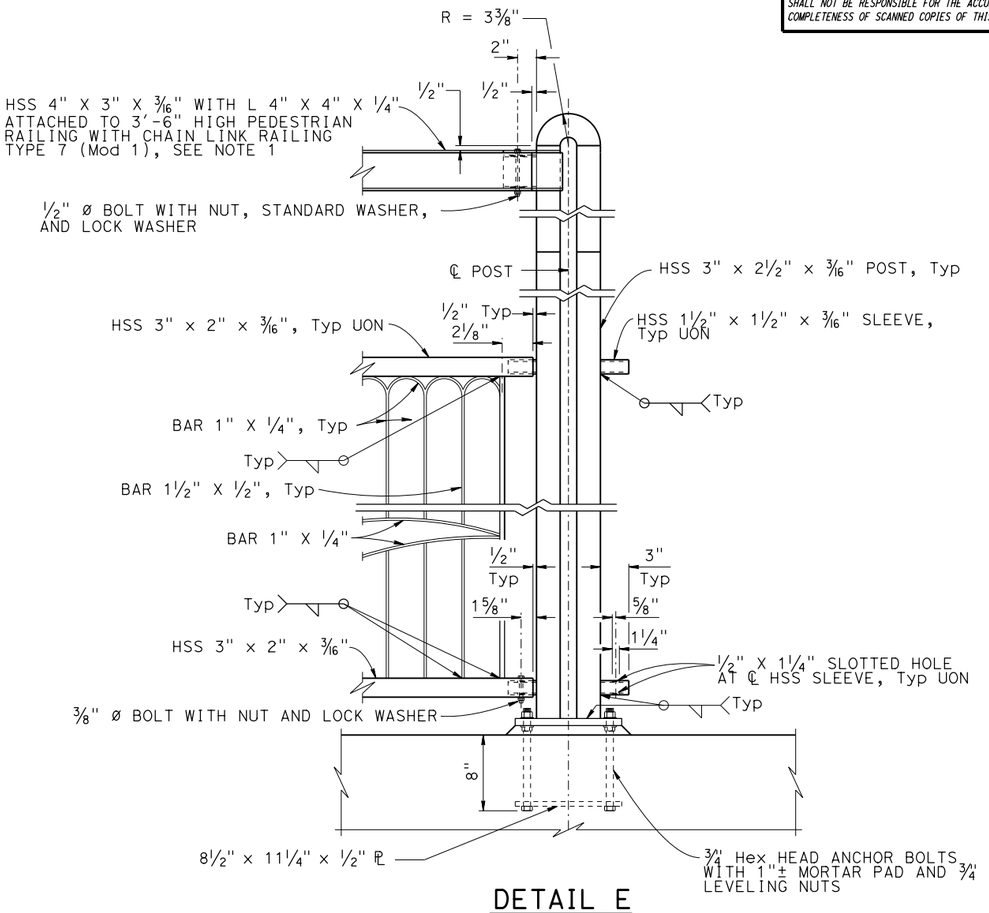


DETAIL D

1½" = 1'-0"



DETAIL E

1½" = 1'-0"

SEE NOTE 4

NOTES:

1. Chain Link Railing Type 7 (Mod 1) fabric not shown for clarity. For details and connections see "3'-6" HIGH PEDESTRIAN RAILING WITH CHAIN LINK RAILING TYPE 7 (Mod 1) DETAILS No. 1" sheet.
2. For welding details not shown see "DETAIL B" on "BRIDGE RAILING DETAILS No. 5" sheet.
3. UON = Unless otherwise noted.
4. For details not shown see "DETAIL B" and "DETAIL D".
5. Use rolled, gas cut, or saw cut edges on PL.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	L. VALLA	W. ADDLESPURGER
DETAILS	A. ONODERA/T. DOAN/T. BRADSHAW	W. ADDLESPURGER
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

BRIDGE RAILING DETAILS No. 7

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail7.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

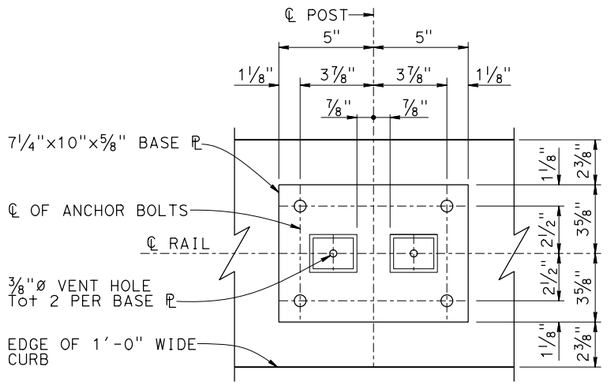
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
6-15-23		7-28-23	8-10-23	52	65

NOTES:

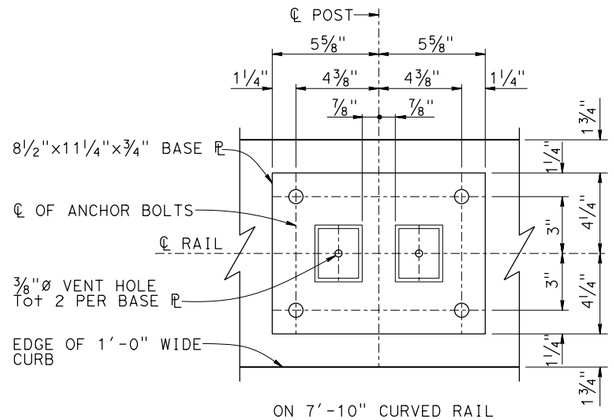
1. 1"± Mortar Pad with ¾" leveling nuts. ¾" Base Plate with (4) ¾"ø hex head anchor bolts.
2. For Chain Link Railing Type 7 (Mod 2), see "CHAIN LINK RAILING TYPE 7 (Mod 2)" sheet.
3. For details not shown see "CONCRETE BARRIER TYPE 86H (Mod 1) DETAILS Nos. 1-5" sheets and "CONCETE BARRIER TYPE 86H (Mod 2) DETAILS Nos. 1-4" sheets.



ON 3'-6" HIGH RAIL

SECTION X-X

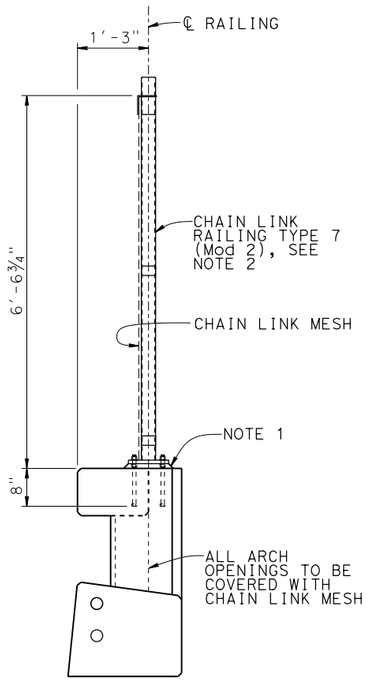
3" = 1'-0"



ON 7'-10" CURVED RAIL

SECTION Y-Y

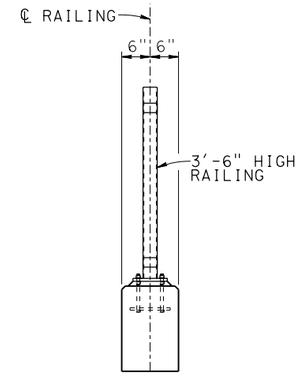
3" = 1'-0"



AT CONCRETE BARRIER TYPE 86H (Mod 1)

SECTION C-C

¾" = 1'-0"



ON 1'-6" HIGH CURB

SECTION B-B

¾" = 1'-0"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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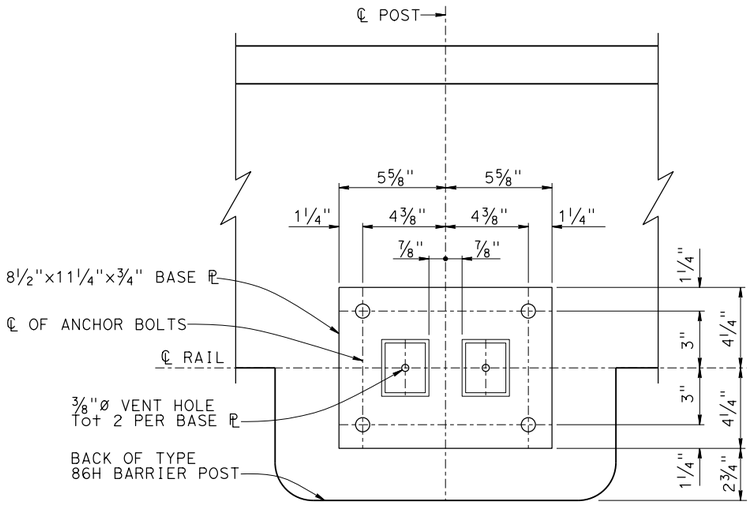
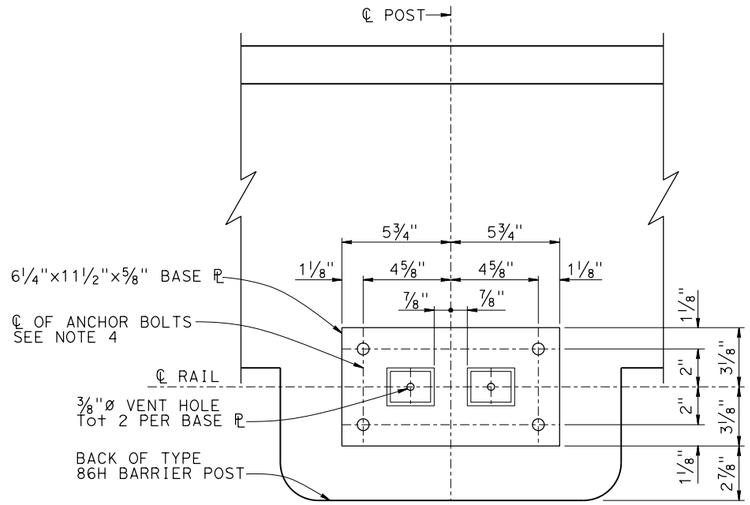


ON 6'-6"± HIGH RAIL

SECTION Z-Z

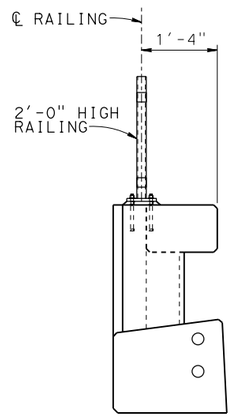
3" = 1'-0"



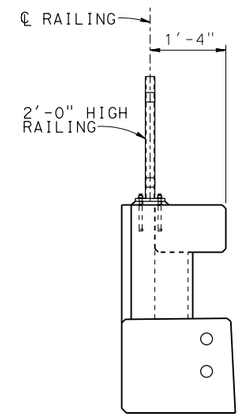
ON 2'-0" HIGH RAIL

SECTION W-W

3" = 1'-0"



AT CONCRETE BARRIER TYPE 86H (Mod 1)



AT CONCRETE BARRIER TYPE 86H (Mod 2)

SECTION A-A

¾" = 1'-0"

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	L. VALLA	B. ADDLESPURGER
DETAILS	T. DOAN/T. BRADSHAW	W. ADDLESPURGER
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

BRIDGE RAILING DETAILS No. 8

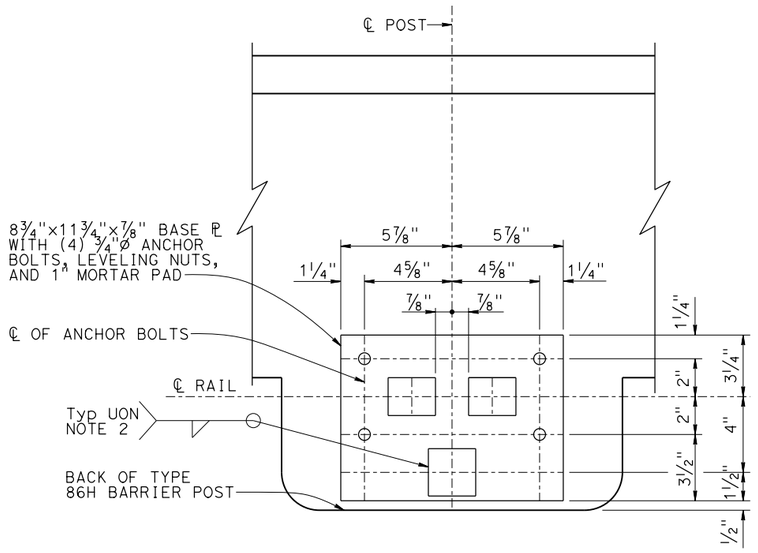
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail8.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-3-23		8-10-23	6-16-23	53	65



2' HIGH RAIL WITH HSS 2½"×2½"×¼" ROADWAY SIGN POST

SECTION W-W

3" = 1'-0"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE X

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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NOTES:

1. For roadway sign details see "ROADWAY PLANS"
2. Use ¼"x¾" Backing Ring to Base ℙ Connection on HSS 2½"x2½"x¼" Sign Post

   UON = Unless otherwise noted

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

	BY	CHECKED
DESIGN	L. VALLA	B. ADDLESPURGER
DETAILS	T. DOAN/T. BRADSHAW	W. ADDLESPURGER
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

BRIDGE RAILING DETAILS No. 9

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-a-rail9.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →
REVISION DATES: ~~3-13-23~~ ~~6-16-23~~ 8-10-23

SHEET 54 OF 65

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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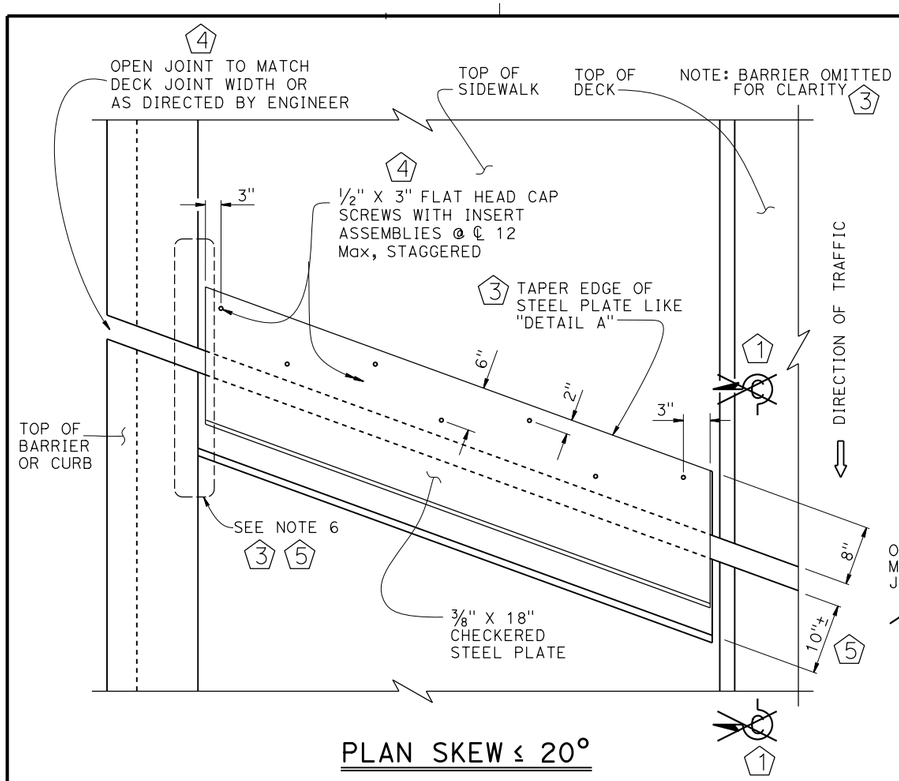
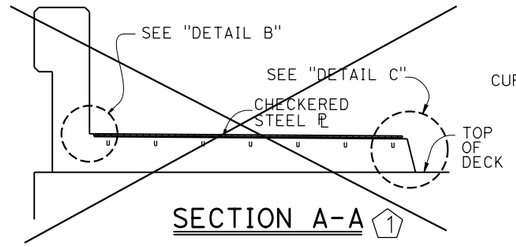
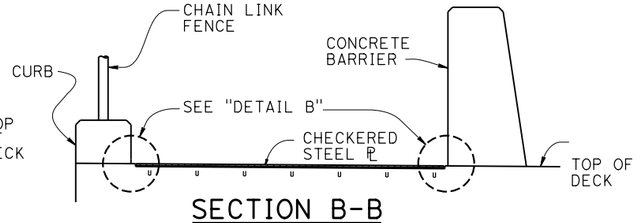
The Registered Civil Engineer for the project is responsible for the selection and proper application of the component design and any modifications shown.



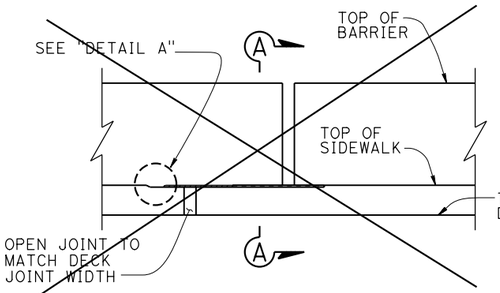
PLAN SKEW ≤ 20°



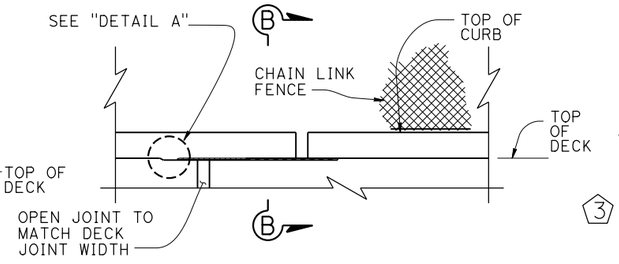
SECTION A-A 1



SECTION B-B



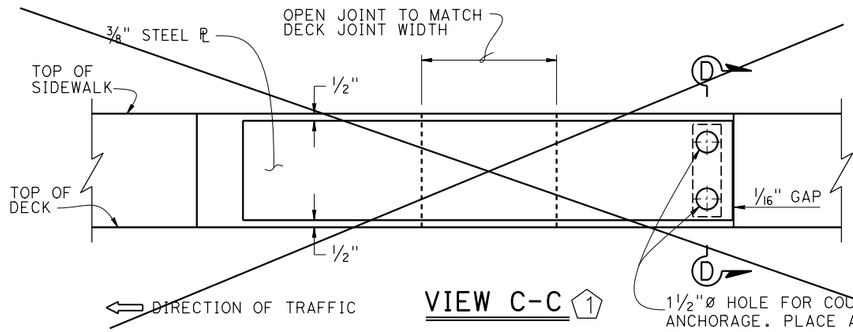
ELEVATION 1



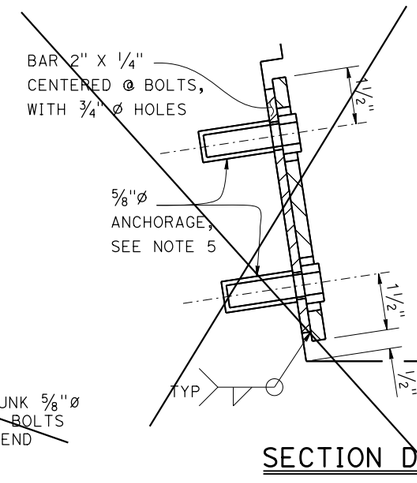
ELEVATION

NOTE: Barrier not shown for clarity

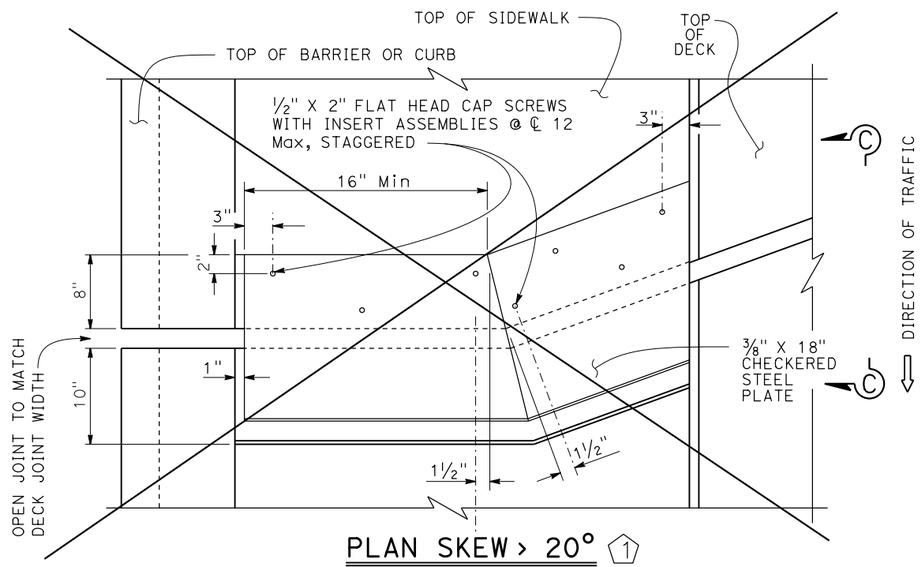
NOTES:
1. Utility openings and expansion joints not shown for clarity
2. Recess concrete ½" for plates
3. Plates to be galvanized
4. Architectural treatment not shown
5. ~~Insert assembly or expansion anchorage for ⅝" x 1¾" bolts. Use installation bolts extended ½" minimum past nut and coat with bond breaker. After concrete has cured, remove installation bolts, install HS bolts~~ 2
3 6. For expansion details in curb see "JOINT ARMOR AT CURB DETAILS" sheet.



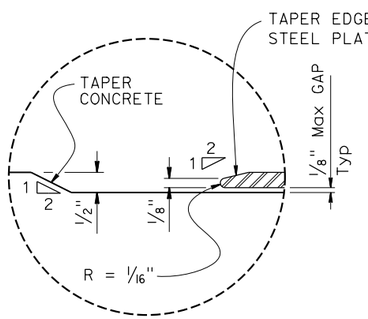
VIEW C-C 1



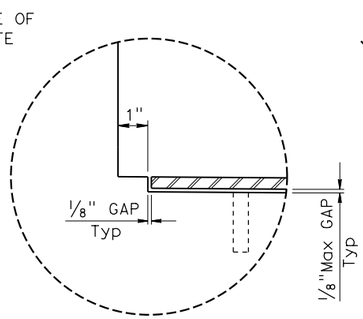
SECTION D-D 1



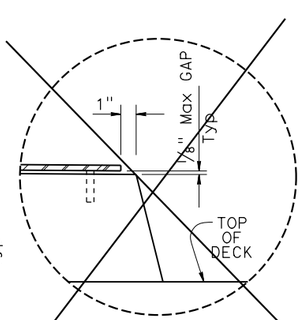
PLAN SKEW > 20° 1



DETAIL A



DETAIL B



DETAIL C 1

NO SCALE

SPECIAL DETAILS

REVISED BRIDGE STANDARD DETAILS		
xs8-050 (FILE NO.)	October 2018 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*

1 Details do not apply 2 Notes do not apply 3 Added Notes 4 Revised Notes 5 Revised Details

STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE NO. 52-0471 | POST MILE 21.54

VENTURA OH (REPLACEMENT)

JOINT ARMOR FOR PEDESTRIAN WALKWAYS

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

FILE => 52-0471-z-a-xs8-050.dgn
USERNAME => s128972 TIME PLOTTED => 11:38 DATE PLOTTED => 31-AUG-2023

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251 CONTRACT NO.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
7-24-14	9-14-18	04-04-23	8-28-16	55	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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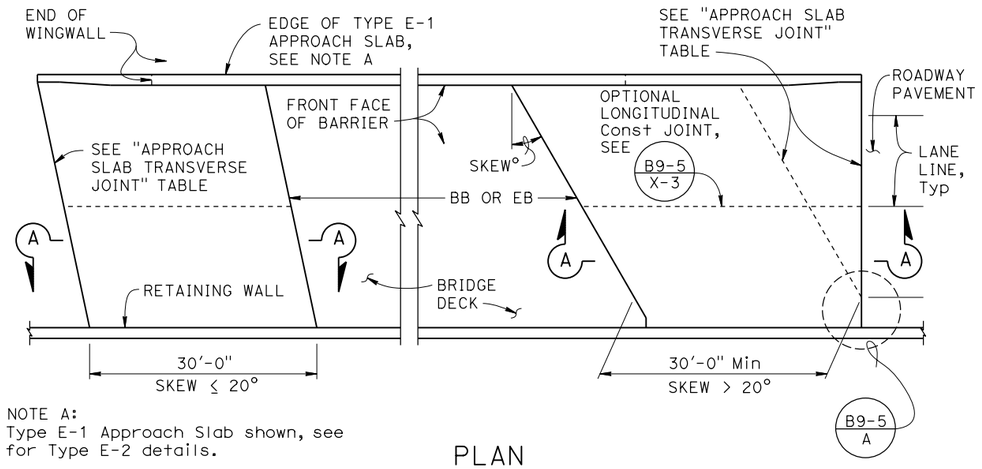
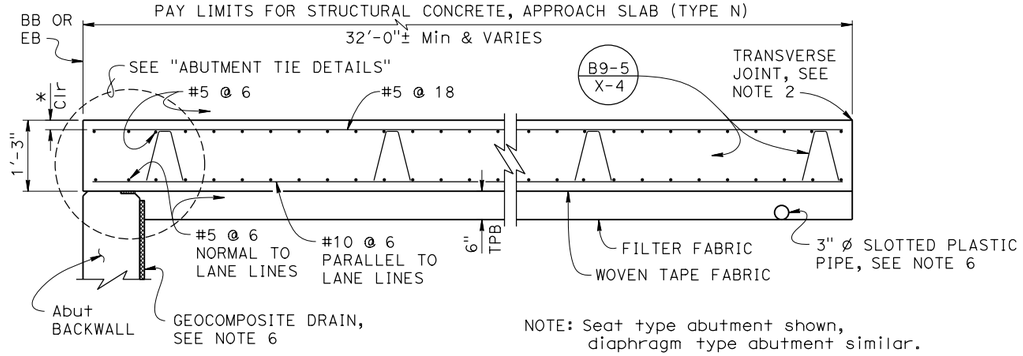


NOTE A:
Type E-1 Approach Slab shown, see for Type E-2 details.

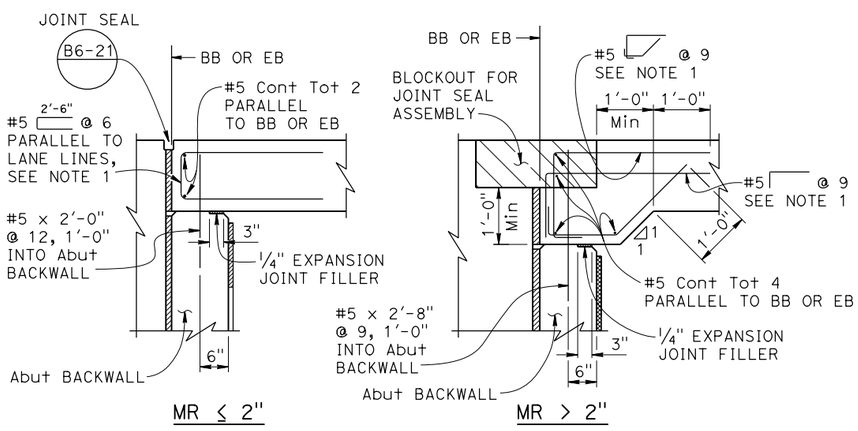
PLAN

APPROACH SLAB TRANSVERSE JOINT		
APPROACH SKEW, x	WITH HMA ROADWAY PAVEMENT	WITH PCC ROADWAY PAVEMENT
x < 20°	PARALLEL TO BB OR EB	PARALLEL TO BB OR EB
20° < x < 45°	PARALLEL TO BB OR EB (B9-5 A)	STAGGER AT LANE LINES 24' TO 36' APART, SEE "END STAGGER DETAIL"
x > 45°	PARALLEL TO BB OR EB (B9-5 A)	STAGGER AT EACH LANE LINE, SEE "END STAGGER DETAIL"

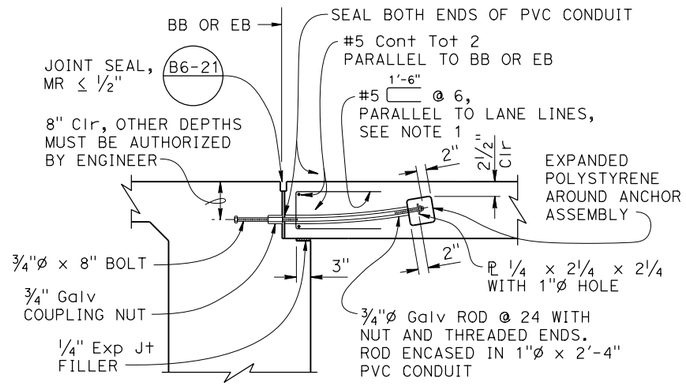


NOTE: Seat type abutment shown, diaphragm type abutment similar.

SECTION A-A



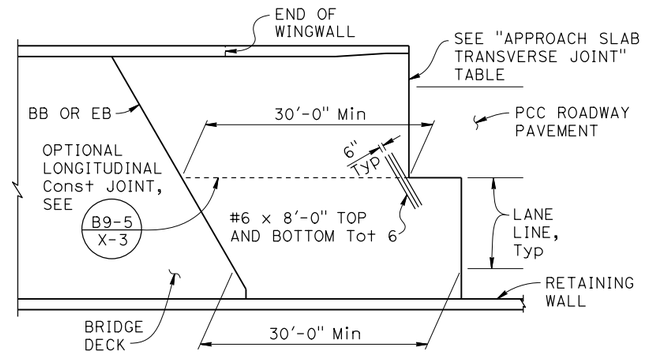
SEAT TYPE ABUTMENT (B9-5 C)



DIAPHRAGM TYPE ABUTMENT

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

ABUTMENT TIE DETAILS



END STAGGER DETAIL

LEGEND:

* - All approach slab reinforcement shall be post-epoxy coated and minimum top mat cover 2½".

NOTES:

1. For MR ≤ 2", adjust reinforcement to clear sawcut for sealed joint. For MR > 2", reinforcement must be normal to BB or EB and spaced to avoid joint seal assembly anchorage.
2. Transverse Joint must be a minimum of 5'-0" from an existing or constructed weakened plane joint in approach PCC roadway pavement.
3. Place dowels into the adjacent PCC pavement along the Transverse Joint, refer to Standard Plans P10 and P30.
4. At the Contractor's option, approach slab transverse reinforcement may be placed parallel to BB or EB. Spacing of transverse reinforcement is measured along ℄ roadway.
5. For details not shown, refer to Standard Plan B9-5.
6. For structure approach drainage details, refer to Standard Plan B9-6.

NO SCALE

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

STRUCTURE APPROACH TYPE N (30) (Mod)

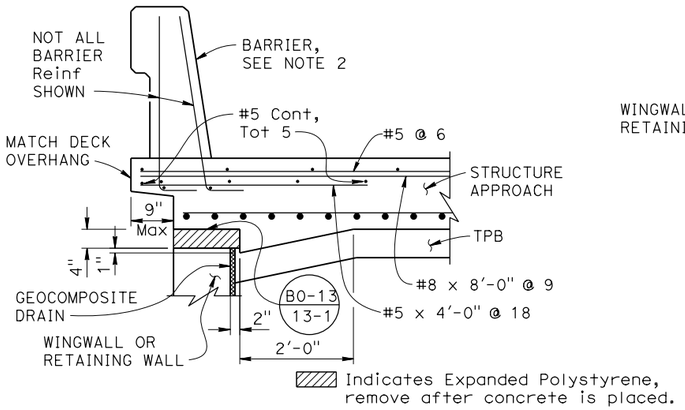
STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 16:39
FILE => 52-0471-z-b-sad01.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

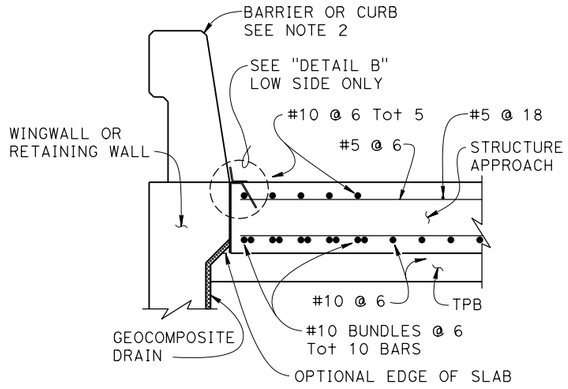
REVISION DATES				SHEET	OF
06-01-23	06-15-23	09-28-23		56	65



NOTE: Right side of bridge only

DETAIL X-1

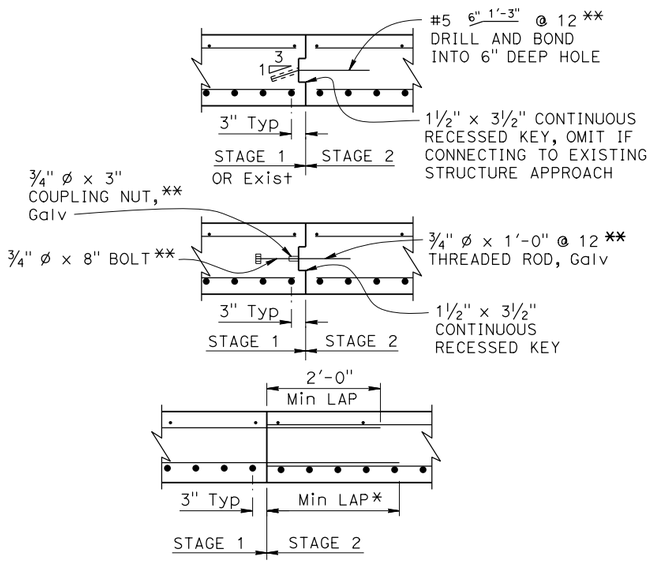
TYPE E-1



NOTE: Left side of bridge only

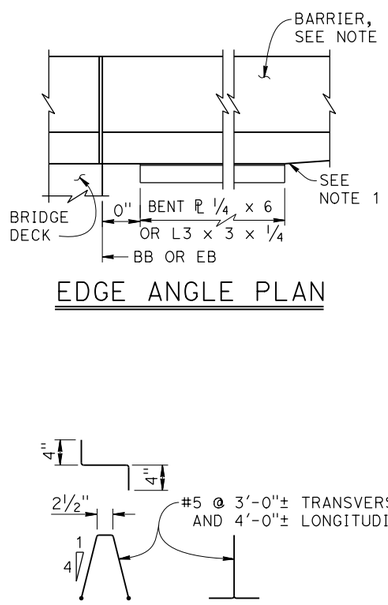
DETAIL X-2

TYPE E-2

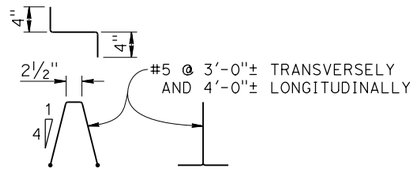


DETAIL X-3

LONGITUDINAL CONSTRUCTION JOINT ALTERNATIVES

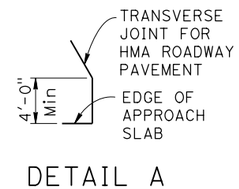


EDGE ANGLE PLAN

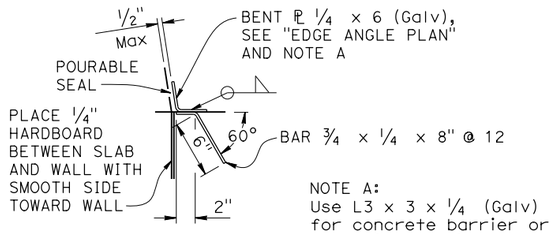


DETAIL X-4

BAR CHAIR DETAIL

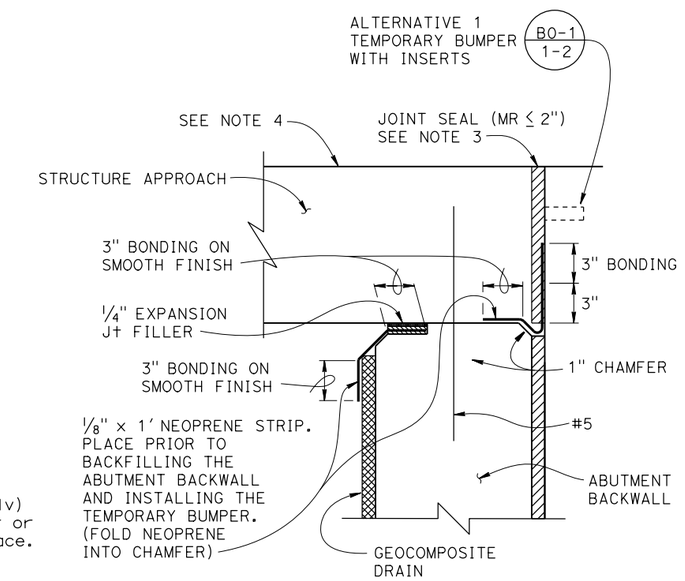


DETAIL A



NOTE A:
Use L3 x 3 x ¼ (Galv) for concrete barrier or curb with vertical face.

DETAIL B



DETAIL C

NOTES:

1. End the plate or edge angle at beginning of barrier transition, end of wingwall or end of structure approach as applicable.
2. Solid concrete barrier shown, details similar for all concrete and standard post-beam barriers.
3. Joint protection details shown for MR ≤ 2". Details similar when joint seal assembly is required.
4. Polyester concrete shall be placed across approach slab to match bridge deck protection in Freeze-Thaw Area.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

DESIGN NOTES

DESIGN: AASHTO LRFD Bridge Design Specifications, 2012 Edition with Caltrans Amendments, preface dated January 2014

LIMIT STATES: Service I, Strength I & II, Extreme II and Fatigue I (Y_{FAT} = 1.0)

DEAD LOAD: Includes 35 psf for future wearing surface

LIVE LOAD: HL93 and permit design load
Equivalent strip width method: W_1 = 12 ft
Slab span: L_1 = 24.5 ft (30 ft Approach Slab)
Slab span: L_1 = 7.83 ft (10 ft Approach Slab)

REINFORCED CONCRETE:
f_y = 60 ksi
f'_c = 3.6 ksi
n = 8

LEGEND:

* Min lap splice for bottom Reinf in Freeze-Thaw Area shall be 3'-6".

** Threaded Rods and Dowels in Freeze-Thaw Area shall be stainless steel or epoxy-coated prefabricated 9" Drill and Bond dowels into a 9" deep hole.

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

NO SCALE

	BY	CHECKED
DESIGN	C. HENSEL	L. VALLA
DETAILS	T. DOAN	L. VALLA
QUANTITIES	L. VALLA	A. QUIROZ

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

STRUCTURE APPROACH DETAILS (Mod)

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 28-SEP-2023 TIME PLOTTED => 10:13
FILE => 52-0471-z-b-sad02.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: Ven/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
06-01-23	09-28-23			57	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE _____

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

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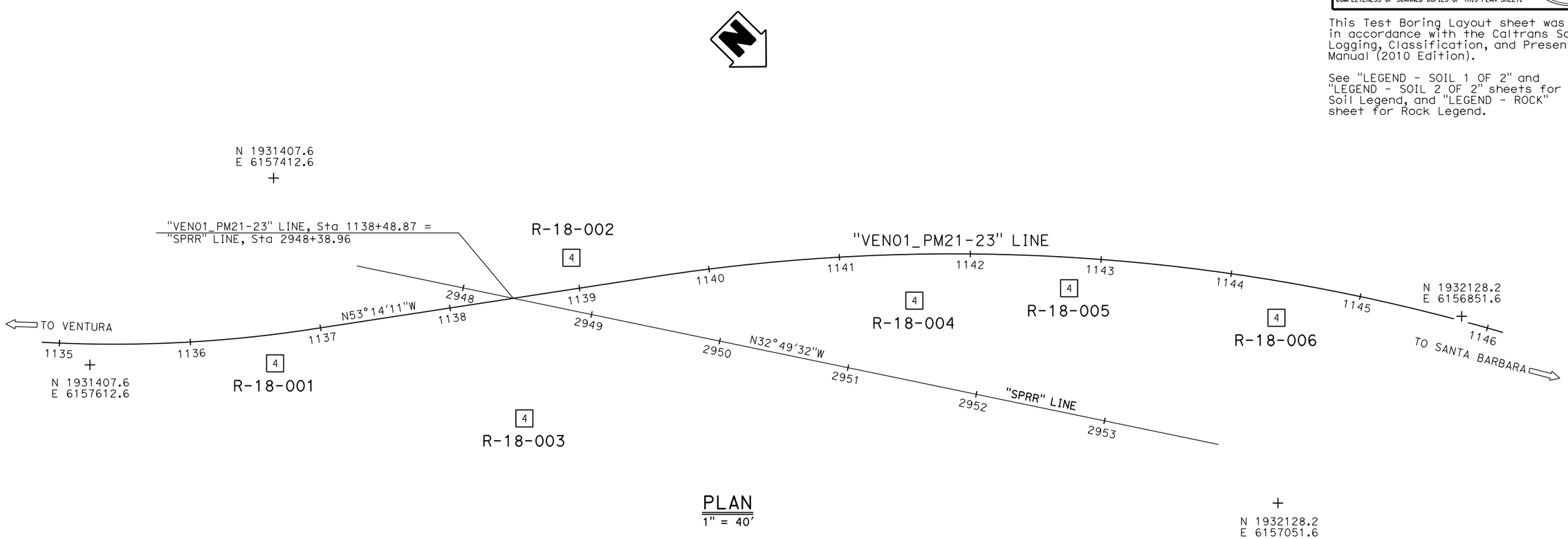
This Test Boring Layout sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010 Edition).

See "LEGEND - SOIL 1 OF 2" and "LEGEND - SOIL 2 OF 2" sheets for Soil Legend, and "LEGEND - ROCK" sheet for Rock Legend.



PLAN
1" = 40'

BOREHOLE LOCATION TABLE

HOLE ID	Northing	Easting	"VEN01_PM21-23" Line		
			Station	Offset (ft)	Rt/Lt
R-18-001	1931507.6	6157512.6	1136+62.32	22.06	Rt
R-18-002	1931612.4	6157296.5	1138+97.46	23.83	Lt
R-18-003	1931672.8	6157409.1	1138+43.42	91.91	Rt
R-18-004	1931822.0	6157136.2	1141+56.57	35.41	Rt
R-18-005	1931899.6	6157046.6	1142+76.92	23.61	Rt
R-18-006	1932028.2	6156951.6	1144+39.63	27.95	Rt

DESIGN	BY C. Hensel	CHECKED L. Valla	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471
DETAILS	BY S. Jiang/H. Tisbe	CHECKED L. Valla			POST MILE 21.54

GEOTECHNICAL SERVICES FIELD INVESTIGATION BY: R. Taguba

VENTURA OH (REPLACEMENT)
TEST BORING LAYOUT

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/1/2022)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-ltb01.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3650
PROJECT NUMBER & PHASE: 0716000025-1

COUNTY/ROUTE: Ven/001
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-26-23	5-31-23			58	65

BENCHMARK

BM PT-64 Elev 14.87
130_SUHV
102.41' Lt 1137+36.22 "VENO1_PM21-23" LINE
N 1931452.93
E 6157378.64
Vert: NAVD88
Horiz: CCS83 (1991.35) Z5

BM PT-65 Elev 16.53
130_SUHV
54.85' Rt 1141+34.42 "VENO1_PM21-23" LINE
N 1931821.09
E 6157165.13
Vert: NAVD88
Horiz: CCS83 (1991.35) Z5

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

8-28-23
REGISTERED GEOTECHNICAL ENGINEER DATE

REGISTERED PROFESSIONAL ENGINEER
James Majors
No. 3161
Exp. 03-31-2024
GEOTECHNICAL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

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R-18-001

N 1931507.6
E 6157512.6

48.1

8 ASPHALT CONCRETE (5").

CR SILTY GRAVEL with SAND (GM); brown; moist; mostly fine to coarse GRAVEL; little medium to coarse SAND; little fines; (FILL).

69|1.4 PA -very dense.

60|1.4 -light brown; some medium to coarse SAND; maximum size 1.5".
-drilling rig chattering due to presence of COBBLES.

60|1.4 -maximum size 1.75".

50/3|1.4 SILTY GRAVEL (GM); very dense; brown; moist; mostly fine to coarse GRAVEL; little fines; few fine to medium SAND; maximum size 1"; (FILL).

48|1.4 PA SILTY GRAVEL with SAND (GM); very dense; olive brown; moist; mostly fine to coarse GRAVEL; little fine to medium SAND; little fines; maximum size 1.5"; (FILL).

19|1.4 PA PI -drilling rig chattering due to presence of COBBLES.
SILT (ML); very stiff; dark olive gray; moist; mostly fines; PP=2 tsf.

GWS Elev 11.3 05-21-18

12|1.4 SILT with SAND (ML); stiff; dark olive gray; moist; mostly fines; little SAND; PP=1.25 tsf.

REF|2.4 -no recovery.

41|1.4 PA PI SEDIMENTARY ROCK (POORLY INDURATED SANDSTONE); fine grained; dark olive gray; (SILTY SAND; very dense; moist; mostly fine SAND; some fines; PP=1.25 tsf).

50/3|2.4 -no recovery.

68|1.4 SEDIMENTARY ROCK (POORLY INDURATED SILTSTONE); dark olive gray; (SANDY SILT; very dense; moist; mostly fines; some fine SAND; PP=2.25 tsf).

85/10|1.4 -(Elastic SILT; very stiff; moist; mostly low to medium plasticity fines; PP=2.75 tsf).

REF|2.4 4 -no recovery.

50/6|1.4 PA PI SEDIMENTARY ROCK (POORLY INDURATED SANDSTONE); dark olive gray; (SILTY SAND; very dense; moist; mostly SAND; little fines).

50/5|1.4 SEDIMENTARY ROCK (POORLY INDURATED SILTSTONE); dark olive gray; (SANDY SILT; very dense; moist; mostly fines; little fine SAND).

50/6|1.4

99/10|1.4 PA SEDIMENTARY ROCK (POORLY INDURATED SANDSTONE); dark olive gray; (SILTY SAND; very dense; moist; mostly fine SAND; some fines).

50/4|1.4 SEDIMENTARY ROCK (POORLY INDURATED SILTSTONE); dark olive gray; (SANDY SILT; very dense; moist; mostly low plasticity fines; some fine SAND; PP=1.25 tsf).

94/10|1.4

5-21-18
Terminated at Elev -53.4
ER_i = 80%

R-18-003

N 1931672.8
E 6157409.1

23.9

8 SILTY SAND with GRAVEL (SM); brown; dry; mostly fine to medium SAND; some coarse GRAVEL; little fines; trace of COBBLES; (FILL).

14|1.4 4 CR PA SILTY GRAVEL with SAND (GM); medium dense; brown; moist; some fines; (FILL).

5|1.4 PA -fine to coarse GRAVEL; maximum size 1.5".

GWS Elev 9.4 05-11-18

5|1.4 PI Lean CLAY with SAND (CL); medium stiff; olive brown; wet; mostly fines; some SAND; PP=0.5 tsf.

9|1.4 Poorly-graded SAND (SP); medium dense; light grayish brown; wet; mostly fine SAND.

42|1.4 SEDIMENTARY ROCK (POORLY INDURATED SILTSTONE); dark olive gray; (SILT; very dense; moist; mostly low plasticity fines; PP=4.5 tsf).

44|1.4

41|1.4

P|2.4 C PI UW M -push sample.

68|1.4 SEDIMENTARY ROCK (POORLY INDURATED CLAYSTONE); dark gray; (Lean CLAY; hard; moist; mostly fines; PP=4.5 tsf).

P|2.4 PI UW M DS UW M

70|1.4

80|1.4 PA PI

50/5|2.4

56|1.4 PA PI -(SANDY lean CLAY; hard; moist; mostly fines; some SAND; PP>4.5 tsf).

P|2.4

REF|2.4 -pushed 8" then hammered.

82/11|1.4 SEDIMENTARY ROCK (POORLY INDURATED SILTSTONE); dark gray; (Elastic SILT; hard; moist; PP=4.5 tsf).

50/5|1.4 -(SILT with SAND; moist; mostly fines; little fine SAND).

92/11|1.4 -(Elastic SILT; hard; moist; PP=4.5 tsf).

50/4|1.4

97/10|1.4 -(very stiff; PP=2.25 tsf).

5-11-18
Terminated at Elev -97.6
ER_i = 80%

PROFILE
Vert: 1" = 10'

GEOTECHNICAL SERVICES		
FUNCTIONAL SUPERVISOR: S. Karimi	DRAWN BY: S. Jiang/H. Tisbe	FIELD INVESTIGATION BY: R. Taguba
	CHECKED BY: M. Merino	

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
LOG OF TEST BORINGS 1 OF 4

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/1/2022)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-itb02.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3650
PROJECT NUMBER & PHASE: 0716000025-1

COUNTY/ROUTE: Ven/001
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES: 5-26-23 | 5-31-23 | 6-08-23 | 6-12-23

SHEET 59 OF 65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED GEOTECHNICAL ENGINEER — DATE 8-28-23

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — James Majors — No. 3161 — Exp. 03-31-2024 — GEOTECHNICAL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

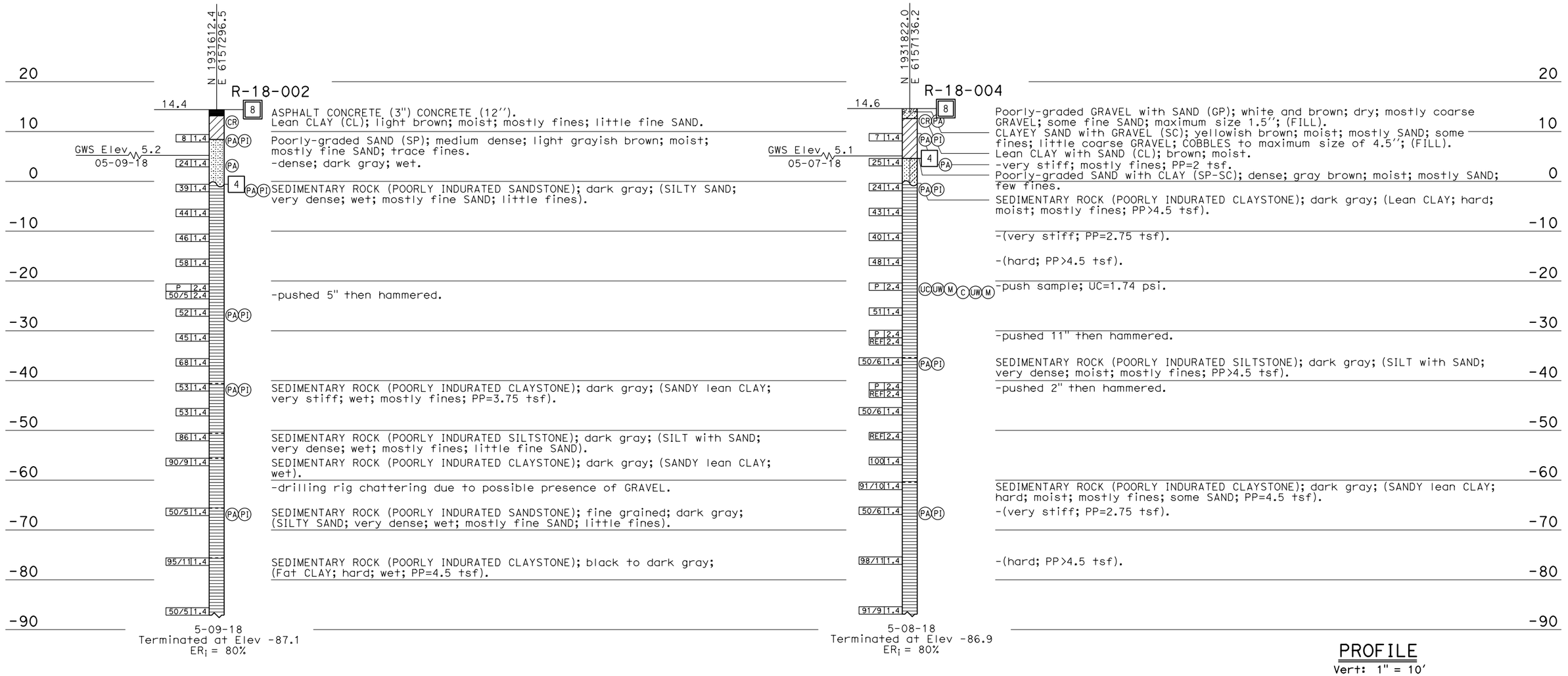
BENCHMARK

BM PT-64 Elev 14.87
130_SUHV
102.41′ Lt 1137+36.22 "VENO1_PM21-23" LINE
N 1931452.93
E 6157378.64
Vert: NAVD88
Horiz: CCS83 (1991.35) Z5

BM PT-65 Elev 16.53
130_SUHV
54.85′ Rt 1141+34.42 "VENO1_PM21-23" LINE
N 1931821.09
E 6157165.13
Vert: NAVD88
Horiz: CCS83 (1991.35) Z5

This LOTB sheet was prepared in accordance with the Caltrans Soil & Rock Logging, Classification, and Presentation Manual (2010 Edition).

See "LEGEND - SOIL 1 OF 2" and "LEGEND - SOIL 2 OF 2" sheets for Soil Legend, and "LEGEND - ROCK" sheet for Rock Legend.



PROFILE

Vert: 1" = 10′

GEOTECHNICAL SERVICES			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471	VENTURA OH (REPLACEMENT)
FUNCTIONAL SUPERVISOR: S. Karimi	DRAWN BY: S. Jiang/H. Tisbe	FIELD INVESTIGATION BY: R. Taguba			POST MILE 21.54	LOG OF TEST BORINGS 2 OF 4
	CHECKED BY: M. Merino					

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/1/2022)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-ltb03.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3650
PROJECT NUMBER & PHASE: 0716000025-1

COUNTY/ROUTE: Ven/001
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-26-23	5-31-23	6-08-23	6-12-23	60	65

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED GEOTECHNICAL ENGINEER — DATE 8-28-23

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — James Majors — No. 3161 — Exp. 03-31-2024 — GEOTECHNICAL — STATE OF CALIFORNIA

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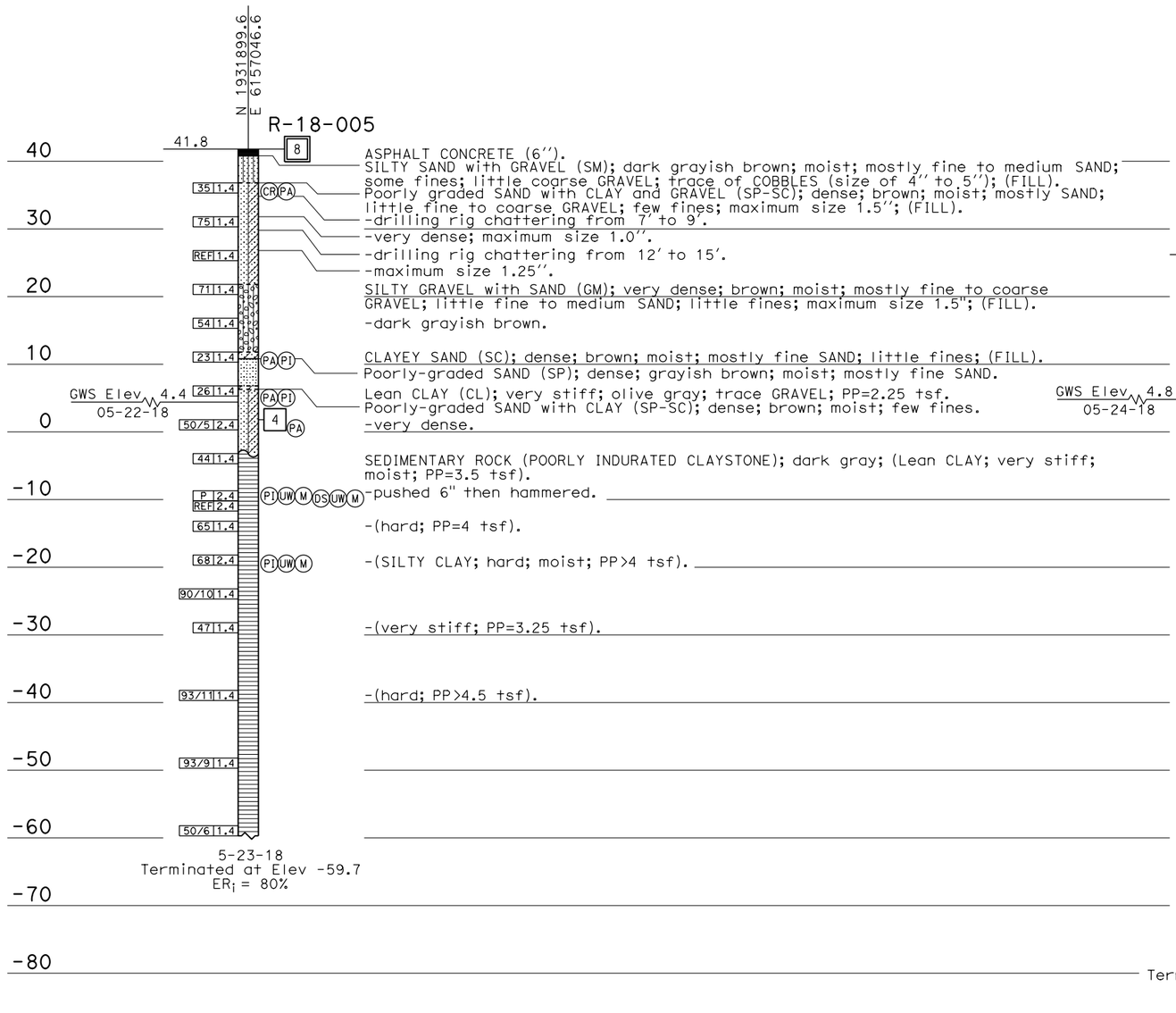
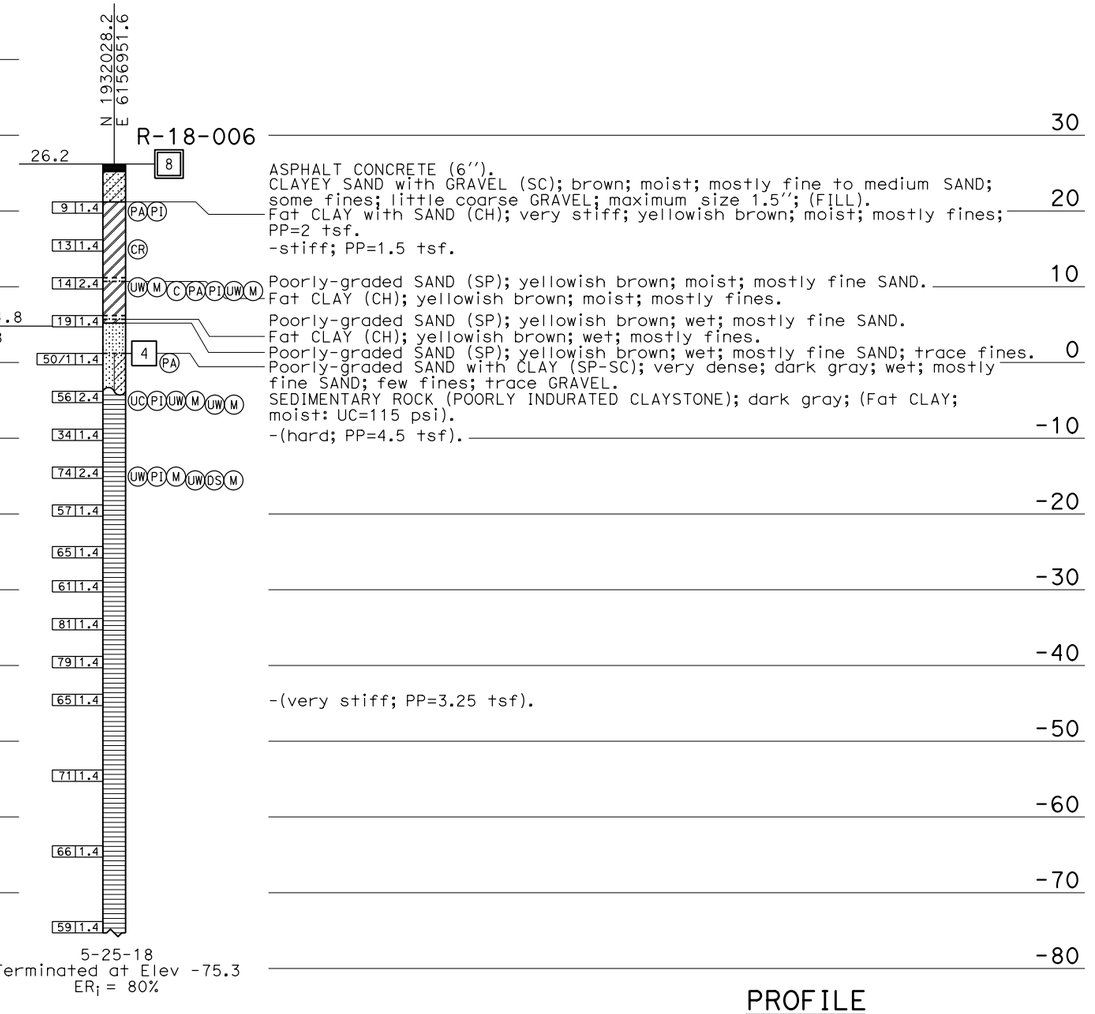
BENCHMARK

BM PT-64 Elev 14.87
130_SUHV
102.41' Rt 1137+36.22 "VEN01_PM21-23" LINE
N 1931452.93
E 6157378.64
Vert: NAVD88
Horiz: CCS83 (1991.35) Z5

BM PT-65 Elev 16.53
130_SUHV
54.85' Rt 1141+34.42 "VEN01_PM21-23" LINE
N 1931821.09
E 6157165.13
Vert: NAVD88
Horiz: CCS83 (1991.35) Z5





PROFILE

Vert: 1" = 10'

GEOTECHNICAL SERVICES			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471	VENTURA OH (REPLACEMENT)
FUNCTIONAL SUPERVISOR: S. Karimi	DRAWN BY: S. Jiang/H. Tisbe	FIELD INVESTIGATION BY: R. Taguba			POST MILE 21.54	LOG OF TEST BORINGS 3 OF 4
	CHECKED BY: M. Merino					

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/1/2022)
DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-ltb04.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3
UNIT: 3650
PROJECT NUMBER & PHASE: 0716000025-1
COUNTY/ROUTE: Ven/001
CONTRACT No.: 07-319604
DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES: 5-26-23 | 5-31-23 | 6-08-23 | 06-12-23
SHEET 61 OF 65

DIST	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET NO.	TOTAL SHEETS
07	Ven	1	21.5	33	33

R. R. PRICE
No. 49593
Exp. 9-30-96
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

9-16-96
PLANS APPROVAL DATE

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NO AS BUILT CHANGES
AS BUILT

CORRECTIONS BY N. MANCHEV
CONTRACT NO. 07-123614
DATE 3/11/98 MET 28 Oct 98

BENCH MARK

TBM ELEV. 20.18

TBM ON C/L OF EXISTING SPTC RR @
STA. 2948+09 AS PER SURVEY REQUEST
94-101, 11-1-94, F. HESS AND PARTY.

DIVISION OF ENGINEERING SERVICES - GEOTECHNICAL SERVICES

As-Built Log of Test Borings sheet is considered an informational document only. As such, the State of California registration seal with signature, license number and registration certificate expiration date confirm that this is a true and accurate copy of the original document. It does not attest to the accuracy or validity of the information contained in the original document. This drawing is available and presented only for the convenience of any bidder, contractor or other interested party.

DIST.	COUNTY	ROUTE	POST MILE-TOTAL PROJECT	Sheet No.	Total Sheets
07	Ven	001			

REGISTERED GEOTECHNICAL ENGINEER — 8-28-23 DATE

VENTURA OH (REPLACEMENT)

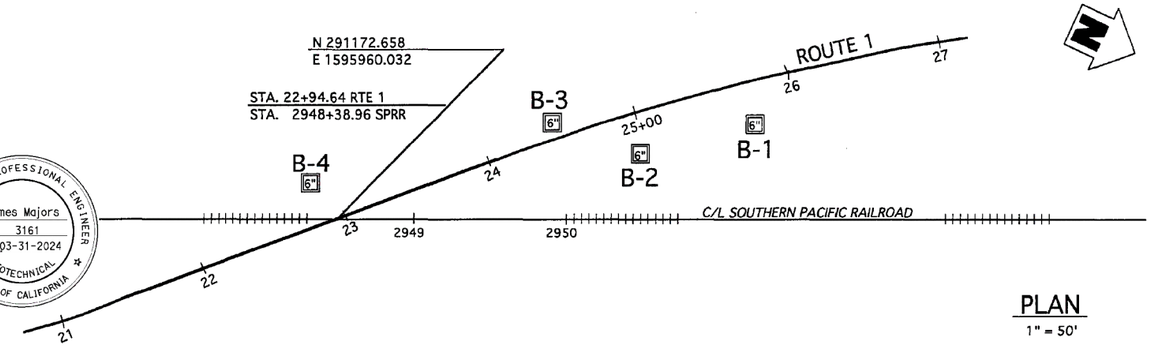
LOG OF TEST BORINGS 4 OF 4

UNIT: 3650	CONTRACT No.	BRIDGE No.
PROJ. No. & PHASE: 0716000025-1	07-319604	52-0471

AS-BUILT VERT DATUM: NGVD29 **CONVERSION:** NAVD88=NGVD29+2.49' Sheet of

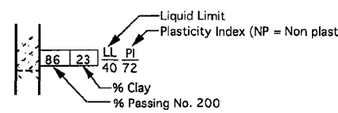
NOTE: A COPY OF THIS LOG OF TESTS BORINGS IS AVAILABLE AT OFFICE OF STRUCTURE MAINTENANCE AND INVESTIGATIONS, SACRAMENTO, CALIFORNIA — 62 65

REGISTERED PROFESSIONAL ENGINEER
James Majors
No. 3161
Exp. 03-31-2024
GEOTECHNICAL
STATE OF CALIFORNIA

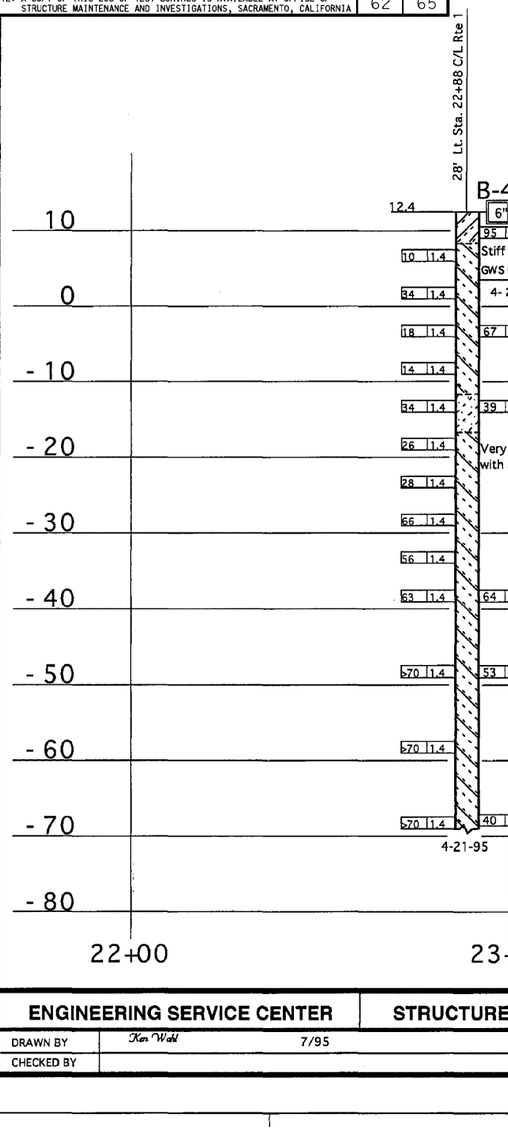


PLAN
1" = 50'

LEGEND

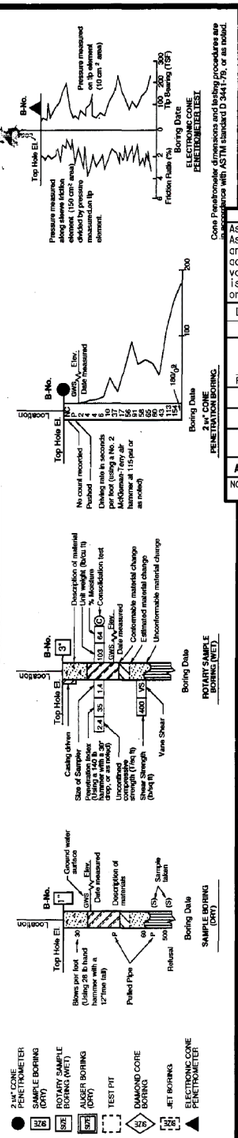


NOTE:
Electronic Cone Penetrometer Test data for this project is on file at Structural Foundation South, 1616 S. Maple, Room 12, Los Angeles, CA 90015.



PROFILE
HOR. 1" = 20'
VER. 1" = 10'

LEGEND OF BORING OPERATIONS



LEGEND OF EARTH MATERIALS

GRAVEL, SAND, SILT, CLAY, SANDY CLAY or CLAYEY SAND, SANDY SILT or SILTY SAND, SILTY CLAY, CLAYEY SILT, PEAT and/or ORGANIC MATTER, FILL MATERIAL, IGNEOUS ROCK, SEDIMENTARY ROCK, METAMORPHIC

CONSISTENCY CLASSIFICATION FOR SOILS
According to the Standard Penetration Test

Penetration Index (Blows / Ft)	Granular	Cohesive
0-4	Very Loose	Very Soft
5-9	Loose	Soft
10-19	Slightly compact	Stiff
20-34	Compact	Very Stiff
35-69	Dense	Hard
>70	Very Dense	Very Hard

NOTE: Classification of earth material as shown on this sheet is based upon field inspection and is not to be construed to imply mechanical analysis.

SEISMIC RETROFIT PROJECT NO. SR-704

ENGINEERING SERVICE CENTER	STRUCTURE FOUNDATIONS
DRAWN BY Ken Wall 7/95	
CHECKED BY	

FIELD INVESTIGATION BY: S. AMIRI

State of CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF STRUCTURES
STRUCTURE DESIGN

CU: 07
EA: 123611

BRIDGE NO. 52-0040
POST MILE 21.5

VENTURA OVERHEAD
LOG OF TEST BORINGS

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS → 0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES (PRELIMINARY STAGE ONLY): 6-24-96

SHEET 16 OF 16

TL 6052 REV. 5/95

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED GEOTECHNICAL ENGINEER — 8-28-23 DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — James Majors — No. 3161 — Exp. 03-31-2024 — GEOTECHNICAL — STATE OF CALIFORNIA

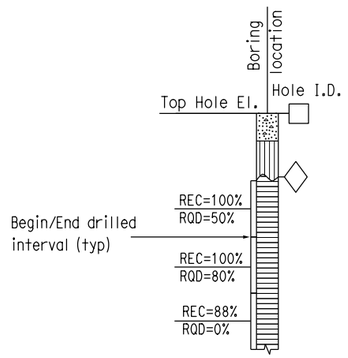
THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PERCENT CORE RECOVERY (REC) & ROCK QUALITY DESIGNATION (RQD)

$$REC = \frac{\sum \text{Length of the recovered core pieces (in.)}}{\text{Total length of core run (in.)}} \times 100\%$$

$$RQD = \frac{\sum \text{Length of intact core pieces} \geq 4 \text{ in.}}{\text{Total length of core run (in.)}} \times 100\%$$

RQD* Indicates soundness criteria not met.



BEDDING SPACING

Description	Thickness / Spacing
Massive	Greater than 10 ft
Very Thickly Bedded	3 ft - 10 ft
Thickly Bedded	1 ft - 3 ft
Moderately Bedded	4 in. - 1 ft
Thinly Bedded	1 in. - 4 in.
Very Thinly Bedded	1/4 in. - 1 in.
Laminated	Less than 1/4 in.

LEGEND OF ROCK MATERIALS

- IGNEOUS ROCK
- SEDIMENTARY ROCK
- METAMORPHIC ROCK

ROCK HARDNESS

Description	Criteria
Extremely Hard	Cannot be scratched with a pocketknife or sharp pick. Can only be chipped with repeated heavy hammer blows.
Very Hard	Cannot be scratched with a pocketknife or sharp pick. Breaks with repeated heavy hammer blows.
Hard	Can be scratched with a pocketknife or sharp pick with difficulty (heavy pressure). Breaks with heavy hammer blows.
Moderately Hard	Can be scratched with pocketknife or sharp pick with light or moderate pressure. Breaks with moderate hammer blows.
Moderately Soft	Can be grooved 1/16 in. deep with a pocketknife or sharp pick with moderate or heavy pressure. Breaks with light hammer blow or heavy manual pressure.
Soft	Can be grooved or gouged easily by a pocketknife or sharp pick with light pressure, can be scratched with fingernail. Breaks with light to moderate manual pressure.
Very Soft	Can be readily indented, grooved or gouged with fingernail, or carved with a pocketknife. Breaks with light manual pressure.

FRACTURE DENSITY

Description	Observed Fracture Density
Unfractured	No fractures.
Very Slightly Fractured	Core lengths greater than 3 ft.
Slightly Fractured	Core lengths mostly from 1 to 3 ft.
Moderately Fractured	Core lengths mostly from 4 in. to 1 ft.
Intensely Fractured	Core lengths mostly from 1 to 4 in.
Very Intensely Fractured	Mostly chips and fragments.

WEATHERING DESCRIPTORS FOR INTACT ROCK

Description	Diagnostic Features					General Characteristics
	Chemical Weathering-Discoloration and/or Oxidation		Mechanical Weathering-Grain Boundary Conditions (Disaggregation) Primarily for Granitics and Some Coarse-Grained Sediments	Texture and Leaching		
	Body of Rock	Fracture Surfaces		Texture	Leaching	
Fresh	No discoloration, not oxidized.	No discoloration or oxidation.	No separation, intact (tight).	No change	No leaching	Hammer rings when crystalline rocks are struck.
Slightly Weathered	Discoloration or oxidation is limited to surface of, or short distance from, fractures; some feldspar crystals are dull.	Minor to complete discoloration or oxidation of most surfaces.	No visible separation, intact (tight).	Preserved	Minor leaching of some soluble minerals.	Hammer rings when crystalline rocks are struck. Body of rock not weakened.
Moderately Weathered	Discoloration or oxidation extends from fractures usually throughout; Fe-Mg minerals are "rusty," feldspar crystals are "cloudy."	All fracture surfaces are discolored or oxidized.	Partial separation of boundaries visible.	Generally preserved	Soluble minerals may be mostly leached.	Hammer does not ring when rock is struck. Body of rock is slightly weakened.
Intensely Weathered	Discoloration or oxidation throughout; all feldspars and Fe-Mg minerals are altered to clay to some extent; or chemical alteration produces in-situ disaggregation, see grain boundary conditions.	All fracture surfaces are discolored or oxidized, surfaces friable.	Partial separation, rock is friable; in semiarid conditions granitics are disaggregated.	Texture altered by chemical disintegration (hydration, argillation).	Leaching of soluble minerals may be complete.	Dull sound when struck with hammer, usually can be broken with moderate to heavy manual pressure or by light hammer blow without reference to planes of weakness such as incipient or hairline fractures, or veinlets. Rock is significantly weakened.
Decomposed	Discolored or oxidized throughout, but resistant minerals such as quartz may be unaltered; all feldspars and Fe-Mg minerals are completely altered to clay.		Complete separation of grain boundaries (disaggregated).	Resembles a soil, partial or complete remnant rock structure may be preserved; leaching of soluble minerals usually complete.		Can be granulated by hand. Resistant minerals such as quartz may be present as "stringers" or "dikes."

GEOTECHNICAL SERVICES

FUNCTIONAL SUPERVISOR: S. Karimi | DRAWN BY: S. Jiang/H. Tisbe | CHECKED BY: M. Merino | FIELD INVESTIGATION BY: R. Taguba

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE NO. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)

LEGEND - ROCK

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/17/2022)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-ltb06.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3650
PROJECT NUMBER & PHASE: 0716000025-1

COUNTY/ROUTE: Ven/001
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES					SHEET	OF
5-25-23					63	65

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

8-28-23
REGISTERED GEOTECHNICAL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — James Majors — No. 3161 — Exp. 03-31-2024 — GEOTECHNICAL — STATE OF CALIFORNIA

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CEMENTATION

Description	Criteria
Weak	Crumbles or breaks with handling or little finger pressure.
Moderate	Crumbles or breaks with considerable finger pressure.
Strong	Will not crumble or break with finger pressure.

ABBREVIATION:

GWS=Ground Water Surface

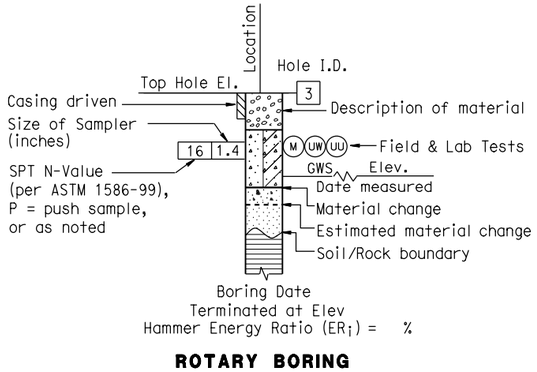
BOREHOLE IDENTIFICATION

Symbol	Hole Type	Description
Size	A	Auger Boring (hollow or solid stem bucket)
Size	R RW RC P	Rotary drilled boring (conventional) Rotary drilled with self-casing wire-line Rotary core with continuously-sampled, self-casing wire-line Rotary percussion boring (air)
Size	R RC	Rotary drilled diamond core Rotary drilled diamond core, continuously sample
Size	HD HA	Hand driven (1-inch soil tube) Hand Auger
●	D	Dynamic Cone Penetration Boring
▲	CPT	Cone Penetration Test (ASTM D 5778)
⬚	O	Other (note on LOTB)

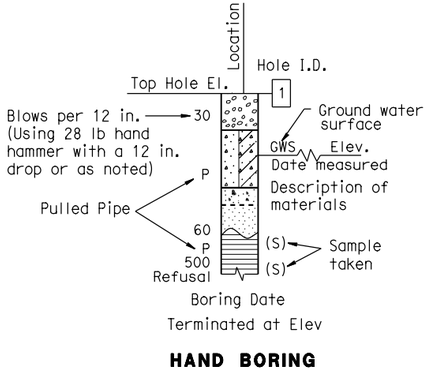
Note: Size in inches.

CONSISTENCY OF COHESIVE SOILS

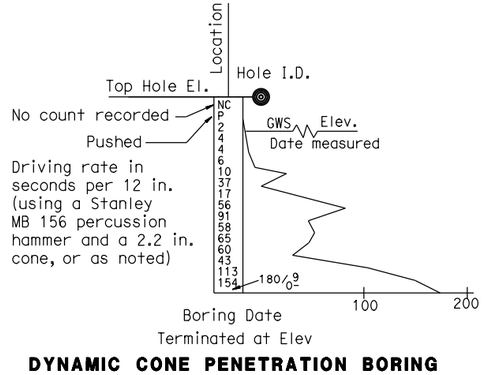
Description	Shear Strength (tsf)	Pocket Penetrometer Measurement, PP, (tsf)	Torvane Measurement, TV, (tsf)	Vane Shear Measurement, VS, (tsf)
Very Soft	Less than 0.12	Less than 0.25	Less than 0.12	Less than 0.12
Soft	0.12 - 0.25	0.25 - 0.5	0.12 - 0.25	0.12 - 0.25
Medium Stiff	0.25 - 0.5	0.5 - 1	0.25 - 0.5	0.25 - 0.5
Stiff	0.5 - 1	1 - 2	0.5 - 1	0.5 - 1
Very Stiff	1 - 2	2 - 4	1 - 2	1 - 2
Hard	Greater than 2	Greater than 4	Greater than 2	Greater than 2



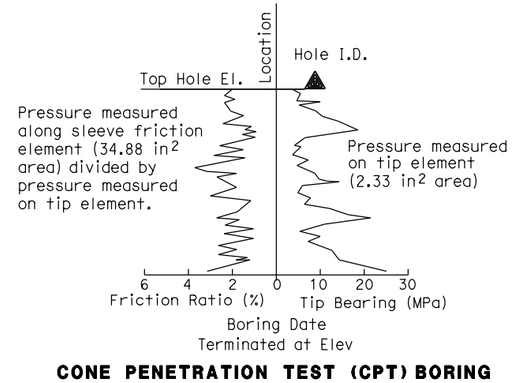
ROTARY BORING



HAND BORING



DYNAMIC CONE PENETRATION BORING



CONE PENETRATION TEST (CPT) BORING

GEOTECHNICAL SERVICES			STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-0471	VENTURA OH (REPLACEMENT)
FUNCTIONAL SUPERVISOR: S. Karimi	DRAWN BY: S. Jiang/H. Tisbe	FIELD INVESTIGATION BY: R. Taguba			POST MILE 21.54	LEGEND - SOIL 1 OF 2
	CHECKED BY: M. Merino					

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/1/2022)

DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:38
FILE => 52-0471-z-itb07.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3650
PROJECT NUMBER & PHASE: 0716000025-1

COUNTY/ROUTE: Ven/001
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES				SHEET	OF
5-25-23				64	65

REFERENCE: CALTRANS SOIL & ROCK LOGGING, CLASSIFICATION, AND PRESENTATION MANUAL (2010)

GROUP SYMBOLS AND NAMES

Graphic/Symbol	Group Names	Graphic/Symbol	Group Names
GW	Well-graded GRAVEL Well-graded GRAVEL with SAND	CL	Lean CLAY Lean CLAY with SAND Lean CLAY with GRAVEL SANDY lean CLAY SANDY lean CLAY with GRAVEL GRAVELLY lean CLAY GRAVELLY lean CLAY with SAND
GP	Poorly-graded GRAVEL Poorly-graded GRAVEL with SAND		
GW-GM	Well-graded GRAVEL with SILT Well-graded GRAVEL with SILT and SAND	CL-ML	SILTY CLAY SILTY CLAY with SAND SILTY CLAY with GRAVEL SANDY SILTY CLAY SANDY SILTY CLAY with GRAVEL GRAVELLY SILTY CLAY GRAVELLY SILTY CLAY with SAND
GW-GC	Well-graded GRAVEL with CLAY (or SILTY CLAY) Well-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GP-GM	Poorly-graded GRAVEL with SILT Poorly-graded GRAVEL with SILT and SAND	ML	SILT SILT with SAND SILT with GRAVEL SANDY SILT SANDY SILT with GRAVEL GRAVELLY SILT GRAVELLY SILT with SAND
GP-GC	Poorly-graded GRAVEL with CLAY (or SILTY CLAY) Poorly-graded GRAVEL with CLAY and SAND (or SILTY CLAY and SAND)		
GM	SILTY GRAVEL SILTY GRAVEL with SAND	OL	ORGANIC lean CLAY ORGANIC lean CLAY with SAND ORGANIC lean CLAY with GRAVEL SANDY ORGANIC lean CLAY SANDY ORGANIC lean CLAY with GRAVEL GRAVELLY ORGANIC lean CLAY GRAVELLY ORGANIC lean CLAY with SAND
GC	CLAYEY GRAVEL CLAYEY GRAVEL with SAND		
GC-GM	SILTY, CLAYEY GRAVEL SILTY, CLAYEY GRAVEL with SAND	OL	ORGANIC SILT ORGANIC SILT with SAND ORGANIC SILT with GRAVEL SANDY ORGANIC SILT SANDY ORGANIC SILT with GRAVEL GRAVELLY ORGANIC SILT GRAVELLY ORGANIC SILT with SAND
SW	Well-graded SAND Well-graded SAND with GRAVEL		
SP	Poorly-graded SAND Poorly-graded SAND with GRAVEL	CH	Fat CLAY Fat CLAY with SAND Fat CLAY with GRAVEL SANDY fat CLAY SANDY fat CLAY with GRAVEL GRAVELLY fat CLAY GRAVELLY fat CLAY with SAND
SW-SM	Well-graded SAND with SILT Well-graded SAND with SILT and GRAVEL		
SW-SC	Well-graded SAND with CLAY (or SILTY CLAY) Well-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	MH	Elastic SILT Elastic SILT with SAND Elastic SILT with GRAVEL SANDY elastic SILT SANDY elastic SILT with GRAVEL GRAVELLY elastic SILT GRAVELLY elastic SILT with SAND
SP-SM	Poorly-graded SAND with SILT Poorly-graded SAND with SILT and GRAVEL		
SP-SC	Poorly-graded SAND with CLAY (or SILTY CLAY) Poorly-graded SAND with CLAY and GRAVEL (or SILTY CLAY and GRAVEL)	OH	ORGANIC fat CLAY ORGANIC fat CLAY with SAND ORGANIC fat CLAY with GRAVEL SANDY ORGANIC fat CLAY SANDY ORGANIC fat CLAY with GRAVEL GRAVELLY ORGANIC fat CLAY GRAVELLY ORGANIC fat CLAY with SAND
SM	SILTY SAND SILTY SAND with GRAVEL		
SC	CLAYEY SAND CLAYEY SAND with GRAVEL	OH	ORGANIC elastic SILT ORGANIC elastic SILT with SAND ORGANIC elastic SILT with GRAVEL SANDY ORGANIC elastic SILT SANDY ORGANIC elastic SILT with GRAVEL GRAVELLY ORGANIC elastic SILT GRAVELLY ORGANIC elastic SILT with SAND
SC-SM	SILTY, CLAYEY SAND SILTY, CLAYEY SAND with GRAVEL		
PT	PEAT	OL/OH	ORGANIC SOIL ORGANIC SOIL with SAND ORGANIC SOIL with GRAVEL SANDY ORGANIC SOIL SANDY ORGANIC SOIL with GRAVEL GRAVELLY ORGANIC SOIL GRAVELLY ORGANIC SOIL with SAND
	COBBLES COBBLES and BOULDERS BOULDERS		

FIELD AND LABORATORY TESTING

- (C) Consolidation (ASTM D 2435)
- (CL) Collapse Potential (ASTM D 5333)
- (CP) Compaction Curve (CTM 216)
- (CR) Corrosivity Testing (CTM 643, CTM 422, CTM 417)
- (CU) Consolidated Undrained Triaxial (ASTM D 4767)
- (DS) Direct Shear (ASTM D 3080)
- (EI) Expansion Index (ASTM D 4829)
- (M) Moisture Content (ASTM D 2216)
- (OC) Organic Content-% (ASTM D 2974)
- (P) Permeability (CTM 220)
- (PA) Particle Size Analysis (ASTM D 422)
- (PI) Plasticity Index (AASHTO T 90) Liquid Limit (AASHTO T 89)
- (PL) Point Load Index (ASTM D 5731)
- (PM) Pressure Meter
- (R) R-Value (CTM 301)
- (SE) Sand Equivalent (CTM 217)
- (SG) Specific Gravity (AASHTO T 100)
- (SL) Shrinkage Limit (ASTM D 427)
- (SW) Swell Potential (ASTM D 4546)
- (UC) Unconfined Compression-Soil (ASTM D 2166) Unconfined Compression-Rock (ASTM D 2938)
- (UU) Unconsolidated Undrained Triaxial (ASTM D 2850)
- (UW) Unit Weight (ASTM D 4767)

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

8-28-23
REGISTERED GEOTECHNICAL ENGINEER — DATE

REGISTERED PROFESSIONAL ENGINEER — James Majors — No. 3161 — Exp. 03-31-2024 — GEOTECHNICAL — STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

APPARENT DENSITY OF COHESIONLESS SOILS

Description	SPT N_{60} (Blows / 12 in.)
Very Loose	0 - 5
Loose	5 - 10
Medium Dense	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

MOISTURE

Description	Criteria
Dry	No discernable moisture
Moist	Moisture present, but no free water
Wet	Visible free water

PERCENT OR PROPORTION OF SOILS

Description	Criteria
Trace	Particles are present but estimated to be less than 5%
Few	5% - 10%
Little	15% - 25%
Some	30% - 45%
Mostly	50% - 100%

PARTICLE SIZE

Description		Size (in.)
Boulder		Greater than 12
Cobble		3 - 12
Gravel	Coarse	3/4 - 3
	Fine	1/5 - 3/4
Sand	Coarse	1/16 - 1/5
	Medium	1/64 - 1/16
	Fine	1/300 - 1/64
Silt and Clay		Less than 1/300

GEOTECHNICAL SERVICES

FUNCTIONAL SUPERVISOR: S. Karimi | DRAWN BY: S. Jiang/H. Tisbe | CHECKED BY: M. Merino | FIELD INVESTIGATION BY: R. Taguba

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-0471
POST MILE 21.54

VENTURA OH (REPLACEMENT)
LEGEND - SOIL 2 OF 2

OGS CIVIL LOG OF TEST BORINGS SHEET (ENGLISH) (REVISION 4/1/2022)

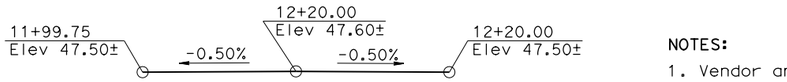
DATE PLOTTED => 31-AUG-2023 TIME PLOTTED => 11:39
FILE => 52-0471-z-ltb08.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3650
PROJECT NUMBER & PHASE: 0716000025-1
COUNTY/ROUTE: Ven/001
CONTRACT No.: 07-319604

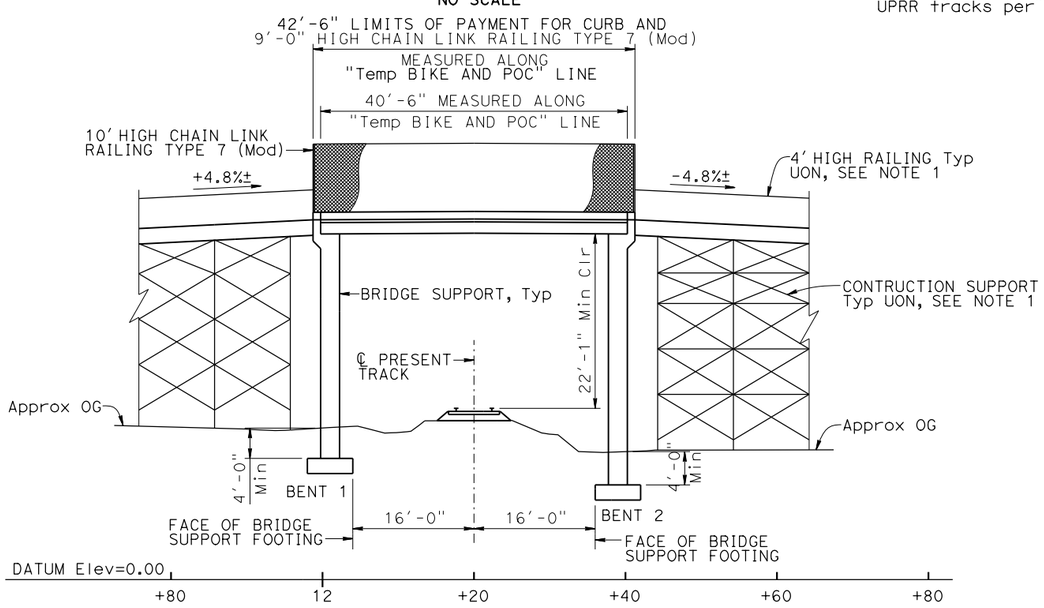
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
5-25-23				65	65



PROFILE GRADE

NO SCALE



DEVELOPED ELEVATION

1" = 10'

NOTES:

1. Vendor and/or contractor supplied structures.
2. Vendor and/or contractor supplied Temp Bike and POC structure outside limits of Crashwalls will be 25'-0" Min horiz clear from center of UPRR tracks per AREMA GUIDELINES.

LEGEND:

Existing structure

Point of minimum vertical clearance

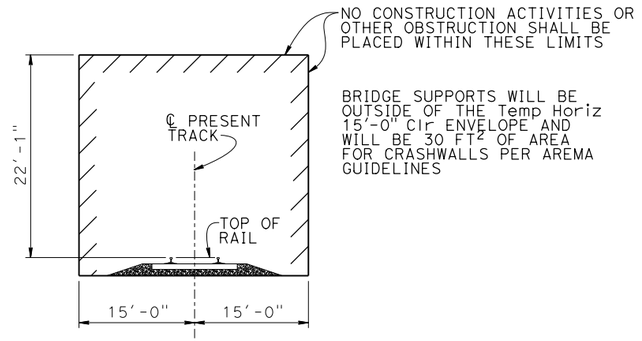
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — DATE

PLANS APPROVAL DATE

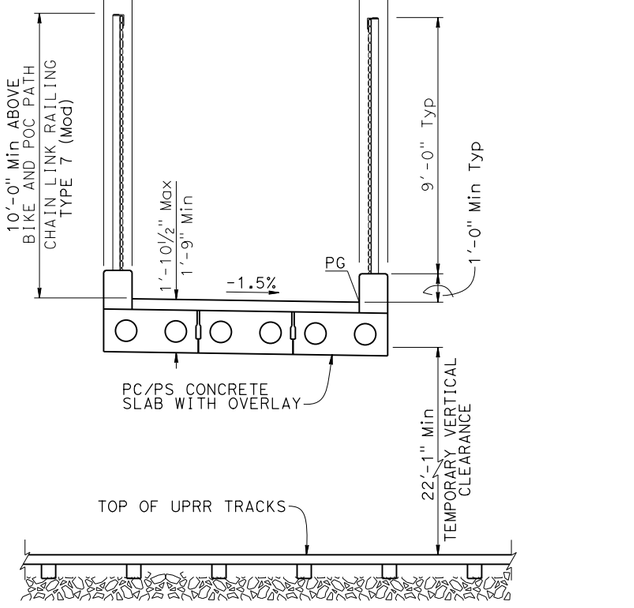
REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



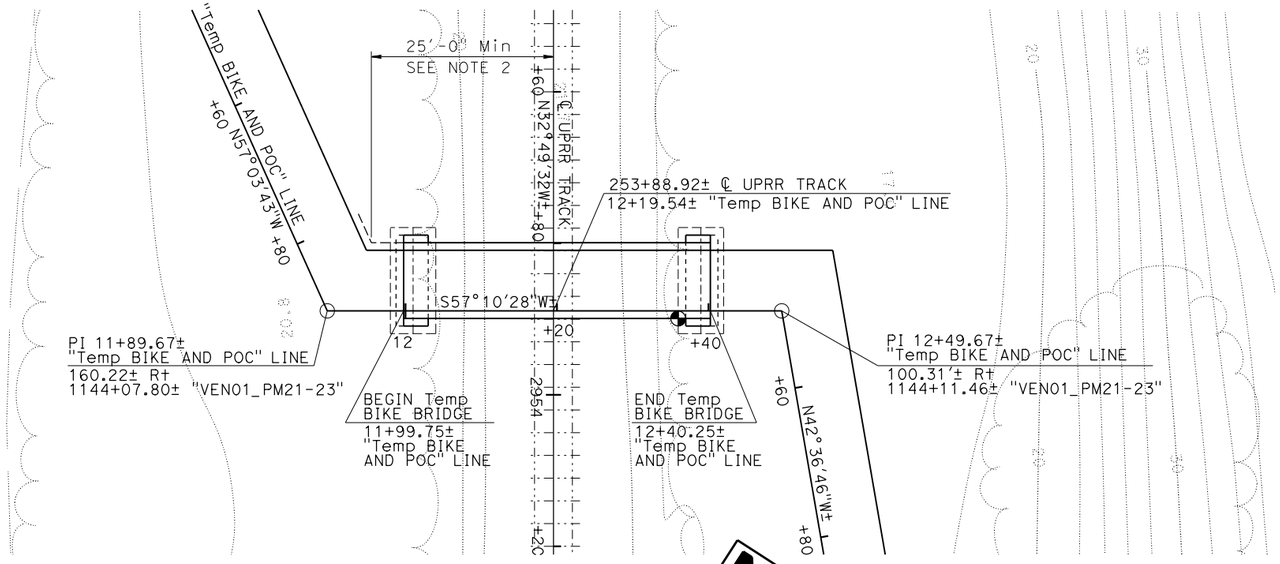
MINIMUM TEMPORARY CONSTRUCTION CLEARANCE ENVELOPE (NORMAL TO RAILROAD)

NO SCALE



TYPICAL SECTION

⅜" = 1'-0"



PLAN

1" = 10'

NOTE:
THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

		BY	CHECKED		BY	CHECKED
JOHN PETERSON BRANCH CHIEF	DESIGN	L. VALLA	C. HENSEL	SEISMIC ANALYSIS	L. VALLA	C. HENSEL
	DETAILS	T. DOAN	C. HENSEL	LAYOUT	L. VALLA	C. HENSEL
	QUANTITIES	L. VALLA	C. HENSEL	SPECIFICATIONS	K. ELLINGSON	PLANS AND SPECS COMPARED K. ELLINGSON

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-TEMP
POST MILE 21.61

VENTURA OH (REPLACEMENT) Temp BIKE AND POC

GENERAL PLAN

STRUCTURES DESIGN GENERAL PLAN SHEET (ENGLISH) (REVISION 2/8/2022)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 16:43
FILE => 52-temp-a-gp.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			SHEET	OF
08-01-23		09-15-23 09-27-23	1	8

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, 8th edition with California Amendments, preface dated April 2019. Except bent footing bearing capacity shall be per Allowable Stress and OSC requirements.

AASHTO LRFD Guide Specifications for the Design of Pedestrian Bridges dated December 2009.

Standard Plans and Specifications, 2023 edition

DEAD LOAD:
Includes 3¾" ave overlay on top of voided slabs.

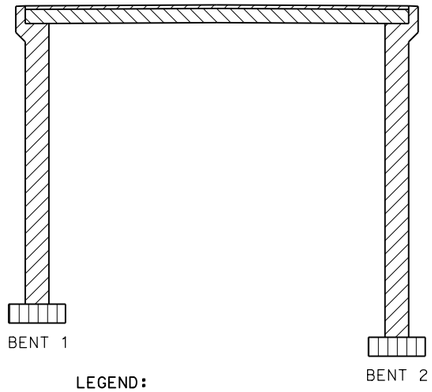
LIVE LOADING:
H5 Design load
Pedestrian Load = 90 psf

REINFORCED CONCRETE:
fy = 60 ksi unless otherwise noted.
f'c = 5,000 psi unless otherwise noted.

SEISMIC LOADING: See ARS Curve.
Soil Profile: Vs30 = 1049.6 ft/sec
Moment Magnitude: Mmax = 6.74
Peak Ground Acceleration: 0.21 g

DESIGN NOTES:
1. The temporary bridge bents are to be braced on both sides of the structure in the longitudinal direction for a seismic load of 60 Kips for both tension and compression at 43'± elevation. The Contractor's design should be based on the latest ICBO seismic requirements for ordinary braced frames.

2. The allowable bearing stress on the temporary bridge bent footings should not be less than 3.3 ksf.



LEGEND:

Structural Concrete, Bridge (f'c = 5,000 psi)

Structural Concrete, Bridge Footing (f'c = 5,000 psi)

Structural Concrete, Bridge PC/PS Voided Slab TYPE SIII (Mod) Girders (f'c = 6,000 psi)

CONCRETE STRENGTH AND TYPE LIMITS
NO SCALE

INDEX TO PLANS

SHEET NO.	TITLE:
1	GENERAL PLAN
2	INDEX TO PLANS
3	BENT LAYOUT
4	BENT DETAILS
5	TYPICAL SECTION
6	PC/PS VOIDED SLAB TYPE SIII-40 (Mod) DETAILS
7	CHAIN LINK RAILING TYPE 7 (Mod) DETAILS No. 1
8	CHAIN LINK RAILING TYPE 7 (Mod) DETAILS No. 2

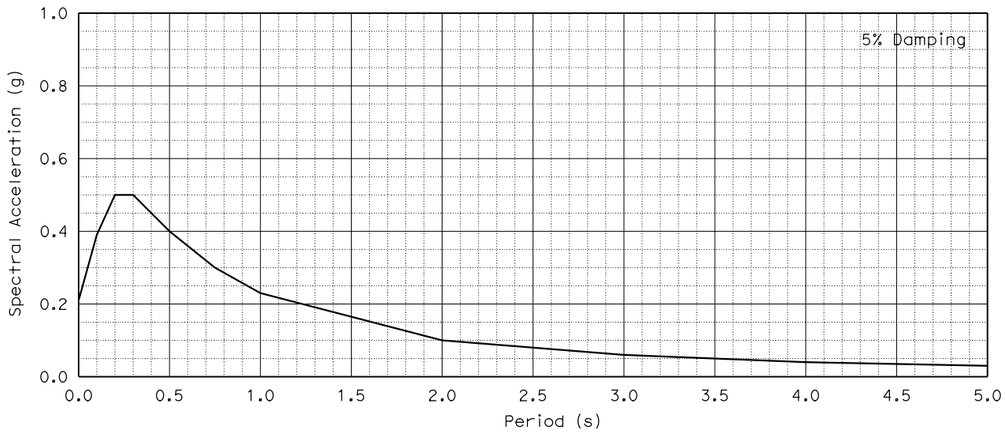
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER — X — DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



SITE SPECIFIC ARS CURVE
NO SCALE

DESIGN	BY L. VALLA	CHECKED C. HENSEL	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-TEMP
DETAILS	BY T. DOAN	CHECKED C. HENSEL			POST MILE 21.61
QUANTITIES	BY L. VALLA	CHECKED C. HENSEL			

VENTURA OH (REPLACEMENT) Temp BIKE AND POC

INDEX TO PLANS

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

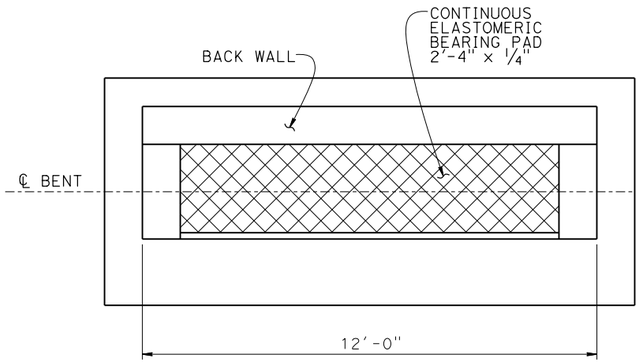
DATE PLOTTED => 18-AUG-2023 TIME PLOTTED => 11:02
FILE => 52-temp-a-itp.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

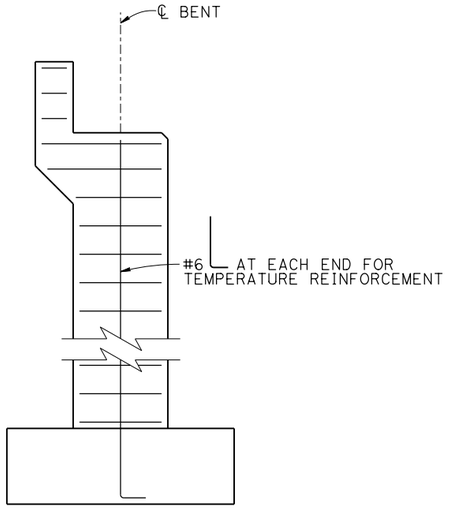
UNIT: 3606 COUNTY/ROUTE: Ven/01
PROJECT NUMBER & PHASE: 0716000025 & 1 CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-01-23	08-10-23	08-16-23	08-18-23	2	8



PLAN
1/2" = 1'-0"



VIEW A-A
1/2" = 1'-0"

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

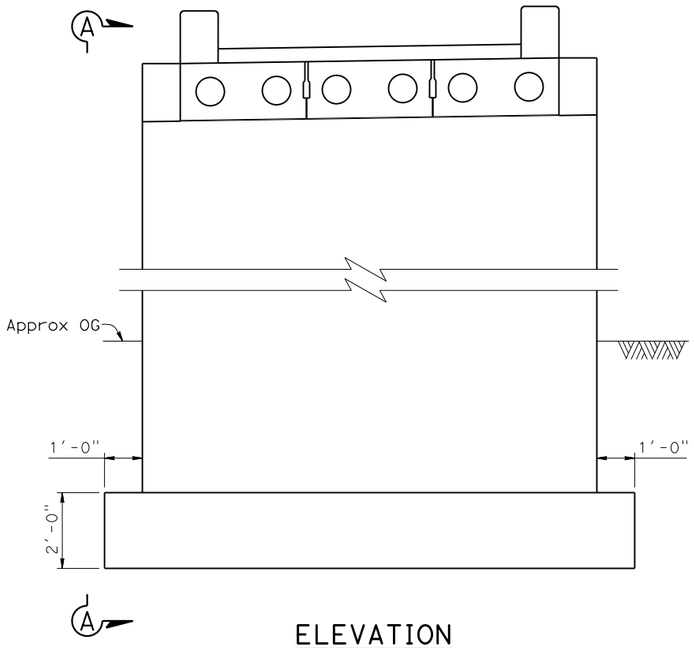
LEGEND:

Limits of Elastomeric Bearing Pad

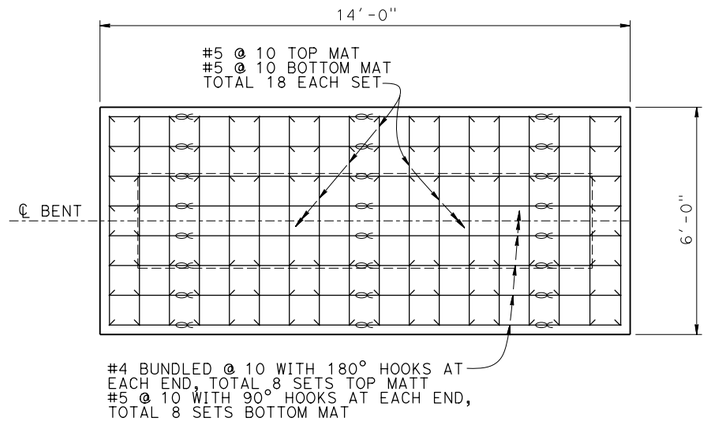
/ #5 Vertical Stirrup Tie

NOTES:

1. Bent 1 shown, Bent 2 similar.



ELEVATION
1/2" = 1'-0"



FOOTING PLAN
1/2" = 1'-0"

DESIGN	BY L. VALLA	CHECKED C. HENSEL	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE NO. 52-TEMP	VENTURA OH (REPLACEMENT) Temp BIKE AND POC	
DETAILS	BY T. DOAN	CHECKED C. HENSEL			POST MILE 21.61	BENT LAYOUT	
QUANTITIES	BY L. VALLA	CHECKED C. HENSEL					

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 21-AUG-2023 TIME PLOTTED => 08:48
FILE => 52-temp-h-b_lo.dgn USERNAME => s128972

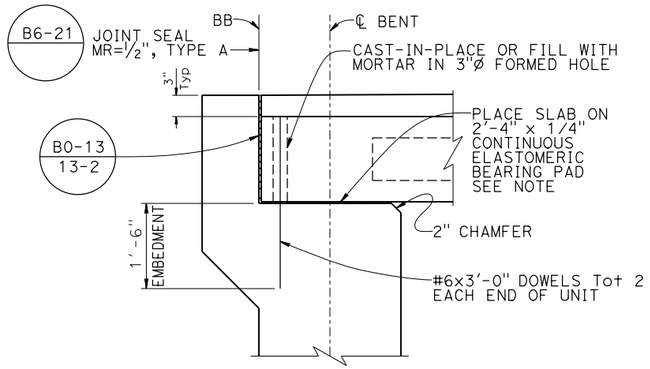
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

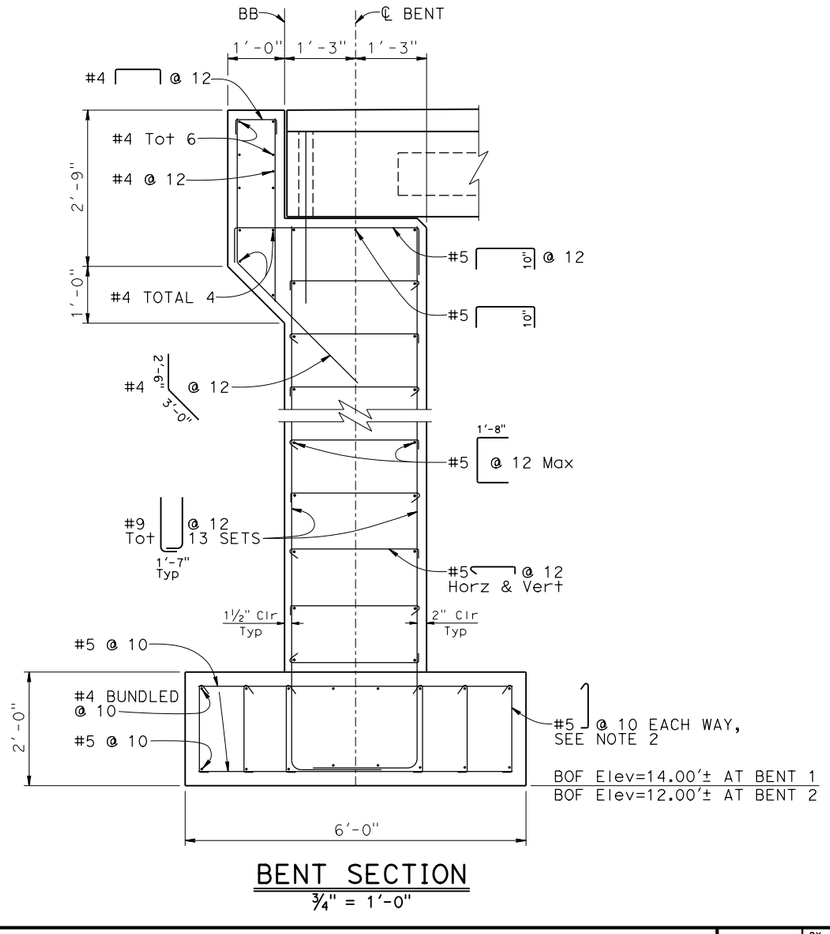
REVISION DATES				SHEET	OF
08-01-23		08-21-23	08-16-23	3	8



NOTE: Bent Seats must be formed to profile grade and cross slope

BENT SUPPORT DETAIL

¾" = 1'-0"



BENT SECTION

¾" = 1'-0"

NOTES:

1. Bent 1 shown, Bent 2 similar.
2. See #5 Vertical Stirrup locations in "FOOTING PLAN" on "BENT LAYOUT" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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	BY	CHECKED
DESIGN	L. VALLA	C. HENSEL
DETAILS	T. DOAN	C. HENSEL
QUANTITIES	L. VALLA	C. HENSEL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-TEMP
POST MILE 21.61

VENTURA OH (REPLACEMENT) Temp BIKE AND POC

BENT DETAILS

STRUCTURES DESIGN DETAIL SHEET
(ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 27-SEP-2023 TIME PLOTTED => 10:45
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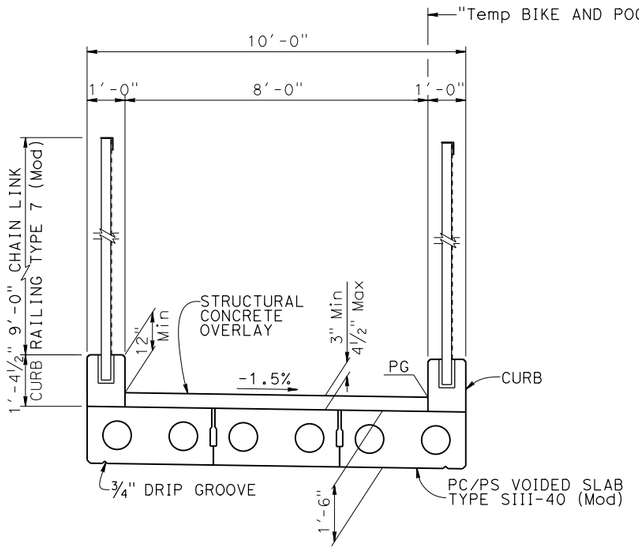
UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

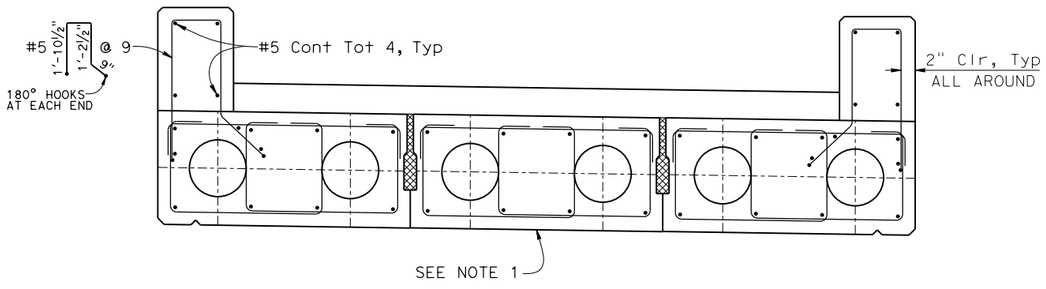
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES			SHEET	OF
08-16-23		08-23-23 09-27-23	4	8



TYPICAL SECTION

½" = 1'-0"



NOTE: Chain Link Railing Type 7 (mod) not shown for clarity

TYPICAL SECTION - BARRIER CURB

1" = 1'-0"

LEGEND:

Non-shrink grout

NOTES:

1. For slab details, see "PC/PS VOIDED SLAB TYPE SIII-40 (Mod) DETAILS" sheet.

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ X DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

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	BY	CHECKED
DESIGN	L. VALLA	C. HENSEL
DETAILS	T. DOAN	C. HENSEL
QUANTITIES	L. VALLA	C. HENSEL

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES
BRIDGE DESIGN
BRANCH 12

BRIDGE No. 52-TEMP
POST MILE 21.61

VENTURA OH (REPLACEMENT) Temp BIKE AND POC

TYPICAL SECTION

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 18-AUG-2023 TIME PLOTTED => 11:02
FILE => 52-temp-k-ts.dgn USERNAME => s128972

ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251

COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-08-23	08-11-23			5	8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS

REGISTERED CIVIL ENGINEER _____ DATE X

PLANS APPROVAL DATE _____

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA No. C45351 Exp. 09-30-24 CIVIL — STATE OF CALIFORNIA

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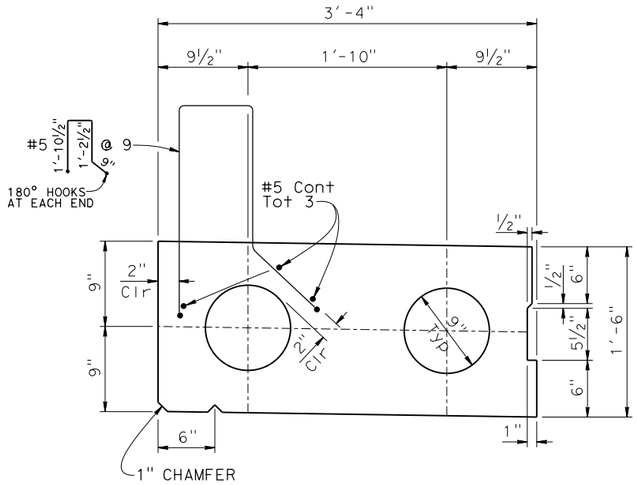
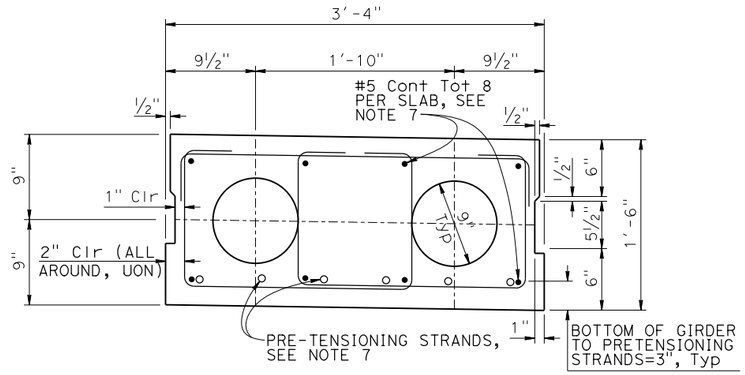


EXTERIOR SLAB



INTERIOR SLAB

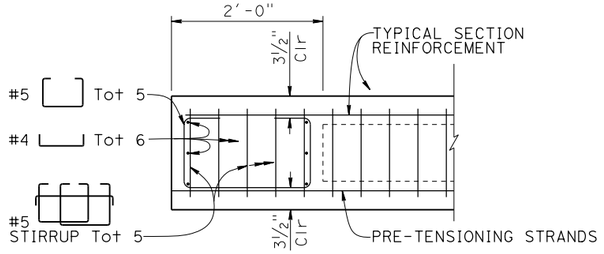
TYPICAL SECTION

1½" = 1'-0"

NOTES:

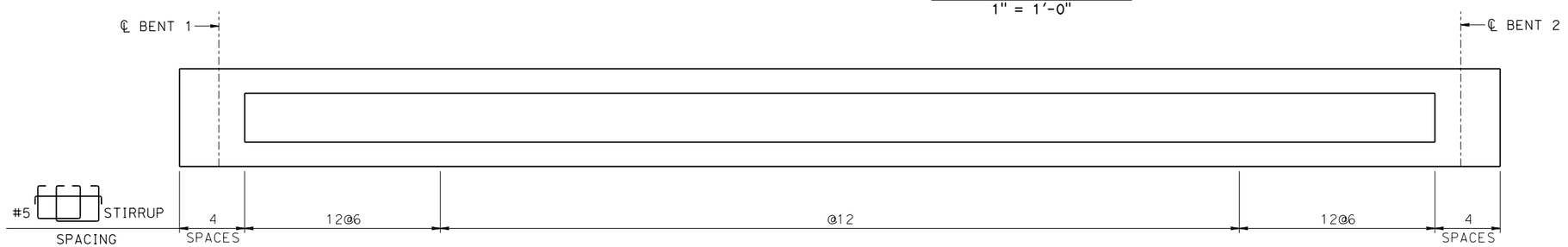
1. Jacking Force (P): The jacking force required at the point of control along the span. The jacking force does not include any fabrication specific losses.
2. The maximum tensile stress in the prestressing steel upon release must not exceed 75% of the specified minimum ultimate tensile strength of the prestressing steel.
3. The maximum temporary tensile stress (jacking stress) in the prestressing steel must not exceed 80% of the specified minimum ultimate tensile strength of the prestressing steel.
4. Concrete strength: f'ci is at time of initial stressing. f'c is at 28 days.
5. Deflection components are informational and will be used to set screed line elevations.
6. Prestressing strand must be 270 ksi low relaxation.
7. Interior slab reinforcement shown. Reinforcing for exterior slab similar.
8. UON = Unless otherwise noted.
9. PC/PS Voided Slab Type SIII-40 (Mod) Girders must be pretensioned 90 days before placing structural concrete overlay.

PRETENSIONING TABLE					
LOCATION	JACKING FORCE (P) (kips)	CONCRETE STRENGTH (ksi)		MIDSPAN DEAD LOAD DEFLECTION (IN)	
		f'ci	f'c	FWS	RAIL
SPAN 1	270	4.5	6.0	0.25	0.45



END DIAPHRAGM

1" = 1'-0"



LONGITUDINAL SECTION

VERT 1" = 1'-0"
HORIZ ½" = 1'-0"

	DESIGN	BY L. VALLA	CHECKED C. HENSEL	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES BRIDGE DESIGN BRANCH 12	BRIDGE No. 52-TEMP	VENTURA OH (REPLACEMENT) Temp BIKE AND POC		
	DETAILS	BY T. DOAN	CHECKED C. HENSEL			POST MILE 21.61	PC/PS VOIDED SLAB TYPE SIII-40 (Mod) DETAILS		
	QUANTITIES	BY L. VALLA	CHECKED C. HENSEL						

STRUCTURES DESIGN DETAIL SHEET (ENGLISH) (REVISION 3/10/2021)

DATE PLOTTED => 18-AUG-2023 TIME PLOTTED => 11:02
FILE => 52-temp-i-g_io.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: 3606
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/01
CONTRACT No.: 07-319604

DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
08-11-23				6	8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
DDDD	CCCC	RRRR	PPPP	????	#####

REGISTERED CIVIL ENGINEER — X — DATE

MM/DD/YYYY
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER — LEON VALLA — No. C45351 — Exp. 09-30-24 — CIVIL — STATE OF CALIFORNIA

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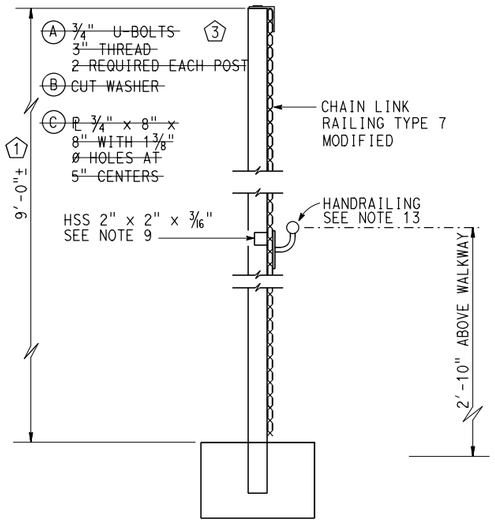
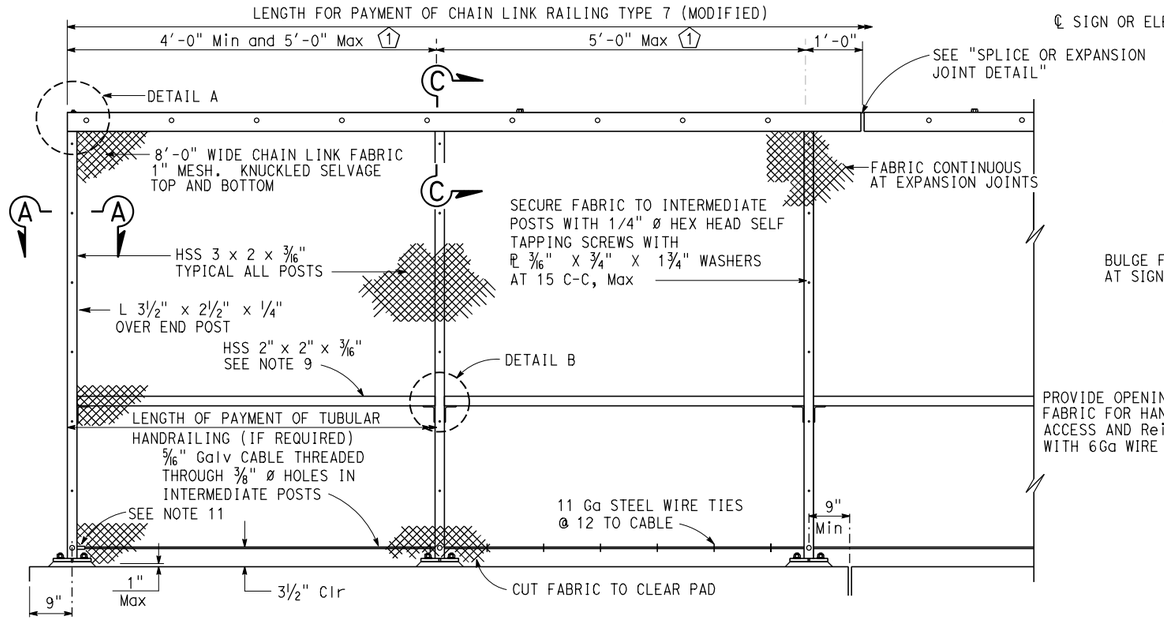
THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.



TYPICAL POST DETAIL

1" = 1'-0'

(2) NOTE: USE ALTERNATIVE POST POCKET ANCHORAGE DETAIL



END POST

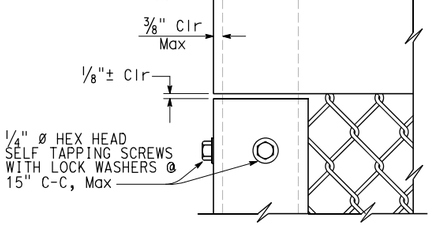
DECK OR WALL JOINT

SIGN PANEL OR ELECTROLIER

NOTES:

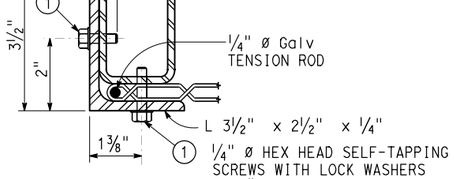
1. Railing assembly except chain link fabric to be galvanized after fabrication
2. Railing must conform to horizontal and vertical alignment. Post must be vertical. Horizontal angle must be bent to conform to horizontal alignment if radius is 150'-0" or less.
3. Horizontal angle shall be continuous over not less than two intermediate posts, except that a shorter length is permitted at expansion joints and other rail discontinuities.
4. When railing is placed on curved horizontal alignment with radius of 150'-0" or less, drill ½"Ø x 3" deep hole in slab and set in epoxy adhesives ⅜"Ø welded eyebolt for 5/16" cable to limit the mid-ordinate distance between the 5/16" cable and curve to be 1" Max.
5. Place fabric parallel to slope.
6. Alternative details may be submitted by the Contractor for Engineer's approval.
7. Provide thimbles at all cable loops.
8. Peen all exposed bolts.
9. HSS 2" x 2" x 3/16" required for curves with radius of 150'-0" or less. Bend to conform to curve.
10. Expansion joint same dimension as expansion joint in deck or wall. Increase slotted hole length and splice PL length correspondingly.
11. Anchor 5/16" galvanized cable at end post and end posts adjacent to electrolier openings of deck or wall joints with ½"Ø stud socket assembly or ½"Ø welded eyebolt and crimped sleeve clamp. Provide 1½" minimum take-up at each anchorage.
12. Design valid for bridges with the top of chain link railing type 7 (Mod) equal to or less than 260' height above surrounding ground surfaces.

(4) 13. Handrail is required only where slope is 4.5% or greater, or as indicated on other bridge plans.



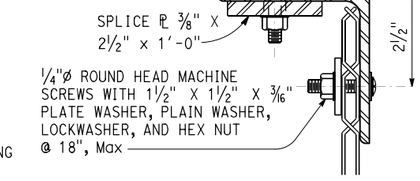
DETAIL A

6" = 1'-0'



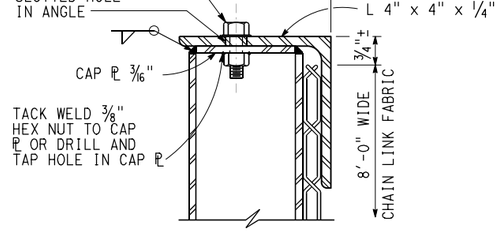
SECTION A-A

6" = 1'-0'



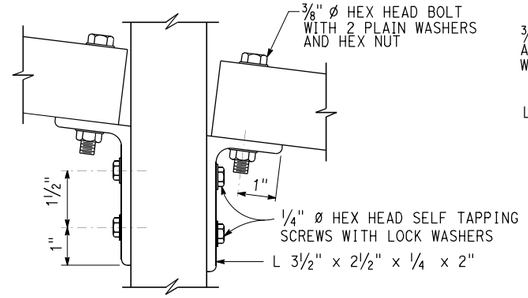
SECTION B-B

6" = 1'-0'



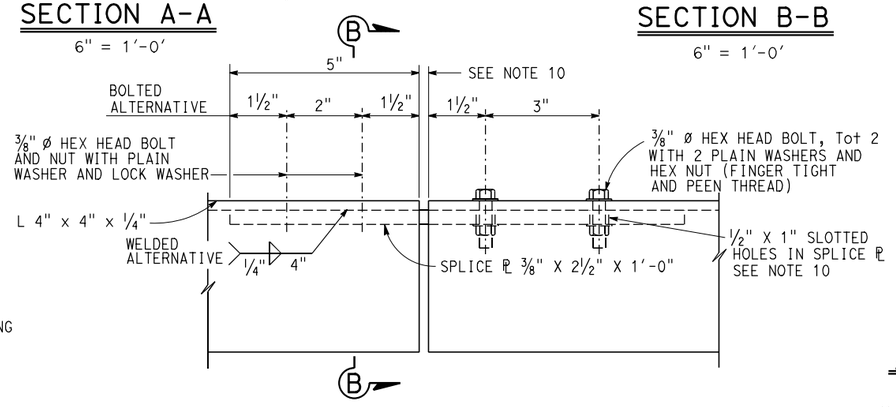
SECTION C-C

6" = 1'-0'



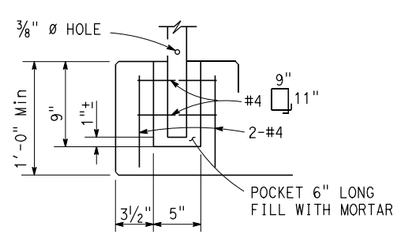
DETAIL B

6" = 1'-0'



SPLICE OR EXPANSION JOINT DETAIL

6" = 1'-0'



ALTERNATIVE ANCHORAGE DETAILS (2)

1½" = 1'-0'

May be used when thickness of concrete is 1'-0" or more
Not to be used when post contains electrical conduit

GENERAL NOTES
LOAD AND RESISTANCE FACTOR DESIGN

DESIGN:
AASHTO LRFD Bridge Design Specifications, 8th Edition 2017 with California Amendments April 2019

CONCRETE:
f_y = 60ksi f'_c = 3.6 ksi

STRUCTURAL STEEL:
HSS: f_y = 46 ksi for HSS (2)

BRIDGE STANDARD DETAILS		
xs16-220-1 (FILE NO.)	July 2020 (APPROVAL DATE)	The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California

(1) REVISE DIMENSIONS (3) VOIDED NOTES
(2) REVISE DETAILS (4) ADD NOTES

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

BRIDGE No.	VENTURA OH (REPLACEMENT) Temp BIKE AND POC
52-TEMP	
POST MILE 21.61	CHAIN LINK RAILING TYPE 7 (Mod) DETAILS No. 1

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 28-AUG-2023 TIME PLOTTED => 16:17
FILE => 52-temp-y-xs160-220-1.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT:
PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/1
CONTRACT No.: 07-319604
DISREGARD PRINTS BEARING EARLIER REVISION DATES

REVISION DATES			SHEET	OF
03-24-20		08-28-23 07-01-20	7	8

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
DDDD	CCCC	RRRR	PPPP	????	#####

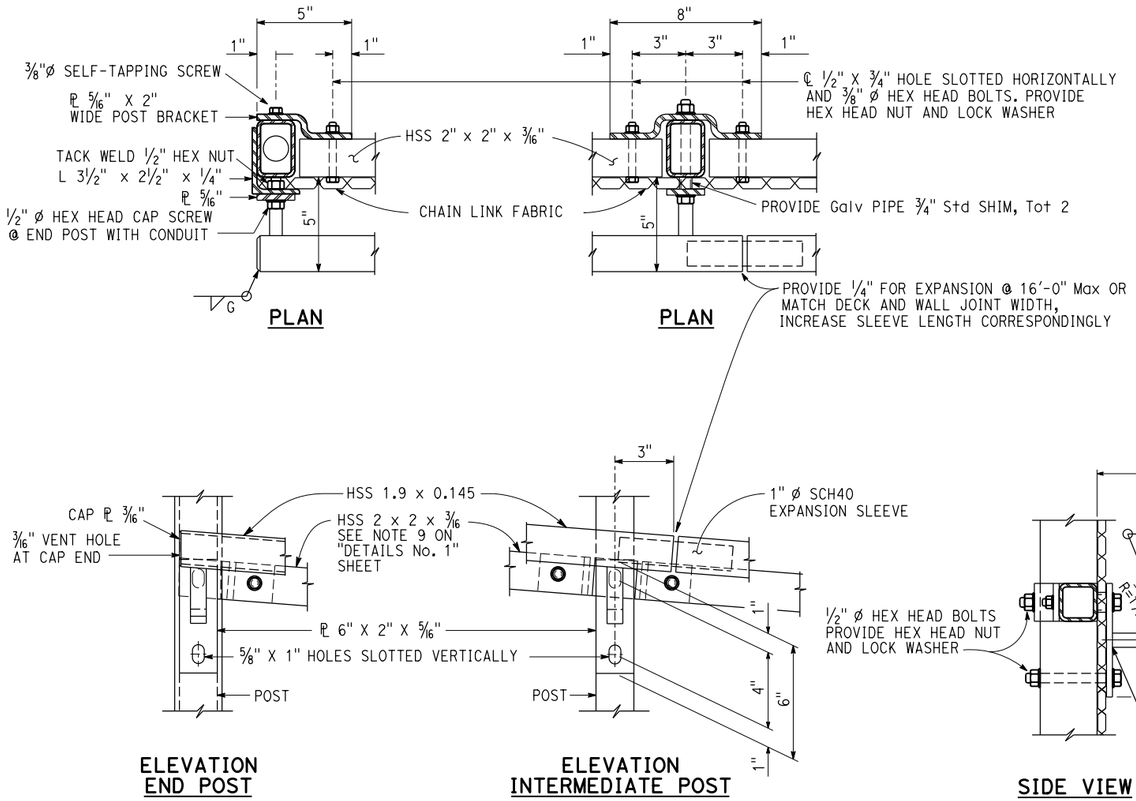
REGISTERED CIVIL ENGINEER — DATE X

MM/DD/YYYY
PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
LEON VALLA
No. C45351
Exp. 09-30-24
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

THE REGISTERED CIVIL ENGINEER FOR THE PROJECT IS RESPONSIBLE FOR THE SELECTION AND PROPER APPLICATION OF THE COMPONENT DESIGN AND ANY MODIFICATIONS SHOWN.



TUBULAR HANDRAILING BRACKET DETAILS

NO SCALE

BRIDGE STANDARD DETAILS						
xs16-220-2 (FILE NO.)	July 2020 (APPROVAL DATE)	*The components of the Bridge Standard Details have been prepared under the responsible charge of the Technical Owner, a registered civil engineer in the State of California*	STATE OF CALIFORNIA DEPARTMENT OF TRANSPORTATION	DIVISION OF ENGINEERING SERVICES	BRIDGE No. 52-TEMP; POST MILE 21.61	VENTURA OH (REPLACEMENT) Temp BIKE AND POC CHAIN LINK RAILING TYPE 7 (Mod) DETAILS No. 2

Refer to: http://www.dot.ca.gov/hq/esc/techpubs/manual/bridgemanuals/bridge-standard-detail-sheets/index.html

DATE PLOTTED => 18-AUG-2023 TIME PLOTTED => 11:02
FILE => 52-temp-y-xs160-220-2.dgn USERNAME => s128972
ORIGINAL SCALE IN INCHES FOR REDUCED PLANS 0 1 2 3

UNIT: PROJECT NUMBER & PHASE: 07160000251
COUNTY/ROUTE: VEN/1 CONTRACT No.: 07-31964
DISREGARD PRINTS BEARING EARLIER REVISION DATES →

REVISION DATES				SHEET	OF
05-24-20	12-31-19	05-22-20	07-01-20	8	8

DRAFT CONDITIONS OF APPROVAL FOR COASTAL PD PERMIT CASE NO. PL22-0114

RESOURCE MANAGEMENT AGENCY (RMA)

Planning Division Conditions

1. Project Description

This Coastal Planned Development (PD) Permit is based on and limited to compliance with the project description stated in this condition below, Exhibit 3 (Plans), Exhibit 6 (ESA Coastal Hazards Report) and Exhibit 7 (Initial Study Biological Assessment) of the Planning Director hearing on October 26, 2023, and conditions of approval set forth below. Together, these conditions and documents describe the "Project." Any deviations from the Project must first be reviewed and approved by the County in order to determine if the Project deviations conform to the Project as approved. Project deviations may require Planning Director for changes to the permit or further California Environmental Quality Act (CEQA) environmental review, or both. Any Project deviation that is implemented without requisite County review and approval(s) may constitute a violation of the conditions of this permit and applicable law.

The Project description is as follows:

The California Department of Transportation proposes to demolish the existing Ventura Overhead (OH) Bridge (Bridge No. 52-0040) located at State Route 1 (SR 1) between Post Miles 21.3s through 21.9 and construct a new bridge.

Demolition of Ventura OH Bridge No.52-0040

The California Department of Transportation, together with the Contractor retained for the project, will begin the demolition with the removal of the bridge deck and soffit between girders. Excavators with hammers or concrete crushing equipment will be used to crush the rest of the concrete bridge super structure. The remaining steel girders will be cut and removed in the spans over the railroad tracks followed by bents and abutment walls being removed. The contractor selected by Caltrans to construct the project will be required to prepare a bridge removal plan ("Demolition Plan") to be reviewed and approved by Caltrans, Union Pacific Railroad (UPRR), and Ventura County. The plan will include detailed demolition methods for ocean and beach, and railroad track protection.

Construction of a New OH Bridge

The new bridge will have an elevation of 57.10 feet and will be 55 feet wide and 614 feet in length. The bridge deck provides a north- and southbound lane (12 feet wide) and 8-foot shoulder on either side of the traffic lane. A Class I Bike Lane (10 -feet wide) would be located on the southern side of the bridge deck for north- and southbound bicyclists. The bike lanes will be separated from ongoing traffic by a concrete barrier (3 feet 8 inches

in height on the side of the travel lane) with a pedestrian railing (24 inches in height) on top. For areas where the bike lanes are located above the UPRR tracks, a 7 foot 10-inch-tall fence will be installed. The bridge will include abutment/retaining walls on the north and south side of the bridge and six columns to support the five spans and three bents. Architectural texture will be incorporated into the left and right side of the retaining walls and inside the face on both abutments stem walls. Four standard lights (rail mounted electroliers) at 15 foot in height will be installed above the north bound lane of bridge deck.

Emma Wood State Beach Access Road

Emma Wood State Beach Access Road will be widened by 8 to 10 feet landward; this will require approximately 3,150 cubic yards of grading and construction of retaining walls to retain the slope supporting SR 1 and construction of the new bridge abutments.

Class I Bike Lane

The Class I Bike Lane located on the southern side of the bridge deck would continue north onto SR 1 south bound lane. The concrete barrier that separates bicyclists from motorists across the bridge will continue north until the Emma Wood State Beach entrance road.

Omer Rains Coastal Bike Trail Connection to SR 1

The Omer Rains Coastal Bike Trail terminates at SR 1. After exiting the Omer Rains Coastal Bike Trail at PM 21.3, a Class I Bike Lane will be constructed to restrict bicyclists to the seaward side of SR 1. A new 65 foot long 12-foot-wide pedestrian bridge with pedestrian railing will span over an existing culvert and provide immediate access to the Class I Bike Lane from Omer Rains Trail. The bike lane will be separated from ongoing traffic by a concrete barrier (3 feet 8 inches in height on the side of the travel lane) with a pedestrian railing (24 inches in height) on top. Bike lane railing will be interrupted at SR 1 Station 1130 to 1131, to retain access to on-street parking and avoid removal of existing trees. The Class I Bike Lane continues onto the seaward side of SR 1, across the new Ventura OH bridge, until PM 21.8 (Emma Wood State Beach entrance).

Bicycle lanes will be delineated with green-colored pavement to identify the bike lane from the roadway.

Crosswalk/Pedestrian Hybrid Beacons (PHB)

At SR1 PM 21.8, a crosswalk and two PHB will provide a transition redirecting northbound bicyclists to the northbound Class I Bike Lane. Two 30-foot-tall light posts with two 26-foot-tall PHB will be installed to notify south and north bound motorists of the approaching crosswalk. The project will include the installation and replacement of electrical conduits and equipment at PM 21.8 to accommodate the crosswalk and PHB.

Signs/Pavement Delineation

A total of 25 existing signs will be replaced and a total of 17 new signs will be installed along and in proximity to the bridge. All signs would be located within the Caltrans right-of-way and are "wayfinding signs" (i.e., Coastal Access, Coastal Trail), directional, or are necessary to ensure public safety.

Tree Removal

Three Monterey cypress trees are located on the slope that supports SR 1 adjacent to Emma Wood State Beach access road; all three trees will be removed. Eight replacement trees of the same species will be planted. The replacement trees collectively be of comparable size, and planted in the same general location as, the three Monterey cypress being removed.

Habitat Restoration

The Emma Wood Beach access road widening will permanently remove approximately 0.04 acres (1,742 sq. ft.) of degraded and isolated Environmentally Sensitive Habitat Areas (ESHA), specifically disturbed Quailbrush-Lemonade Berry Scrub. The abutments for the elevated pedestrian bridge that will span a culvert will remove approximately 336 sq. ft. of native vegetation, which includes California rye grass, Coyote brush, Mulefat, Saltbrush and cottonwood, that is also considered ESHA. A Habitat Restoration, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan will be implemented that requires the planting of 4,157 square feet of local, indigenous native vegetation to offset the loss of 2,078 sq. ft. of degraded ESHA.

Temporary impacts related to staging areas, construction activities, and the temporary bicycle overcrossing bridge (prefabricated bridge), will disturb approximately 1.04 acres of disturbed Big Saltbrush Scrub/Successional Big Salt Brush Scrub. All temporary impacts will be restored on a 1:1 ratio immediately following completion of construction of the project.

Seacliff Exit 78

Seacliff Exit 78 (U.S. 101 North and Southbound) on- and off-ramps will remain open throughout construction activities.

Temporary Bike/Pedestrian Path

While the bridge is out of commission, a temporary bike/pedestrian path of travel will be constructed to provide access around the construction zone. As bicyclists exit the Omer Rains Coastal Bike Trail onto SR 1, the temporary path of travel will be separated from construction traffic by K rail. At Station 1131, a temporary 12 foot wide by 20-foot-long

paved path will direct users to the southbound shoulder adjacent to the Number 3 Lane on U.S. 101. The path of travel will be separated from vehicular traffic by K-rail with plywood attached above. At Station 1745, an 8-foot-wide temporary overcrossing (prefabricated bridge) will direct path users from U.S. 101, over UPRR, and back onto SR 1. The temporary bike/pedestrian bridge will be at height clearance of 22 feet and 1 inch above the UPRR. A Portable Changeable Message Sign (PCMS) and two "Shoulder Closed" signs will be installed on south bound U.S. 101 for the duration of the temporary path of travel.

Batch Plant

A mobile batch plant will be installed, the location has yet to be determined, but the Batch Plant will be in the Caltrans right-of-way and will not impact coastal resources and public access to and from the beach. Equipment for the mobile batch plant includes but is not limited to a batching system, water supply system, concrete admixture supply system, and air supply system.

Traffic Control

Traffic control measures will be implemented throughout the project. Construction areas will be closed off to the public by concrete barriers. Temporary construction signs and digital message boards would be installed at the construction zone informing motorists, bicyclists, and pedestrians that construction activities are underway and access through the area will be detoured.

Temporary Road Closures

Exit 72 SR 1 North, PCH/State Beaches: The project will temporarily close Exit 72; U.S. 101 north bound traffic will be routed approximately 7 miles north to the Seacliff exit where the motorist can get onto SR 1 southbound. As part of traffic handling measures, the existing signs for Exit 72 will be covered and a PCMS will be placed along the US 101 shoulder to indicate that Exit 72 is closed. Stationary Mounted Construction Area Signs will be installed along US 101 and SR 1 to indicate the road closure and detour.

Emma Wood State Beach Access Road will remain open during construction, if temporary closure is required, flagmen will be used to maintain traffic flow. A temporary barrier system comprised of K rail will allow for construction access below the bridge and to allow continued access to Emma Wood State Beach.

Construction Hours/Duration

November – March: Monday through Friday 7:00 AM to 5:00 PM
April – September: Monday through Friday 7:00 AM to 7:00 PM

The project is estimated to take approximately 26 months to complete (all construction activities); Ventura OH Bridge No.52-0040 is expected to be out of commission for approximately 18-20 months.

Permanent and Temporary Easements

Caltrans will acquire permanent easements and temporary construction easements from UPRR, Wood-Claeyssens Foundation, and California State Parks, prior to construction.

2. Required Improvements for Coastal PD

Purpose: To ensure the project site conforms to the plans approved at the Planning Director hearing in support of the project.

Requirement: The Permittee shall ensure that all required off-site and on-site improvements for the Project, including replacement bridge, parking, signs, striping, bike lanes, guardrail and crosswalk, and pedestrian signals are completed in conformance with the approved plans stamped as Exhibit 3. The Permittee shall prepare and submit all final building, and landscaping plans for the County's review and approval in accordance with the approved plans.

Documentation: The Permittee shall obtain Planning Division staff's stamped approval on the project plans and submit them to the County for inclusion in the Project file. The Permittee shall submit additional plans to the Planning Division for review and stamped approval (e.g., landscape plans) for inclusion in the Project file, as necessary.

Timing: Prior to the issuance of a Zoning Clearance for construction the Permittee shall submit all final development plans to the Planning Division for review and approval. Unless the Planning Director allows the Permittee to provide financial security and a final executed agreement, approved as to form by the County Counsel, that ensures completion of such improvements, the Permittee shall complete all required improvements within the construction duration of 26 months unless upon written request a time extension is provided to the Planning Division. The Permittee shall maintain the required improvements for the life of the Project.

Monitoring and Reporting: The Public Works Agency Grading Inspector, Fire Marshall, and/or Planning Division staff has the authority to conduct periodic site inspections to ensure the Permittee's ongoing compliance with this condition consistent with the requirements of §8183-5 of the Ventura County Coastal Zoning Ordinance.

3. Site Maintenance

Purpose: To ensure that the Project site is maintained in a neat and orderly manner so as not to create any hazardous conditions or unsightly conditions which are visible from outside of the Project site.

Requirement: The Permittee shall maintain the Project site in a neat and orderly manner, and in compliance with the Project description set forth in Condition No. 1. Only equipment and/or materials which the Planning Director determines to substantially comply with the Project description shall be stored within the Project site during the life of the Project. The batch plant, and equipment and materials shall be stored in designated construction storage and staging areas, as shown on the final development plans required pursuant to Condition of Approval 1 (above).

Documentation: The Permittee shall maintain the Project site in compliance with Condition No. 1 and the approved plans for the Project.

Timing: The Permittee shall maintain the Project site in a neat and orderly manner and in compliance with Condition No. 1 throughout the life of the Project.

Monitoring and Reporting: The County Building Inspector, Public Works Agency Grading Inspector, Fire Marshall, and/or Planning Division staff has the authority to conduct periodic site inspections to ensure the Permittee's ongoing compliance with this condition consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

4. Coastal PD Permit Modification

Prior to undertaking any operational or construction-related activity which is not expressly described in these conditions, the Permittee shall first contact the Planning Director to determine if the proposed activity requires a modification of this Coastal PD. The Planning Director may, at the Planning Director's sole discretion, require the Permittee to file a written and/or mapped description of the proposed activity in order to determine if a Coastal PD modification is required. If a Coastal PD modification is required, the modification shall be subject to:

a. The modification approval standards of the Ventura County Ordinance Code in effect at the time the modification application is acted on by the Planning Director; and

b. Environmental review, as required pursuant to the California Environmental Quality Act (CEQA; California Public Resources Code, §§ 21000-21178) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, §§ 15000-15387), as amended from time to time.

5. Construction Activities

Prior to any construction or grading activities, the Permittee shall obtain a Zoning Clearance for construction from the Planning Division.

6. Acceptance of Conditions and Schedule of Enforcement Responses

The Permittee's acceptance of this Coastal PD Permit and/or commencement of construction and/or operations under this Coastal PD Permit shall constitute the

Permittee's formal agreement to comply with all conditions of this Coastal PD Permit. Failure to abide by and comply with any condition of this Coastal PD Permit shall constitute grounds for enforcement action provided in the Ventura County Coastal Zoning Ordinance (Article 13), which shall include, but is not limited to, the following:

a. Public reporting of violations to the Planning Commission and/or Board of Supervisors;
b. Suspension of the permitted land uses (Condition No. 1);
c. Modification of the Coastal PD Permit conditions listed herein;
d. Recordation of a "Notice of Noncompliance" on the deed to the subject property;
e. The imposition of civil administrative penalties; and/or
f. Revocation of this Coastal PD Permit.

The Permittee is responsible for being aware of and complying with the Coastal PD Permit conditions and all applicable federal, state, and local laws and regulations.

7. Time Limits
   a. Use inauguration:

      (1) At the conclusion of the local appeal period set forth in the Ventura County Coastal Zoning Ordinance (Section 8181-9.2), or following a final decision on a filed appeal, the Planning Division shall send a Notice of Final Decision to the California Coastal Commission (CCC). The CCC may set another appeal period pursuant to terms and conditions set forth in the California Coastal Act (Pub. Res. Code, Section 30000 et seq.). Following the expiration of the CCC's appeal period, and if no appeals are filed, the decision regarding the Coastal PD Permit will be considered "effective." Once the approval decision becomes effective, the Permittee must obtain a Zoning Clearance in order to conduct the construction activities and use the property as set forth in Condition No. 1 (Project Description).

      (2) This Coastal PD Permit shall expire and become null and void if the Permittee fails to obtain a Zoning Clearance for construction within one year [Ventura County Coastal Zoning Ordinance (§ 8181-7.7)] from the date the approval decision of this Coastal PD becomes effective. The Planning Director may grant a one-year extension of time to the Permittee in order to obtain the Zoning Clearance for construction if the Permittee can demonstrate to the satisfaction of the Planning Director that the Permittee has made a diligent effort to implement the Project, and the Permittee has requested the time extension in writing at least 30 days prior to the one-year expiration date.

      (3) Prior to the issuance of the Zoning Clearance for construction, all fees and charges billed to that date by any County agency, as well as any fines, penalties, and sureties, must be paid in full. After issuance of the Zoning

Clearance for construction, any final billed processing fees must be paid within 30 days of the billing date, or the County may revoke this Coastal PD Permit.

8. Documentation Verifying Compliance with Other Agencies' Requirements Related to this Coastal PD Permit

Purpose: To ensure compliance with, and notification of, federal, state, and/or local government regulatory agencies that have requirements that pertain to the Project (Condition No. 1, above) that is the subject of this Coastal PD Permit.

Requirement: Upon the request of the Planning Director, the Permittee shall provide the Planning Division with documentation (e.g., copies of permits or agreements from other agencies, which are required pursuant to a condition of this Coastal PD Permit) to verify that the Permittee has obtained or satisfied all applicable federal, state, and local entitlements and conditions that pertain to the Project. The Permittee must provide verification that temporary construction easements have been acquired from California State Parks.

Documentation: The Permittee shall provide this documentation to Planning Division staff in the form that is acceptable to the agency issuing the entitlement or clearance, to be included in the Planning Division Project file.

Timing: The documentation shall be submitted to the Planning Division prior to the issuance of the Zoning Clearance for construction.

Monitoring and Reporting: The Planning Division maintains the documentation provided by the Permittee in the respective Project file. In the event that the federal, state, or local government regulatory agency prepares new documentation due to changes in the Project or the other agency's requirements, the Permittee shall submit the new documentation within 30 days of receipt of the documentation from the other agency.

9. Notice of Coastal PD Permit Requirements and Retention of Coastal PD Permit Conditions On Site

Purpose: To ensure full and proper notice of these Coastal PD Permit conditions affecting the use of the subject property.

Requirement: Unless otherwise required by the Planning Director, the Permittee shall notify, in writing, the Property Owner(s) of record, contractors, and all other parties and vendors who regularly conduct activities associated with the Project, of the pertinent conditions of this Coastal PD Permit.

Documentation: The Permittee shall maintain a current set of Coastal PD Permit conditions and exhibits at the project site.

Timing: Prior to issuance of a Zoning Clearance for construction and throughout the life of the Project.

Monitoring and Reporting: The Planning Division has the authority to conduct periodic site inspections to ensure ongoing compliance with this condition consistent with the requirements of §8183-5 of the Ventura County Coastal Zoning Ordinance.

10. Financial Responsibility for Compliance Monitoring and Enforcement

    a. Cost Responsibilities: The Permittee shall bear the full costs of all County staff time, materials, and County-retained consultants associated with condition compliance review and monitoring, CEQA mitigation monitoring, other permit monitoring programs, and enforcement activities, actions, and processes conducted pursuant to the Ventura County Coastal Zoning Ordinance (§ 8183-5) related to this PD Permit. Such condition compliance review, monitoring and enforcement activities may include (but are not limited to): periodic site inspections; preparation, review, and approval of studies and reports; review of permit conditions and related records; enforcement hearings and processes; drafting and implementing compliance agreements; and attending to the modification, suspension, or revocation of permits. Costs will be billed at the rates set forth in the Planning Division or other applicable County Fee Schedule, and at the contract rates of County-retained consultants, in effect at the time the costs are incurred.

    b. Establishment of Revolving Compliance Account:

       Within 10 calendar days of the effective date of the final decision approving this PD Permit, the Permittee shall submit the following deposit and reimbursement agreement to the Planning Director:

       (1) A payment of $500.00 for deposit into a revolving condition compliance and enforcement account to be used by the Planning Division to cover costs associated with condition compliance review, monitoring, and enforcement activities described in 10.a (above), and any duly-imposed civil administrative penalties regarding this. The Permittee shall replenish such account to the above-stated amount within 10 calendar days after receiving notice of the requirement to do so from the Resource Management Agency.

       (2) An executed reimbursement agreement, in a form provided by the Planning Division, obligating the Permittee to pay all condition compliance review, monitoring, and enforcement costs, and any civil administrative penalties, subject to the Permittee's right to challenge all such charges and penalties prior to payment.

c. Billing Process: The Permittee shall pay all Planning Division invoices within 30 days of receipt thereof. Failure to timely pay an invoice shall subject the Permittee to late fees and charges set forth in the Planning Division Fee Schedule, and shall be grounds for suspension, modification, or revocation of this PD Permit. The Permittee shall have the right to challenge any charge or penalty prior to payment.

11. Defense and Indemnification

a. The Permittee shall defend, at the Permittee's sole expense with legal counsel acceptable to the County, against any and all claims, actions, or proceedings against the County, any other public agency with a governing body consisting of the members of the County Board of Supervisors, or any of their respective board members, officials, employees and agents (collectively, “Indemnified Parties”) arising out of or in any way related to the County’s issuance, administration, or enforcement of this Coastal PD Permit. The County shall promptly notify the Permittee of any such claim, action or proceeding and shall cooperate fully in the defense.

b. The Permittee shall also indemnify and hold harmless the Indemnified Parties from and against any and all losses, damages, awards, fines, expenses, penalties, judgments, settlements, or liabilities of whatever nature, including but not limited to court costs and attorney fees (collectively, “Liabilities”), arising out of or in any way related to any claim, action or proceeding subject to subpart (a) above, regardless of how a court apportions any such Liabilities as between the Permittee, the County, and/or third parties.

c. Except with respect to claims, actions, proceedings, and Liabilities resulting from an Indemnified Party’s sole active negligence or intentional misconduct, the Permittee shall also indemnify, defend (at Permittee’s sole expense with legal counsel acceptable to County), and hold harmless the Indemnified Parties from and against any and all claims, actions, proceedings, and Liabilities arising out of, or in any way related to, the construction, maintenance, land use, or operations conducted pursuant to this Coastal PD Permit, regardless of how a court apportions any such Liabilities as between the Permittee, the County, and/or third parties. The County shall promptly notify the Permittee of any such claim, action, or proceeding and shall cooperate fully in the defense.

d. Neither the issuance of this Coastal PD Permit, nor compliance with the conditions hereof, shall relieve the Permittee from any responsibility otherwise imposed by law for damage to persons or property; nor shall the issuance of this Coastal PD Permit serve to impose any liability upon the Indemnified Parties for injury or damage to persons or property.

12. Invalidation of Condition(s)

If any of the conditions or limitations of this Coastal PD Permit are held to be invalid in whole or in part by a court of competent jurisdiction, that holding shall not invalidate any of the remaining Coastal PD Permit conditions or limitations. In the event that any condition imposing a fee, exaction, dedication, or other mitigation measure is challenged by the Permittee in an action filed in a court of competent jurisdiction, or threatened to be filed therein, the Permittee shall be required to fully comply with this Coastal PD Permit, including without limitation, by remitting the fee, exaction, dedication, and/or by otherwise performing all mitigation measures being challenged. This Coastal PD Permit shall continue in full force unless, until, and only to the extent invalidated by a final, binding judgment issued in such action.

If a court of competent jurisdiction invalidates any condition in whole or in part, and the invalidation would change the findings and/or the mitigation measures associated with the approval of this Coastal PD Permit, at the discretion of the Planning Director, the Planning Director may review the project and impose substitute feasible conditions/mitigation measures to adequately address the subject matter of the invalidated condition. The Planning Director shall make the determination of adequacy. If the Planning Director cannot identify substitute feasible conditions/mitigation measures to replace the invalidated condition, and cannot identify overriding considerations for the significant impacts that are not mitigated to a level of insignificance as a result of the invalidation of the condition, then this Coastal PD Permit may be revoked.

13. Consultant Review of Information and Consultant Work

The County and all other County permitting agencies for the Project have the option of referring any and all special studies that these conditions require to an independent and qualified consultant for review and evaluation of issues beyond the expertise or resources of County staff.

Prior to the County engaging any independent consultants or contractors pursuant to the conditions of this Coastal PD Permit, the County shall confer in writing with the Permittee regarding the necessary work to be contracted, as well as the estimated costs of such work. Whenever feasible, the County will use the lowest responsible bidder or proposer. Any decisions made by County staff in reliance on consultant or contractor work may be appealed pursuant to the appeal procedures contained in the Ventura County Zoning Ordinance Code then in effect.

The Permittee may hire private consultants to conduct work required by the County, but only if the consultant and the consultant's proposed scope-of-work are first reviewed and approved by the County. The County retains the right to hire its own consultants to evaluate any work that the Permittee or a contractor of the Permittee undertakes. In accordance with Condition No. 11 above, if the County hires a consultant to review any work undertaken by the Permittee or hires a consultant to review the work undertaken by a contractor of the Permittee, the hiring of the consultant will be at the Permittee's expense.

14. Relationship of Coastal PD Permit Conditions, Laws, and Other Entitlements

The Permittee shall implement the Project in compliance with all applicable requirements and enactments of federal, state, and local authorities. In the event of conflict between various requirements, the more restrictive requirements shall apply. In the event the Planning Director determines that any Coastal PD Permit condition contained herein is in conflict with any other Coastal PD Permit condition contained herein, when principles of law do not provide to the contrary, the Coastal PD Permit condition most protective of public health and safety and environmental resources shall prevail to the extent feasible.

No condition of this Coastal PD Permit for uses allowed by the Ventura County Ordinance Code shall be interpreted as permitting or requiring any violation of law, lawful rules, or regulations, or orders of an authorized governmental agency. Neither the approval of this Coastal PD Permit, nor compliance with the conditions of this Coastal PD Permit, shall relieve the Permittee from any responsibility otherwise imposed by law for damage to persons or property.

15. Undergrounding of Utilities

Purpose: In order to ensure that public utility extensions from the point of connection to the structure(s) comply with General Plan Public Facilities, Services, and Infrastructure Policy PFS 7.4.

Requirement: Where above-ground transmission line placement would unavoidably affect views, undergrounding shall be required where it is technically and economically feasible unless it can be shown that other alternatives are less environmentally damaging. When above-ground facilities are necessary, design and color shall be compatible with the surroundings to the extent safety and economic considerations allow. Where undergrounding of utilities is feasible, the Permittee shall place utility service lines beneath the roadway to minimize impacts associated with trenching and native vegetation removal.

Documentation: The Permittee shall provide a copy of the project plans denoting the location of utility service lines, point of connection, and alignment to the structure(s) the utility will serve, to the Planning Division for review and approval, to be maintained as part of the project file. If utility service lines cannot be undergrounded, the Permittee shall provide documentation to support the alternate location, design, materials and color of the equipment.

Timing: Prior to the issuance of a Zoning Clearance for construction, the location of utility service lines shall be noted on all building and grading plans for review and approval by the Planning Division.

Monitoring and Reporting: The Planning Division has the authority to conduct site inspections to ensure ongoing compliance by the Permittee with this condition consistent with the requirements § 8183-5 of the Ventura County Coastal Zoning Ordinance.

16. Contact Person

Purpose: To designate a person responsible for responding to complaints.

Requirement: The Permittee shall designate a contact person(s) to respond to complaints from citizens and the County which are related to the permitted uses of this Coastal PD Permit.

Documentation: The Permittee shall provide the Planning Director with the contact information (e.g., name and/or position title, address, business and cell phone numbers, and email addresses) of the Permittee's field agent who receives all orders, notices, and communications regarding matters of condition and code compliance at the Project site.

Timing: Prior to the issuance of a Zoning Clearance for construction, the Permittee shall provide the Planning Division with the contact information of the Permittee's field agent(s) for the Project file. If the address or phone number of the Permittee's field agent(s) should change, or the responsibility is assigned to another person, the Permittee shall provide Planning Division staff with the new information in writing within three calendar days of the change in the Permittee's field agent.

Monitoring and Reporting: The Planning Division maintains the contact information provided by the Permittee in the Project file. The Planning Division has the authority to periodically confirm the contact information consistent with the requirements of §8183-5 of the Ventura County Coastal Zoning Ordinance.

17. Avoidance of Nesting Birds

Purpose: In order to prevent impacts to birds protected under the Migratory Bird Treaty Act, land clearing, and construction activities shall be regulated.

Requirement: The Permittee shall conduct all demolition and construction in such a way as to avoid nesting native birds. This can be accomplished by implementing one of the following options:

a. Timing of demolition and construction: Prohibit demolition and construction activities during the breeding and nesting season January 1 – September 15 for Ventura County CZO), in which case the following surveys are not required; or

b. Surveys and avoidance of occupied nests: Conduct site-specific surveys prior to demolition and construction activities during the breeding and nesting season (January 1 – September 15 for Ventura County CZO) and avoid occupied bird nests. A County-approved biologist shall conduct surveys to identify any occupied (active) bird nests in the area proposed for disturbance. Occupied nests shall be avoided until juvenile birds have vacated the nest.

The County-approved biologist shall conduct an initial breeding and nesting bird survey 30 days prior to the initiation of demolition and construction activities. The County-approved biologist shall continue to survey the Project site on a weekly basis, with the last survey completed no more than 3 days prior to the initiation of land clearing activities. The nesting bird survey must cover the development footprint and 300 feet from the development footprint. If occupied (active) nests are found, demolition and construction activities within a setback area surrounding the nest shall be postponed or halted. Demolition and construction activities may commence in the setback area when the nest is vacated (juveniles have fledged) provided that there is no evidence of a second attempt at nesting, as determined by the County-approved biologist. Demolition and construction activities can also occur outside of the setback areas. Pursuant to the recommendations of the California Department of Fish and Wildlife, the required setback is 300 feet for most birds and 500 feet for raptors. This setback can be increased or decreased based on the recommendation of the County-approved biologist and approval from the Planning Division.

Documentation: The Permittee shall provide to the Planning Division a Survey Report from a County-approved biologist documenting the results of the initial nesting bird survey and a plan for continued surveys and avoidance of nests in accordance with the requirements set forth in this condition (above). Along with the Survey Report, the Permittee shall provide a copy of a signed contract (financial information redacted) with a County-approved biologist responsible for the surveys, monitoring of any occupied nests discovered, and establishment of mandatory setback areas. The Permittee shall submit to the Planning Division a Mitigation Monitoring Report from a County-approved biologist following demolition and construction activities documenting actions taken to avoid nesting birds and results.

Timing: If demolition and construction activities will occur between January 1 – September 15 for Ventura County CZO, the County-approved biologist shall conduct the nesting bird surveys 30 days prior to initiation of demolition and construction activities, and weekly thereafter. The last survey for nesting birds shall be conducted no more than 3 days prior to initiation of demolition and construction activities. The Permittee shall submit the Survey Report documenting the results of the first nesting bird survey and the signed contract to the Planning Division prior to issuance of a zoning clearance for construction. The Permittee shall submit the Mitigation Monitoring Report within 14 days of completion of the demolition and construction activities.

Monitoring and Reporting: The Planning Division reviews the Survey Report and signed contract for adequacy prior to issuance of a Zoning Clearance for Construction. The Planning Division maintains copies of the signed contract, Survey Report, and Mitigation Monitoring Report in the Project file.

18. Archaeological Resources Discovered During Ground Disturbance

Purpose: In order to mitigate potential impacts to archaeological resources discovered during ground disturbance.

Requirement: The Permittee shall implement the following procedures:

a. If any archaeological or historical artifacts are uncovered during ground disturbance or construction activities, the Permittee shall:

   i. Cease operations and assure the preservation of the area in which the discovery was made;

   ii. Notify the Planning Director in writing, within three days of the discovery;

   iii. Obtain the services of a County-approved archaeologist who shall assess the find and provide recommendations on the proper disposition of the site in a written report format;

   iv. Obtain the Planning Director's written concurrence of the recommended disposition of the site before resuming development; and

   v. Implement the agreed upon recommendations.

b. If any human burial remains are encountered during ground disturbance or construction activities, the Permittee shall:

   i. Cease operations and assure the preservation of the area in which the discovery was made;

   ii. Immediately notify the County Coroner and the Planning Director;

   iii. Obtain the services of a County-approved archaeologist and, if necessary, Native American Monitor(s), who shall assess the find and provide recommendations on the proper disposition of the site in a written report format;

   iv. Obtain the Planning Director's written concurrence of the recommended disposition of the site before resuming development on-site; and

   v. Implement the agreed upon recommendations.

Documentation: If archaeological remains are encountered, the Permittee shall submit a report prepared by a County-approved archaeologist including recommendations for the proper disposition of the site. Additional documentation may be required to demonstrate that the Permittee has implemented any recommendations made by the archaeologist's report.

Timing: If any archaeological remains are uncovered during ground disturbance or construction activities, the Permittee shall provide the written notification to the Planning

Director within three days of the discovery. The Permittee shall submit the archaeological report to the Planning Division immediately upon completion of the report.

Monitoring and Reporting: The Permittee shall provide the archaeological report to the Planning Division to be made part of the Project file. The Permittee shall implement any recommendations made in the archaeological report to the satisfaction of the Planning Director. The archaeologist shall monitor all ground disturbance activities within the area in which the discovery was made, in order to ensure the successful implementation of the recommendations made in the archaeological report. The Planning Division has the authority to conduct site inspections to ensure that the Permittee implements the recommendations set forth in the archaeological report, consistent with the requirements of Section 8183-5 of the Ventura County Coastal Zoning Ordinance.

19. Paleontological Resources Discovered During Grading

Purpose: In order to mitigate potential impacts to paleontological resources that may be encountered during ground disturbance or construction activities.

Requirement: If any paleontological remains are uncovered during ground disturbance or construction activities, the property owner shall:

1. Cease operations and assure the preservation of the area in which the discovery was made;

2. Notify the Planning Director in writing, within three days of the discovery;

3. Obtain the services of a paleontological consultant or professional geologist who shall assess the find and provide a report that assesses the resources and sets forth recommendations on the proper disposition of the site;

4. Obtain the Planning Director's written concurrence with the recommended disposition of the site before resuming development; and

5. Implement the agreed upon recommendations.

Documentation: The property owner shall submit the paleontologist's or geologist's reports. Additional documentation may be required to demonstrate that the property owner has implemented the recommendations set forth in the paleontological report.

Timing: If any paleontological remains are uncovered during ground disturbance or construction activities, the property owner shall provide the written notification to the Planning Director within three days of the discovery. The property owner shall submit the paleontological report to the Planning Division immediately upon completion of the report.

Monitoring and Reporting: The property owner shall provide the paleontological report to the Planning Division to be made part of the Project file. The property owner shall

implement any recommendations made in the paleontological report to the satisfaction of the Planning Director. The paleontologist shall monitor all ground disturbance activities within the area in which the discovery was made, in order to ensure the successful implementation of the recommendations made in the paleontological report. The Planning Division has the authority to conduct site inspections to ensure that the property owner implements the recommendations set forth in the paleontological report, consistent with the requirements of § 8185-5 of the Ventura County Coastal Zoning Ordinance.

20. Construction Noise

Purpose: In order for this project to comply with the Ventura County General Plan Hazards and Safety Policies HAZ-9.2.4 and HAZ-9.2.5, and the County of Ventura Construction Noise Threshold Criteria and Control Plan (Amended 2010).

Requirement: The Permittee shall limit construction activity for site preparation and development to the following hours:

November – March: Monday through Friday 7:00 AM to 5:00 PM
April – September: Monday through Friday 7:00 AM to 7:00 PM

No construction would occur on Saturday, Sunday, and State holidays.

Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities such as interior painting are not subject to these restrictions.

Documentation: The Permittee shall post a sign stating these restrictions in a conspicuous location on the Project site, in order so that the sign is visible to the general public. The Permittee shall provide photo documentation showing posting of the required signage to the Planning Division, prior to the commencement of grading and construction activities. The sign must provide a telephone number of the site foreman, or other person who controls activities on the jobsite, for use for complaints from the public. The Permittee shall maintain a “Complaint Log,” noting the date, time, complainant’s name, complaint, and any corrective action taken, in the event that the Permittee receives noise complaints. The Permittee must submit the “Complaint Log” to the Planning Division upon the Planning Director’s request.

Timing: The Permittee shall install the sign prior to the issuance of a building permit and throughout all grading and construction activities. The Permittee shall maintain the signage on-site until all grading and construction activities are complete. If the Planning Director requests the Permittee to submit the “Complaint Log” to the Planning Division, the Permittee shall submit the “Complaint Log” within one day of receiving the Planning Director’s request.

Monitoring and Reporting: The Planning Division reviews, and maintains in the Project file, the photo documentation of the sign and the “Complaint Log.” The Planning Division

has the authority to conduct site inspections and take enforcement actions to ensure that the Permittee conducts grading and construction activities in compliance with this condition, consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

21. Private, County, and State-Owned Property Notification of Construction Schedule

Purpose: To ensure property owners, and County and State Parks, who will be temporarily impacted by the decommissioning of Ventura Overhead Bridge (Bridge No.52-040), constructing a new bridge, and temporary closure of US 101 Exit 72, are timely informed prior to the initiation of construction activities.

Requirement: The Permittee shall prepare a Notification Letter to all property owners between State Beach Access Road (PM 21.9) to Mobile Pier Road/Seacliff Exit 78 (PM 28.4), State Parks, General Services Agency (GSA) Parks Department, the California Coastal Commission, and the city of Ventura. The Notification Letter will identify the initiation of construction activities and completion date, and the name and contact information of the Caltrans Public Information Officer (PIO). The Permittee shall request, at the Permittee's expense, a current list of property owners ("mailing list") from the Planning Division for the purpose of notification.

Documentation: The Permittee shall provide the Planning Director a copy of the Notification Letter. The Permittee shall provide verification the Notification Letter was sent to all property owners/residents between State Beach Access Road (PM 21.9) to Mobile Pier Road/Seacliff Exit 78 (PM 28.4), State Parks, General Services Agency (GSA) Parks Department, the California Coastal Commission, and the city of Ventura.

Timing: Prior to the issuance of a Zoning Clearance for construction, the Permittee shall provide a copy of the Notification Letter and mailing list to the Planning Division.

Monitoring and Reporting: The Planning Division maintains the Permittee's Notification and mailing list in the Project file. The Planning Division has the authority to conduct site inspections and take enforcement actions to ensure that the Permittee implements the noticing requirements in compliance with this condition, consistent with the requirements of § 8183-5 of the *Ventura County Coastal Zoning Ordinance*.

22. Demolition Plan

Purpose: To ensure demolition of Ventura OH Bridge (Bridge No. 52-040) does not impact coastal resources including (beach access and parking, sandy beach, and Pacific Ocean), Union Pacific Railroad (UPRR), and motorists, bicyclists, pedestrians, and beachgoers.

Requirement: The Demolition Plan shall establish responsibilities and procedures for all bridge removal activities, including protocol for handling unexpected conditions. The Demolition Plan shall include but not be limited to the following:

- Plans showing the location of all adjacent structures and land features;
- Pre-Bridge Removal Meeting;
- List of construction equipment;
- Hazardous materials handling, storage, and removal;
- A detailed narrative that describes the sequential order and methods for demolition;
- Plans showing the phased approach to demolition;
- Debris Containment and Collection Plan. Protective covers and other measures to ensure debris is contained;
- Best Management Practices (BMPs);
- Disposal Plan for concrete recycling (i.e., batch plant) or transfer to an acceptable receiving site.
- Community noise monitoring
- Contact information of the Foreman, Engineer of Record, UPRR, Public Information Officer (PIO).

Documentation: The Permittee shall submit three copies of the Demolition Plan to the County of Ventura for review and approval.

Timing: Prior to the issuance of a Zoning Clearance for construction, the Permittee shall submit the final approved copy of the Demolition Plan to the Planning Division.

Monitoring and Reporting: The Planning Division maintains the Permittee's Demolition Plan in the Project file. The Planning Division has the authority to conduct site inspections and take enforcement actions to ensure that the Permittee implements the demolition plan in compliance with this condition, consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

23. Permanent and Temporary Easements
Purpose: To ensure Caltrans has obtained permanent and temporary easements to construct the project.

Requirement: Caltrans shall obtain authorization in the form of permanent and temporary easements from the following entities to construct the project: (1) A Permanent Easement and Bridge Easement (Permanent Highway Easement for roadway purposes and ancillary uses) from Union Pacific Railroad (UPRR) to construct and operate the replacement bridge for Ventura OH Bridge No. 52-0040 and a temporary bike lane and bridge over and across UPRR railroad tracks, (2) a Permanent Easement from the Wood-Claeyssens Foundation, to construct the Emma Wood State Beach access road improvements and replacement bridge, and (3) Temporary Construction Easements

and legal access for construction storage and staging areas outside the Caltrans right-of-way (if necessary).

Documentation: The Permittee shall submit to the Planning Division a copy of the Permanent and Temporary Construction Easements that have been acquired and if necessary, recorded with the Ventura County Recorder.

Timing: Prior to Zoning Clearance for construction, the Permittee shall record all Permanent Easements and Temporary Construction Easements and submit copies of Easements to the Planning Division.

Monitoring and Reporting: The Planning Division maintains the Permittee's Permanent and Temporary Construction Easements in the Project file. The Planning Division has the authority to conduct site inspections and take enforcement actions to ensure that the Permittee implements the demolition plan in compliance with this condition, consistent with the requirements of § 8183-5 of the *Ventura County Coastal Zoning Ordinance*.

24. Habitat Restoration Plan

Purpose: To offset the loss of 2,078 sq. ft. of degraded ESHA through the planting of 4,157 sq. ft. of locally indigenous, native vegetation, and to restore areas disturbed temporarily due to construction of the project in accordance with Ventura County Coastal Zoning Ordinance Section 8178-8.4.2.5.1.

Requirement: The Permittee must install and maintain a total of 4,157 square feet of locally indigenous, native vegetation to offset the loss of 2,078 sq. ft. of degraded ESHA. The 4,157 sq. ft. of landscaping shall be compatibility with ESHA.

All temporary impacts (approximately 1.04 acres of Disturbed Big Saltbrush Scrub/Successional Big Salt Brush Scrub) related to staging areas, construction activities, and the temporary bicycle overcrossing bridge (prefabricated bridge), will be restored on a 1:1 ratio. Temporary impacts to be restored shall revegetate slopes and restore or reclaim disturbed land with locally indigenous, native vegetation.

The Permittee shall retain a qualified biologist and landscape architect to prepare a Habitat Restoration Plan, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan as described below:

Habitat Restoration Plan: The Habitat Restoration Plan must include restoring the plant communities referenced in the Initial Study Biological Assessment (ISBA) (Caltrans, dated June 16, 2022 and amended on July 31, 2023, and October 9, 2023). The Plan shall include, but not be limited to, the following components:

- A description of the purpose and goals of the project including the improvement of specific physical, chemical, and/or biological functions at the restoration site(s).
- A description of the ESHA type(s) and amount(s) that will be provided by the Habitat Restoration Plan and how the method (i.e., restoration, establishment, enhancement) will achieve the 4,157 sq. ft. of ESHA.
- A description of restoration sites, including a site plan of the location and rationale for site selection.
- A plant palette and methods of salvaging, propagating, and planting the site to be restored.
- Methods of soil preparation.
- Method and timing of irrigation.
- Best Management Practices (BMPs) that will be utilized to avoid erosion and excessive runoff before plant establishment.
- Maintenance and monitoring necessary to ensure that the restored plant communities meet the success criteria.
- Schedule for restoration activities including fencing, weed abatement, propagating and planting, soil preparation, irrigation, erosion control, qualitative and quantitative monitoring, and reporting to the County.
- Identification of measurable performance standards for each objective to evaluate the success of the ESHA restoration.
- Identification of contingency and adaptive management measures to address unforeseen changes in site conditions or other components of the mitigation project.

Habitat Maintenance and Monitoring Plan: A detailed description of the required activities during the maintenance and monitoring period associated with the Habitat Restoration Plan. It must include performance standards, procedures for the periodic monitoring and implementation of corrective measures, and maintenance tasks used to ensure the continued viability of habitat once initial construction is complete.

Habitat Management Plan: Restored areas shall be permanently preserved and maintained through a deed restriction or other equivalent legal instrument.

Documentation: The Permittee shall submit three sets of a Habitat Restoration Plan, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan to the Planning Division for review and approval. A California registered landscape architect (or other qualified individual as approved by the Planning Director), in consultation with a qualified biologist, shall prepare the Habitat Restoration Plan, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan, demonstrating compliance with the requirements set forth in this condition (above).

The Permittee shall submit annual monitoring reports, prepared by a qualified biologist, after the completion of construction activities and following installation of the Habitat Restoration Plan, which address the success of plantings and any adjustments made to meet the performance criteria set forth in the maintenance, monitoring management plan.

The Permittee shall provide annual reports prepared by a County-approved qualified biologist on the progress of the habitat restoration area(s) for 5 years (or more, if the success criteria have not been met by Year 5).

Timing: The Permittee shall submit three sets of a Habitat Restoration Plan, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan to the Planning Division for review and approval prior to issuance of a Zoning Clearance for Construction of the Project.

After the Habitat Restoration Plan has been installed, the Permittee shall submit to the Planning Division (1) photographs of the restored areas, and (2) a statement from the project landscape architect that the Permittee installed all local, indigenous, native plantings as shown on the approved Habitat Restoration Plan.

The annual reports must be provided to the Planning Division by December 31st of each year during the monitoring period.

Monitoring and Reporting: Habitat Restoration Area(s) shall be maintained for the life of the permit. The Planning Division maintains a copy of the approved Habitat Restoration Plan, Habitat Maintenance and Monitoring Plan, and Habitat Management Plan in the case file. The Planning Division has the authority to conduct site inspections and take enforcement actions to ensure compliance with this condition, consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

25. Tree Protection Plan (TPP)

Purpose: To comply with the County's Tree Protection Regulations (TPR) set forth in § 8178-7 et seq. of the Ventura County Coastal Zoning Ordinance.

Requirement: The Permittee shall avoid impacting protected to the extent feasible and shall offset any damage to protected trees or associated impacts from such damage. If protected trees are felled/damaged and require offsets pursuant to the TPR (§ 8178-7.6) and TPG (§ IV.C, Offset/Replacement Guidelines), the Permittee shall cover the costs of planting and maintaining the offset trees.

Documentation: A qualified arborist[1] shall prepare the TPP in conformance with the County's TPR. The Permittee shall submit to the Planning Division for review and approval, a TPP pursuant to the "Content Requirement for Tree Protection Plans" that is currently available on-line at: https://vcrma.org/en/tree-permits-and-the-tree-protection-ordinance.

The TPP must include (but is not limited to):

[1] A qualified arborist may be either an International Society of Arboriculture certified arborist or a related professional, such as a landscape architect, with qualifying education, knowledge and experience, as determined by the Planning Director. The project arborist is the arborist who prepared the TPP and remains involved with implementation and monitoring of the Project.

a. measures to protect all protected whose tree protection zones (TPZs) are within 50 feet of the development envelope (including stockpile and storage areas, access roads, and all areas to be used for construction activities) or within 10 feet of other trees proposed for felling or removal;

b. the offset (planting of replacement trees) that will be provided should any protected trees be damaged unexpectedly.

c. the schedule for installation and monitoring of replacement trees.

Timing: Prior to the issuance of a Zoning Clearance for construction, the Permittee shall submit the TPP to the Planning Division for review and approval, implement all prior-to-construction tree protection measures, and submit the required documentation to demonstrate that the Permittee implemented the tree protection measures, and tree replacement schedule. Unless otherwise approved by the Planning Director, replacement trees must be planted prior to final inspection by the Planning Division, confirming all project components have been constructed pursuant to the approved plans. Other monitoring and reporting dates shall be indicated in the approved TPP.

Monitoring and Reporting: The Permittee shall retain an arborist to monitor and prepare the documentation regarding the health of protected and heritage trees, pursuant to the monitoring and reporting requirements set forth in Ventura County Coastal Zoning Ordinance Section 8178-7. The Planning Division maintains the approved TPP and all supporting documentation in the Project file. Planning Division staff, Building and Safety Inspectors, and Public Works Agency grading inspectors have the authority to inspect the site during the construction phase of the Project, to verify that tree protection measures remain in place during construction activities. Planning Division staff may take enforcement actions to ensure compliance with this condition, consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

26. Tree Health Monitoring and Reporting

Purpose: To comply with the County's Tree Protection Regulations (TPR) in 8178-7 et seq. of the Ventura County Coastal Zoning Ordinance.

Requirement: The Permittee shall submit annual monitoring reports, prepared by an arborist, after initiation of construction activities and until two years after the completion of construction activities, which address the success of tree protection measures and the overall condition of encroached-upon trees relative to their condition prior to the initiation of construction activities. If any trees are found to be in serious decline (e.g., "D" status, or "C" status if pre-construction status was "A"), the arborist's report must include a Damaged Tree Addendum to the TPP which recommends offsets and any associated additional monitoring.

Documentation: The Permittee shall submit annual arborist reports as stated in the "Requirement" section of this condition (above).

Timing: The Permittee shall submit annual arborist reports after initiation of construction activities and until two years after the completion of construction activities.

Monitoring and Reporting: The Permittee shall implement any recommendations made by the arborist's Damaged Tree Addendum to the satisfaction of the Planning Director. The Planning Division maintains copies of all documentation and evidence that the arborist's recommendations are implemented. The Planning Division has the authority to conduct site inspections and take enforcement actions to ensure that the Permittee implements the demolition plan in compliance with this condition, consistent with the requirements of § 8183-5 of the Ventura County Coastal Zoning Ordinance.

OTHER VENTURA COUNTY AGENCIES

Ventura County Fire Protection District (VCFPD) Conditions

27. General

VCFD Standard 501.
3.8 Bridges and Elevated Surfaces. Where fire apparatus must cross over a bridge or elevated surface the bridge shall be constructed and maintained in accordance with AASHTO HB-17. Surfaces shall be designed for a live load sufficient to carry the imposed loads of not less than that required by HS-20 Loading

4.3.1 Road Width. Roads shall be installed in accordance with the minimum requirements of the road standards of the jurisdiction in which the road is to be constructed.

Ventura County Air Pollution Control District (APCD) Conditions

28. BMPs and Tier ¾ off-road

Purpose: In order to ensure that ozone precursor and particulate emissions from diesel-powered mobile construction equipment are reduced to the greatest amount feasible.

Requirement: The Permittee shall comply with the provisions of all applicable California State Laws and APCD Rules and Regulations regarding portable construction equipment and construction vehicles.

Documentation: The project applicant shall ensure compliance with the following State Laws and APCD requirements:

I. Construction equipment shall not have visible emissions greater than 20% opacity, as required by APCD Rule 50, Opacity.

II. All portable diesel-powered equipment over 50 BHP shall be registered with the State's Portable Equipment Registration Program (PERP) or an APCD Portable Permit.

III. Off-Road Heavy-Duty trucks shall comply with the California State Regulation for In-Use Off-Road Diesel Vehicles (Title 13, CCR §2449), the purpose of which is to reduce NOx and diesel particulate matter exhaust emissions.

IV. On-Road Heavy-Duty trucks shall comply with the California State Regulation for In-Use On-Road Diesel Vehicles (Title 13, CCR §2025), the purpose of which is to reduce NOx and diesel particulate matter exhaust emissions.

V. All commercial on-road and off-road diesel vehicles are subject to the idling limits of Title 13, CCR §2485, §2449(d)(3), respectively. Construction equipment shall not idle for more than five (5) consecutive minutes. The idling limit does not apply to: (1) idling when queuing; (2) idling to verify that the vehicle is in safe operating condition; (3) idling for testing, servicing, repairing or diagnostic purposes; (4) idling necessary to accomplish work for which the vehicle was designed (such as operating a crane); (5) idling required to bring the machine system to operating temperature, and (6) idling necessary to ensure safe operation of the vehicle. It is the Permittee's responsibility to have a written idling policy that is made available to operators of the vehicles and equipment and informs them that idling is limited to 5 consecutive minutes or less, except as exempted in subsection a. above.

VI. All off-road construction equipment shall be rated a minimum of Tier 3 EPA diesel rating, or Tier 4 if commercially available.

The following are recommended measures for construction equipment and vehicles:

I. Diesel powered equipment should be replaced by electric equipment whenever feasible.

II. Maintain equipment engines in good condition and in proper tune as per manufacturer's specifications.

III. Lengthen the construction period during smog season (May through October), to minimize the number of vehicles and equipment operating at the same time.

IV. Use alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), or electric, if feasible.

Timing: Throughout the construction phases of the project.

Reporting and Monitoring: Reporting of compliance with the required State Laws regarding diesel vehicles is conducted via annual fleet mix reporting, phasing out of older-

tier equipment, and routine surveillance and audits by APCD inspectors. The applicable recommended measures shall be included in the construction plan submitted to Building and Safety and County building/grading inspector shall perform periodic site inspections throughout the construction period. Monitoring and Enforcement of dust-related construction activities shall be conducted by APCD staff and is complaint-driven.

29. Fugitive Dust Complaint Driven

Purpose: To ensure that fugitive dust and particulate matter that may result from site preparation and construction activities are minimized to the greatest extent feasible.

Requirement: The Permittee shall comply with the provisions of applicable VCAPCD Rules and Regulations, which include but are not limited to, Rule 50 (Opacity), Rule 51 (Nuisance), and Rule 55 (Fugitive Dust).

Documentation: The project applicant shall ensure compliance with the following provisions:

I. The area disturbed by clearing, grading, earth moving, or excavation operations shall be minimized to prevent excessive amounts of dust;

II. Pre-grading/excavation activities shall include watering the area to be graded or excavated before commencement of grading or excavation operations. Application of water should penetrate sufficiently to minimize fugitive dust during grading activities;

III. All trucks shall cover their loads as required by California Vehicle Code §23114.

IV. Fugitive dust throughout the construction site shall be controlled by the use of a watering truck or equivalent means (except during and immediately after rainfall). Water shall be applied to all unpaved roads, unpaved parking areas or staging areas, and active portions of the construction site. Environmentally-safe dust control agents may be used in lieu of watering.

V. Graded and/or excavated inactive areas of the construction site shall be monitored at least weekly for dust stabilization.

VI. Signs shall be posted onsite limiting traffic to 15 miles per hour or less.

VII. All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., wind speed sufficient to cause fugitive dust to be a nuisance or hazard to adjacent properties). During periods of high winds, all clearing, grading, earth moving, and excavation operations shall be curtailed to the degree necessary to prevent fugitive dust created by onsite activities and operations from being a nuisance or hazard, either offsite or onsite.

Timing: Throughout the construction phases of the project.

Reporting and Monitoring: Monitoring and enforcement of dust-related provisions shall be conducted by APCD inspectors on a complaint-driven basis.

Ventura County Public Works Agency, Land & Development Services Condition

30. Grading Permit

Purpose: In order to ensure the Permittee performs all grading in compliance with Appendix J of the Ventura County Building Code.

Requirement: The Permittee shall submit a grading plan showing existing and proposed elevations to the Public Works Agency's Land Development Services Division for review and approval. If a grading permit is required, a civil engineer registered in the State of California must prepare and submit the grading plans, geotechnical and hydrology reports as necessary, to Land Development Services Division for review and approval. The Permittee must post sufficient surety in order to ensure proper completion of the proposed grading.

Documentation: If a grading permit is required, all deposits, fees, and materials detailed on Public Works Agency Grading Permit Submittal Checklist, must be submitted to Land Development Services Division for review and approval.

Timing: All applicable documentation, as specified above, must be submitted for review and approval prior to issuance of a Zoning Clearance for development.

Monitoring and Reporting: Public Works Agency staff will review grading plans and reports for compliance with Ventura County codes, ordinances and standards, as well as state and federal laws. Public Works Agency inspectors will monitor the proposed grading to verify that the work is done in compliance with the approved plans and reports.

Exhibit 5 – General Plan Consistency Analysis

County of Ventura • Resource Management Agency • Planning Division
800 S. Victoria Avenue, Ventura, CA 93009-1740 • (805) 654-2478 • vcrma.org/divisions/planning

CONSISTENCY WITH THE GENERAL PLAN AND COASTAL AREA PLAN FOR, STATE ROUTE 1 VENTURA OVERHEAD BRIDGE (No. 52-0040) REPLACEMENT PROJECTCASE NO. PL22-0114

The Ventura County General Plan *Goals, Policies and Programs* (2020, page 1-1) states:

> *All area plans, specific plans subdivision, public works projects, and zoning decisions must be consistent with the direction provided in the County's General Plan.*

Furthermore, the Ventura County CZO (Section 8181-3.5. a) states that in order to be approved, a project must be found consistent with all applicable policies of the Ventura County Coastal Area Plan.

The proposed project is for the removal of Ventura Overhead (OH) Bridge No. 52-0040 and construction of a new OH Bridge between State Route 1 (SR 1) (aka Pacific Coast Highway (PCH)) post miles (PM) 21.3 through 21.9.

Evaluated below is the consistency of the proposed project with the applicable policies of the General Plan *Goals, Policies and Programs,* as well as the Coastal Area Plan *Goals and Policies*.

1. **Coastal Area Plan North Coast Subarea Policy 1:** *All zoning and development shall be in conformance with the Land Use Plan map (Figure 3-2)[1] , which has been designed to reflect these goals and policies. The Zoning Compatibility Matrix (Figure 3-1) indicates the zones which are consistent with the various land use categories.*

   Staff Analysis:
   Ventura OH Bridge No. 52-0040 is located along SR 1 between PM 21.3 through 21.9, immediately adjacent to Emma Wood State Beach. The project site has a General Plan land use designation of Open Space, consistent with the zoning, Coastal Open Space. All construction activities and development will be located within the Caltrans right-of-way except for Emma Wood Beach Access Road, which requires widening.

   Based on the discussion above, the proposed project is consistent with Coastal Area Plan North Coast Subarea Policy 1.

[1] Figures from Ventura County 2040 General Plan – Coastal Area Plan

2. **General Plan Land Use and Community Character Policy LU-16.1 Community Character and Quality of Life:** *The County shall encourage discretionary development to be designed to maintain the distinctive character of unincorporated communities, to ensure adequate provision of public facilities and services, and to be compatible with neighboring uses.*

   General Plan Land Use and Community Character Policy LU-16.10 Visual Access for Rural Development: *The County shall encourage discretionary development in rural areas to maintain views of hillsides, beaches, forests, creeks, and other distinctive natural areas through building orientation, height, and bulk.*

   General Plan Land Use and Community Character Policy LU-19.4 Consultation with State and Federal Agencies: *The County shall continue to consult with applicable state and federal regulatory agencies during project review and permitting activities.*

   General Plan Policy Conservation and Open Space Policy COS-3.1 Scenic Roadways: *The County shall protect the visual character of scenic resources visible from State or County designated scenic roadways.*

   Coastal Act Section 30116: *"Sensitive coastal resource areas" means those identifiable and geographically bounded land and water areas within the coastal zone of vital interest and sensitivity. "Sensitive coastal resource areas" include the following: (a) Special marine and land habitat areas, wetlands, lagoons, and estuaries as mapped and designated in Part 4 of the coastal plan. (b) Areas possessing significant recreational value. (c) Highly scenic areas. (d) Archaeological sites referenced in the California Coastline and Recreation Plan or as designated by the State Historic Preservation Officer. (e) Special communities or neighborhoods which are significant visitor destination areas. (f) Areas that provide existing coastal housing or recreational opportunities for low- and moderate-income persons. (g) Areas where divisions of land could substantially impair or restrict coastal access.*

   Coastal Act § 30250 Location; Existing Developed Area:

   (a) *New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels.*

Coastal Act Section 30251 Scenic and Visual Qualities: *The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural landforms, to be visually compatible with the character of the surrounding area and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.*

Coastal Area Plan Visual Resources [Signs] Policy 4.1.7.1. *Signs shall be designed and located to minimize impacts to scenic resources, including views to and along the ocean and other scenic coastal areas.*

Coastal Area Plan Visual Resources [Signs] Policy 4.1.7.2. *Signs shall be visually compatible with surrounding areas.*

Coastal Area Plan Visual Resources [Coastal Development] Policy 4.1.7.7. *New development shall be sited and designed to protect public views to and from the shoreline and public recreational areas. Where feasible, development on sloped terrain shall be set below road grade.*

Staff Analysis:
State Route 1 is one of the most valued road trip routes in California. In Ventura County, SR 1 offers scenic views of the County's coastal areas where people can view clifftop scenery, hidden coves, and sandy beaches. The Ventura OH Bridge No. 52-0040 was built in 1934, widened in 1961, and retrofitted in 1997. The bridge provides a major route for residents, motorists and bicyclists travelling north on US 101 to get onto SR 1 and a means for those same users to get onto the US 101 southbound. The bridge needs to be replaced due to numerous cracks and spalls in the bridge columns and the steel bents being exposed to the elements, resulting in rust and delamination, which pose a safety hazard.

The proposed replacement bridge will not substantially change the character of the area or adversely affect any nearby development. The new bridge is of a minimalistic design with fewer columns in the substructure (6 columns versus 31). The bridge abutments, retaining walls, and bridge deck slab, will include concrete surface texture (i.e., random cobblestone rock, fractured fin and aloha wave texture). The bridge deck railing will be similar in design to the Rincon Bike Trail that is located between Mussel Shoals and the Ventura/Santa Barbara County Line. The nearest noise sensitive uses are a mile and a half to the north (Solimar Beach Community) and south (city of Ventura).

A new crosswalk and two PHB will be constructed north of the bridge and adjacent to Emma Wood State Beach Access Road (PM 21.9). The crosswalk will provide redirect northbound bicyclists to the northbound Class II Bike Lane. Two 30-foot-tall light posts with two 26-foot-tall PHB will be installed to notify south and north bound motorists of the approaching crosswalk. The project will include the installation and replacement of electrical conduits and equipment at PM 21.9 to accommodate the crosswalk and PHB. While the crosswalk warning beacons will alter views of hillsides and beaches, the crosswalk and incidental equipment will comply with the California Manual on Uniform Traffic Control Devices (CA-MUTCD) Guidance. The guidance has been part of the 2014 CA-MUTCD since 2014.

Environmental Science Associates (ESA) prepared a Coastal Hazards Report (Exhibit 6), to address existing and future coastal hazards to SR 1. The new bridge deck will be at an elevation of 49.39 ft at highest point (south end) and 26.93 at lowest point (north end) from the existing grade (below bridge). As designed the new bridge is not expected to be vulnerable to 100-year recurrence flooding or overtopping with up to 6.6 feet of sea-level rise.

The California Department of Transportation (Caltrans) regularly meets with the California Coastal Commission (CCC) to discuss pending and approved projects. The CCC reviewed the project plans and Coastal Hazards Report and provided comments to Caltrans before the Coastal PD application was filed.

Based on the discussion above, the proposed project is consistent with General Plan Land Use and Community Character Policies LU-16.1. LU16.10, LU-19.4, General Plan Policy Conservation and Open Space Policy COS-3.1, and Coastal Act Sections 30250(a) and 30251, and Coastal Area Plan Visual Resources Policies 4.1.7.1, 4.1.7.2 and 4.1.7.7.

3. **General Plan Public Facilities, Services, and Infrastructure Policy PFS-7.4 Discretionary Development Utility Service Line Placement:** *The County shall require discretionary development to place new utility service lines underground if feasible. If undergrounding is determined by the County to be infeasible, then new utility service lines shall be placed in parallel to existing utility rights-of-way, if they exist, or sited to minimize their visual impact.*

   General Plan Public Facilities, Services, and Infrastructure Policy PFS-12.3 Adequate Water Supply, Access, and Response Times for Firefighting Purposes: *The County shall prohibit discretionary development in areas that lack and cannot provide adequate water supplies, access, and response times for firefighting purposes.*

   Coastal Act Section 30254 Public Works Facilities: *New or expanded public works facilities shall be designed and limited to accommodate needs generated by*

development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

Coastal Area Plan North Coast Public Works Policy 4.2.6.1: *New or expanded public works facilities (including roads, flood control measures, water and sanitation) will be designed to serve the potential population within the subarea's boundaries, and to mitigate impacts on agricultural, open space lands, or environmentally sensitive habitats.*

Staff Analysis:
Pursuant to Ventura County Coastal Zoning Ordinance Article 2, “Public Works” includes all public transportation facilities, including streets, roads, highways. The new bridge that will replace the Ventura OH Bridge No. 52-040 has been designed to serve the potential population within the subarea's boundaries. The replacement bridge will be in the same location and have substantially the same purpose and capacity as the structure it will replace. No new or expansion of public works facilities including flood control measures, water and sanitation is required.

State Beach Access Road will be widened to improve circulation as motorists enter Emma Wood State Beach. The slope that begins at the bridge/SR 1 and goes downhill to Emma Wood State Beach access road is isolated and vegetated with disturbed Quailbrush-Lemonade Berry Scrub which could be considered Environmentally Sensitive Habitat Areas (ESHA). This slope will be graded, and a retaining wall constructed. The road widening will permanently remove approximately 0.04 acres (1,742 sq. ft.) of ESHA.

The elevated path leading from Omer Rains Bike Trail to the Class 1 Bike Lane will cross a culvert that functions as the outlet for a drainpipe that collects runoff from U.S. 101 during rain events. The abutments for the elevated path will span the culvert however approximately 336 sq. ft. of native vegetation, which includes California rye grass, Coyote brush, Mulefat, Saltbrush and cottonwood, that is considered ESHA, will be removed.

A total of 4,157 square feet of native vegetation will be planted within the Caltrans right-of-way to offset the loss of 2,078 sq. ft. of degraded ESHA. Areas to be planted with native vegetation will enhance and beautify the area, and provide new habitat where ESHA is not isolated.

Class 1 Bike Lane improvements include elements to provide greater safety. Bike lanes will be painted green and, in some locations, separated from traffic lanes by a concrete barrier/railing. The installation of the two PHB and bridge deck lighting system will require connection to existing utility lines for electric service. One utility cabinet will be installed within the right-of-way on the northbound lane approximately 30 feet south of PM 21.8. While the light post with pedestrian hybrid beacons will alter the views of hillsides and beaches, and the green pavement markers and railing are new, the crosswalk and equipment, and incidental pavement markings and barriers will comply with the California Manual of Uniform Traffic Control Devices and the Caltrans' current Manual for Assessing Safety Hardware and Caltrans Traffic Safety Guidance. Except for the above ground utility boxes, the project will be conditioned to underground all utilities (Exhibit 4, Condition of Approval 15).

Ventura County Fire Station 25 is located at 5674 Pacific Coast Highway, approximately 6 miles north of the existing bridge. Fire Station 25 is staffed daily by three firefighters. Construction activities will temporarily create detours along SR 1, however unobstructed access for firefighting purposes would be made available in cases of an emergency.

Based on the discussion above, the project is consistent with General Plan Public Facilities, Services, and Infrastructure Policies PFS–7.4 and PFS-12.3, Coastal Act Section 30254, and Coastal Area Plan North Coast Public Works Policy 4.2.6.1.

4. **General Plan Conservation and Open Space Policy COS-1.1 Protection of Sensitive Biological Resources:** *The County shall ensure that discretionary development that could potentially impact sensitive biological resources be evaluated by a qualified biologist to assess impacts and, if necessary, develop mitigation measures that fully account for the impacted resource. When feasible, mitigation measures should adhere to the following priority: avoid impacts, minimize impacts, and compensate for impacts. If the impacts cannot be reduced to a less than significant level, findings of overriding considerations must be made by the decision-making body.*

   General Plan Conservation and Open Space Policy COS-1.4 Consideration of Impacts to Wildlife Movement: *When considering proposed discretionary development, County decision-makers shall consider the development's potential project-specific and cumulative impacts on the movement of wildlife at a range of spatial scales including local scales (e.g., hundreds of feet) and regional scales (e.g., tens of miles).*

   General Plan Conservation and Open Space Policy COS-1.8 Bridge Crossing Design: *The County shall require discretionary development that includes new or modified road crossings over streams, wetlands and riparian habitats to include*

bridging design features with bridge columns located outside the riparian habitat areas, when feasible.

General Plan Conservation and Open Space Policy COS-1.9 Agency Consultation Regarding Biological Resources: *The County shall consult with the California Department of Fish and Wildlife, the Regional Water Quality Control Board, the U.S. Fish and Wildlife Service, National Audubon Society, California Native Plant Society, National Park Service for development in the Santa Monica Mountains or Oak Park Area, and other resource management agencies, as applicable during the review of discretionary development applications to ensure that impacts to biological resources, including rare, threatened, or endangered species, are avoided or minimized.*

General Plan Conservation and Open Space Policy COS-1.10 (Evaluation of Potential Impacts of Discretionary Development on Wetlands): *The County shall require discretionary development that is proposed to be located within 300 feet of a wetland to be evaluated by a County-approved biologist for potential impacts on the wetland and its associated habitats pursuant to the applicable provisions of the County's Initial Study Assessment Guidelines.*

General Plan Conservation and Open Space Policy COS-1.11 (Discretionary Development Sited Near Wetlands): *The County shall require discretionary development to be sited 100 feet from wetland habitats, except as provided below. The 100-foot setback may be increased or decreased based upon an evaluation and recommendation by a qualified biologist and approval by the decision-making body based on factors that include, but may not be limited to, soil type, slope stability, drainage patterns, the potential for discharges that may impair water quality, presence or absence of endangered, threatened or rare plants or animals, direct and indirect effects to wildlife movement, and compatibility of the proposed development with use of the wetland habitat area by wildlife. Discretionary development that would have a significant impact on a wetland habitat shall be prohibited unless mitigation measures are approved that would reduce the impact to a less than significant level. Notwithstanding the foregoing, discretionary development that would have a significant impact on a wetland habitat on land within a designated Existing community may be approved in conjunction with the adoption of a statement of overriding considerations by the decision-making body.*

Coastal Act Section 30231 Biological Productivity; Water Quality: *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of wastewater discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference of ground water flow,*

encouraging wastewater reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Coastal Act Section 30240 Environmentally Sensitive Habitat Areas; Adjacent Development:

a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.
b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas and shall be compatible with the continuance of such habitat areas.

Coastal Area Plan ESHA Protection Policy 4.1.3-2.1.1 Environmentally Sensitive Habitat Areas (ESHA). *ESHA shall be protected against any significant disruption of habitat values, and only uses dependent upon those resources shall be allowed within those areas, except as specifically allowed in ESHA Policy 4.1(b) and Policy 4.2 below. In those cases, adverse impacts on ESHA shall be avoided, to the maximum extent feasible, and unavoidable impacts shall be minimized and mitigated.*

Coastal Area Plan ESHA Protection Policy 4.1.3-2.1.2 Development Adjacent to ESHA. *Development in areas adjacent to ESHA shall be sited and designed to prevent impacts which would significantly degrade ESHA and shall be compatible with the continuance of the habitat.*

Coastal Area Plan Environmental Review Policy 4.1.3-2.2.1 Environmental Review: *Within the coastal zone, the environmental review process for proposed development shall be conducted as follows:*

a. To accurately identify ESHA and assess the impacts of proposed development on ESHA, each application for development that may result in the degradation or destruction of ESHA shall include a site-specific environmental assessment that includes: (1) a site-specific biological resource map (see ESHA Policy 3.2), including a wet environment delineation (if applicable), and an analysis of all potentially adverse impacts (on-site, off-site) on those biological resources; and (2) a least environmentally damaging alternatives analysis (see ESHA Policy 5.1). Requirements for the site-specific environmental assessment and least environmentally damaging alternatives analysis are set forth in the Coastal Zoning Ordinance.

b. *Any area defined as ESHA, or mapped as ESHA or buffer zone on site-specific maps, shall be accorded all protections provided for such areas in the LCP; and*

c. *When applicable, applicants for a coastal development permit shall consult with responsible federal/state natural resource agencies to ensure that potential impacts to ESHA under their jurisdiction are avoided or minimized in a manner consistent with federal/state law. Also, in the Santa Monica Mountains (M) overlay zone, new coastal development permit applications shall be provided to federal/state natural resource agencies and conservation organizations that operate in the area for review and comment.*

Coastal Area Plan ESHA and Buffer Zone Determination and Delineation Policy 4.1.3-2.3.4 Buffer Zones: *To provide distance and physical barriers to human disturbance, buffer zones shall be established between new development and 1) ESHA; and 2) parklands/protected open space areas acquired by natural resource agencies or conservation organizations for natural resource protection (e.g., Point Mugu State Park, Leo Carrillo State Park). Buffer zones shall meet the following criteria:*

a. *The width shall be sufficient to ensure the biological integrity and preservation of the biologically sensitive area and ecosystem they are designed to protect, and the minimum width of a buffer zone shall be 100 feet; and*

b. *ESHA buffer zones shall be designed to protect the adjacent ecosystem and be compatible with the continuance of the protected habitat. Also, see ESHA Policy 5.2(b) for information on the application of buffer zones in existing communities and Policy 5.14 for parkland/open space buffers.*

Coastal Area Plan Allowable Uses in ESHA or Buffer Zone Policy 4.1.3-2.4.1. *Allowable uses in ESHA or buffer zone shall be limited to the resource-dependent and non-resource-dependent uses identified below. When a new use is allowed in ESHA or buffer zone, the associated development shall be the minimum amount necessary, shall constitute the least environmentally damaging alternative (see Land Use Plan 4-11 ESHA Policy 5.1), and shall be sited and designed in accordance with the policies and provisions of the LCP:*

a. ***Resource-Dependent Use:*** *Only resource dependent uses may be allowed within ESHA or buffer zones. Resource-dependent uses include passive recreation, nature study, and habitat restoration. Also, see the list of resource dependent uses set forth in Section 8178-2.5 of the Coastal Zoning Ordinance.*

Exceptions to this policy are provided by ESHA Policies 4.1(b), 4.2, and 4.3 below.

b. ***Non-Resource-Dependent Use:*** *A non-resource dependent use may only be allowed in ESHA or buffer zone when necessary for a new wireless communication facility mandated by federal law or a new public works facility is necessary to protect public health/safety or provide essential public services for legally permitted development. Existing public works facilities may be maintained and repaired in accordance with Coastal Zoning Ordinance provisions in Sec. 8174-6.3.2 – Statutory Exemptions and Categorical Exclusions.*

Coastal Area Plan Siting and Design Techniques for Development Policy 4.1.3-2.5.9 Alteration of Land Forms: *Development shall be sited and designed in a manner that will minimize grading, alteration of natural land forms, and brush/vegetation removal to avoid adverse effects on the ecological function of (and water quality within) wet environments, wetlands, coastal waters, and other ESHA.*

Coastal Area Plan Siting and Design Techniques for Development Policy 4.1.3-2.5.10 Water Quality and Coastal Waters: *Development shall be sited and designed to protect water quality and minimize impacts to wetlands, wet environments, and coastal waters. When appropriate, utilize open space restrictions to protect such areas from adverse impacts associated with the development.*

Coastal Area Plan Siting and Design Techniques for Development Policy 4.1.3-2.5.16 Signs: *Signs are prohibited within ESHA except for resource protection or trail interpretative and educational signage, or signage necessary to ensure public safety. Signage within ESHA or its buffer shall be sited and designed to minimize impacts on the resource to the maximum extent feasible.*

Coastal Area Plan Siting and Design Techniques for Development Policy 4.1.3-2.5.18 Outdoor Lighting: *Development, outdoor festivals, and outdoor sporting events shall be sited and designed to avoid light encroachment into ESHA, as well as to minimize outdoor lighting in the Santa Monica Mountains to reduce light trespass or spill, glare, skyglow and light pollution and to preserve the night sky.*

Coastal Area Plan Siting and Design Techniques for Development Policy 4.1.3-2.5.19 Fencing, Gates and Walls: *Fences, gates and walls are prohibited within ESHA or buffer zones, except when the fence is located within an approved development envelope, or the fence is used for habitat protection or restoration. Fences, gates and walls within the development envelope shall not isolate wildlife*

from core habitat areas and shall be sited and designed to avoid impacts to the movement of wildlife.

Coastal Area Plan Siting and Design Techniques for Specific Coastal Habitats [Wet Environments and Wetlands] Policy 4.1.3-2.6.10. *All development on land adjacent to or within a wetland or wet environment, or within 500 feet of such environments, shall be sited and designed to maintain water quality and prevent degradation of the ecosystem function. The purposes of such development projects shall be limited to those set forth in Section 30233(a) and 30236 of the Coastal Act. Discretionary development that would adversely impact a wetland habitat shall be prohibited unless there is no feasible less environmentally damaging alternative and if feasible mitigation measures are provided to minimize adverse environmental effects.*

Coastal Area Plan Compensatory Mitigation Policy 4.1.3-2.10.1. *When development is allowed within ESHA or buffer zone, and adverse impacts to the ESHA ecosystem cannot be avoided through the selection of a least environmentally damaging alternative (see ESHA Policy 5.1), compensatory mitigation is required as follows:*

a. *Mitigation requirements shall account for, and provide proportionate in-kind mitigation for, all adverse impacts to ESHA associated with the proposed development;*
b. *Acceptable types of compensatory mitigation are as follows:*

    1. *On-site restoration, establishment or enhancement; or*
    2. *Off-site preservation, restoration, establishment or enhancement of ESHA; or*
    3. *Specific types of on/off-site mitigation required for wetlands, wet environments, or other specialized habitats regulated by federal or state natural resource agencies; and*

c. *Compensatory mitigation required for adverse impacts to coastal sage scrub and chaparral may be implemented on or off-site. Priority shall be given to onsite mitigation for adverse impacts to wet environments and oak/native woodland habitats unless off-site restoration, establishment, or enhancement is provided through an available federal/state mitigation bank or in-lieu fee program. For all other types of ESHA, preference shall be given to on-site mitigation unless the County determines that off-site mitigation is more protective of the ESHA ecosystem impacted by the project or the off-site mitigation property was prioritized for conservation through a County approved regional conservation plan. In all cases, off-site mitigation may be provided when it is not feasible to fully mitigate impacts on-site due to an insufficient supply of available, suitable areas for on-site restoration, enhancement, or establishment of ESHA.*

Coastal Area Plan Compensatory Mitigation Policy 4.1.3-2.10.3. *Mitigation measures for impacts to ESHA shall be imposed and implemented that ensure all components of the ESHA ecosystem are protected and mitigated and that increase the potential for the success and long-term sustainability of the ESHA. Also, compensatory mitigation sites shall exhibit characteristics such as habitat connectivity, proximity to the impacted ESHA ecosystem, and the potential to achieve ecologically functioning ESHA.*

Coastal Area Plan Compensatory Mitigation Policy 4.1.3-2.10.4. *Mitigation ratios required for compensatory mitigation shall account for the type of habitat impacted; temporal loss of ecosystem function; and the uncertainty that replacement habitats will adequately compensate for the habitat value and ecosystem services previously provided by the impacted ESHA or protected biological habitat.*

Staff Analysis:
The project is considered a Public Works facility, a "Non-Resource-Dependent Use." The Ventura OH Bridge (Bridge No. 52-0040) needs to be replaced due to numerous cracks and spalls in the bridge columns and the steel bents being exposed to the elements, resulting in rust and delamination, which pose a safety hazard. The bridge provides essential public access for legally permitted development providing a major route for the residents, bicyclists, and motorists getting access onto SR 1 from the north and merging onto US 101 if travelling south.

The project is in a heavily used transportation corridor, wildlife likely avoids the area as there is no core habitat on either side of the bridge or wildlife migration corridors within or adjacent to the development envelope.

Paul Caron, Senior Biologist with Caltrans prepared an Initial Study Biological Assessment (ISBA) dated June 16, 2022 and amended on July 31, 2023. The ISBA was reviewed for adequacy by Envicom Corporation. State Beach Access Road will be widened by 8 to 10 feet landward. The slope supporting SR 1 is vegetated with disturbed Quailbrush-Lemonade Berry Scrub; the area is isolated and not an extension of larger extent of ESHA. Approximately 0.04 acres (1,742 sq. ft.) of Quailbrush-Lemonade Berry Scrub that could be considered ESHA, will be removed. The elevated path leading from Omer Rains Bike Trail to the Class 1 Bike Lane will cross a culvert. The abutments for the elevated path will span the culvert however approximately 336 sq. ft. of native vegetation, which includes California rye grass, Coyote brush, Mulefat, Saltbrush and cottonwood, that is considered ESHA, will be removed. The Caltrans road right-of-way and State Beach access road provides no suitable habitat for any special-status wildlife species or features suitable for wildlife migration.

The Ventura County Local Coastal Program (LCP) ESHA standards prescribe procedures for evaluating biological resources and assessing the potential for direct and indirect impacts to these resources. Additionally, the ESHA standards require that impacts to ESHA be offset through restoration, enhancement, or preservation of ESHA. A total of 4,157 square feet of native vegetation will be planted within the Caltrans right-of-way to offset the loss of 2,078 sq. ft. of degraded ESHA. Areas to be planted with native vegetation will enhance and beautify the area, and provide new habitat where ESHA is not isolated.

Temporary impacts related to staging areas, construction activities, pedestrian bridge and the temporary bicycle overcrossing bridge (prefabricated bridge) will disturb approximately 1.04 acres of Disturbed Big Saltbrush Scrub/Successional Big Salt Brush Scrub. All temporary impacts will be restored on a 1:1 ratio immediately following completion of construction of the project (Exhibit 4, Condition of Approval No. 24).

There are five ephemeral streams within the 500-foot buffer survey area, the streams and adjacent vegetation will not be impacted based on the location of construction activities.

The temporary bicycle/pedestrian overcrossing will span over an ephemeral stream, the temporary footings for the prefabricated structure will be placed to avoid impacts to the bed, bank, channel, or riparian vegetation. The project will not result in impacts to wetland or jurisdictional waters.

The State Beach Access Road is approximately 24 feet wide. A rock revetment is located along the seaward side of this road and is approximately 10 feet in width, followed by the beach and Pacific Ocean. The Ventura OH Bridge (Bridge No. 52-0 040) is located on the landward side of this road. As stated in the project description, the contractor selected by Caltrans to construct the project will be required to prepare a bridge removal plan to be reviewed and approved by Caltrans and Ventura County. The plan will include detailed demolition methods that avoid impacts to the ocean, beach, railroad tracks, and surrounding area.

At SR1 PM 21.9, a crosswalk and two Pedestrian Hybrid Beacons (PHB) will redirect northbound bicyclists to the northbound Class I Bike Lane. The crosswalk and incidental equipment will be located in the Caltrans right-of-way.

On the new bridge deck, for areas where the bike lane is located above the Union Pacific Railroad (UPRR) tracks, a 7- to 10-foot-tall fence will be installed. No other fencing is proposed.

A total of 25 existing signs will be replaced and a total of 17 new signs will be installed along and in proximity to the bridge. All signs would be located within the

Caltrans right-of-way and are “wayfinding signs” (i.e., Coastal Access, Coastal Trail), directional, or are necessary to ensure public safety.

Based on the discussion above, the project is consistent with General Plan Conservation and Open Space Policies COS-1.1, COS-1.4, COS-1.8, COS-1.9, COS-1.10, COS-1.11, Coastal Act Sections 30231 and 30240, and Coastal Area Plan Policies 4.1.3-2.1.1, 4.1.3-2.2.1, 4.1.3-2.3.4, 4.1.3-2.4.1, 4.1.3-2.5.9, 4.1.3-2.5.10, 4.1.3-2.5.16, 4.1.3-2.5.18, 4.1.3-2.5.19, 4.1.3-2.6.10, 4.1.3-2.10.1, 4.1.3-2.10.3, 4.1.3-2.10.4.

5. **Coastal Area Plan Tree Protection Policy 4.1.5.1 (All Trees).** *With the exception of emergency tree removal, the alteration or removal of any tree in the coastal zone shall not be conducted during the following times:*

   a) a designated Western Monarch Overwintering Period (i.e., October through March), where the subject tree is part of suitable monarch overwintering habitat, unless two protocol; or
   b) the bird breeding and nesting season (i.e. January 1 through September 15). If the County receives a bird survey prepared by a qualified biologist or ornithologist indicating that no breeding or nesting birds were found within the tree to be altered or removed, that no raptor breeding or nesting activities are present within 500 feet of the subject tree, and that no breeding or nesting behaviors are present within 300 feet of the subject tree for all other types of birds, then alteration or removal of the subject tree(s) may be conducted.

   Notwithstanding the foregoing, any evidence that the tree(s) are used by nesting raptors or function as a colonial roost/nesting site is discovered or known, then the tree may only be removed or altered pursuant to Policies 4.1.5.3 and 4.1.5.4 below.

   Coastal Area Plan Tree Protection Policy 4.1.5.1.2 (Protected Trees). *The following types of trees shall be classified as protected trees when located within the coastal zone of Ventura County:*

   - *Trees that contribute to the function and habitat value of an Environmentally Sensitive Habitat Area (referred to as ESHA);*
   - *Native trees;*
   - *Historical trees; and*
   - *Heritage trees.*

   Unless a tree is classified as one of the groups listed above, non-native trees shall not be classified as a protected tree.

Coastal Area Plan Tree Protection Policy 4.1.5.3 (Protected Trees). *The removal of a protected tree that is ESHA, or tree alteration that damages ESHA, shall be prohibited except where:*

a. The tree poses an imminent hazard to life, health, existing structures, or essential public services and where approved through an Emergency Permit; or
b. Removal or alteration of the tree is necessary to allow for a principal use or structure, and its associated fuel modification, where no feasible alternative exists to provide an economically beneficial use of the property, as evidenced by the alternatives analysis; or
c. Removal or alteration of the tree is a necessary component of an approved habitat restoration plan.

Coastal Area Plan Tree Protection Policy 4.1.5.1.4 (Protected Trees). *For protected trees not classified as ESHA, new development shall be sited and designed to avoid the removal of the protected tree or alteration that damages a protected tree. If there is no feasible project alternative that avoids such impacts to protected trees, then the project alternative shall be selected that would minimize damage to protected trees in the following order of priority: native trees, historical trees, and heritage trees. Protected tree removal or alteration shall be undertaken in the following manner:*

i. Principal Permitted Use/Structure. Protected tree removal or damage may be permitted where no feasible alternative exists to provide an economically beneficial use of the property, as evidenced by the alternatives analysis; and
ii. Accessory Uses/Structures: With the exception of non-native heritage trees, removal of a protected tree shall be prohibited to increase the footprint of an existing use/structure or the placement of a new use/structure not previously approved with the original discretionary permit. Any approved development (e.g., paving, fence posts), including grading or excavation, that encroaches into the tree's protected zone shall be the minimum necessary to provide access, utility service, security, or privacy to the property.

Coastal Area Plan Tree Protection Policy 4.1.5.7 (Protected Trees). *Mitigation Measures: When new development will result in the loss or degraded health of a protected tree, mitigation measures shall be required that include (but are not limited to) the planting of replacement native trees in the following manner:*

- *Replacement tree planting shall occur within suitable, onsite areas at ratios that ensure success of the planted species;*
- *A monitoring program shall be implemented to ensure the successful establishment of replacement trees; and*

- *Mitigation measures for protected trees classified as ESHA shall be developed in accordance with ESHA Mitigation Policies 10.1 - 10.7 (see section 4.1.3 – Environmentally sensitive habitat areas (ESHA)).*
- *Offsite mitigation, or contribution to an established in-lieu fee program, may be permitted when on-site mitigation is not feasible.*

Coastal Area Plan Tree Protection Policy 4.1.5.8 (Protected Trees). *Discretionary development shall be conditioned to ensure tree protection during construction, including but not limited to measures such as protective fencing, flagging, use of hand tools, and biological monitors to avoid damage to the protected zone of protected trees.*

Coastal Area Plan Tree Protection Policy 4.1.5.9 (Non-Native Invasive and Watch List Trees). *The planting of invasive and watch list species trees shall be prohibited.*

Coastal Area Plan Tree Protection Policy 4.1.5.10 (Non-Native Invasive and Watch List Trees). *During the discretionary development process, encourage the removal of existing, non-native invasive or watch list species trees except when such trees are classified as a protected tree.*

Staff Analysis:
The Emma Wood State Beach access road is a two-lane striped paved access road that begins at SR 1 and heads south into the campground. The access road is protected by a seawall that ends just before the campground kiosk, followed by rock rip rap. A slope supporting SR 1 is located on the east side of the access road. The access road experiences wave action. To restore the road width to its design capacity of a two-lane striped paved access road, the slope supporting SR 1 will be graded, a retaining wall constructed, the road extended approximately 8-10 feet landward, within the access easement, and then repaved. This is a “pinch point” in the access to Emma Wood State Beach and modifying the slope is the only alternative to improve circulation in this area.

As shown on the project plans (Exhibit 3, Sheet PP3), three Monterey cypress trees are located at PM 21.65, an isolated area on the slope supporting SR 1. The trees are located within an area considered degraded and disturbed Lemonade Quailbrush-Lemonade Berry Scrub that may be considered ESHA. Monterey cypress trees are native to Monterey, but not locally. The Monterey cypress trees do not exhibit characteristics that would designate the trees as ESHA; a habitat assessment was conducted by Caltrans (Exhibit 7, ISBA) and surveys conducted in 2018 and 2023 determined the trees were not suitable monarch butterfly overwintering/habitat. The three trees are not considered heritage trees, the trees measure 14.65 inches diameter breast height (dbh), 15.9 inches dbh and 16.2 inches dbh. Design of the replacement bridge and improvements to the Emma

Wood State Beach access road warrant the removal of these trees; no alternative is available.

The Ventura County CZO Section 8178-7.6.1(d), prescribes a 1:1 offset for the removal of a heritage tree that is in a prominent location as seen from public viewing areas. If the heritage tree is not an invasive or invasive watch list plant tree, the replacement trees can be of the same species. The Monterey cypress tree is considered moderately invasive in other parts of the state where it spreads from planted windbreaks. The three Monterey cypress trees to be removed can be seen from U.S. 101 and SR 1 and show unique characteristics of weathering countless storms, and exposure to the ocean, fog, and other elements. However, the trees are isolated, do not form a windbreak, and have not shown evidence of becoming invasive, outcompeting surrounding vegetation. To offset the loss of these trees, Caltrans will be planting eight Monterey cypress trees; the replacement trees collectively will be of comparable size and in the same general location as the trees being removed. The goal is to restore the unique symbolic characteristics Monterey cypress trees are known for as seen when commuting along the California coast.

The project will maintain the SR 1 road width and add a new Class I Bike Lane on the seaward side of SR 1. Placing the Class 1 Bike Lane on the seaward side retains the existing road width; however, construction activities will come into close proximity of six Monterey cypress trees at PM 21.4.

To ensure no nesting birds are impacted, the project has been conditioned to require site specific bird nesting surveys if tree removal, demolition and construction activities occur during the breeding and nesting season (January 1 through September 15) (Exhibit 4, Condition no. 17).

The six Monterey cypress trees that will be encroached upon, are not considered heritage trees as defined by CZO Section 8178-7.3.4. The project has been conditioned to require a Tree Protection Plan (Exhibit 4, Condition no. 25) and Tree Health Monitoring and Reporting that requires Caltrans to implement tree protection measures throughout construction, to plant eight Monterey cypress trees as replacement for the three trees that will be removed, and to monitor the health and condition of any protected and heritage trees that construction activities will come close to.

Based on the discussion above, the proposed project is consistent with Coastal Area Plan Tree Protection Policies 4.1.5.1, 4.1.5.2, 4.1.5.3, 4.1.5.4, 4.1.5.7, 4.1.5.8, 4.1.5.9, and 4.1.5.10.

6. **General Plan Conservation and Open Space Policy COS-2.6 Public Access.** *The County shall continue to plan for the preservation, conservation, efficient use*

*of, enjoyment of, and access to resources, as appropriate, within Ventura County for present and future generations***.**

General Plan Conservation and Open Space Policy COS-2.7 Preserve Public Access. *The County shall work with federal, state, and local jurisdictions, agencies, and organizations to assess the vulnerability of public coastal access points and prioritize protection for those that provide the greatest benefits to residents and visitors.*

General Plan Public Facilities, Services, and Infrastructure Policy PFS-10.8 Discretionary Development near Trails. *The County shall require discretionary development near existing trails to mitigate or avoid adverse impacts to the existing trail system. Where appropriate, a condition of approval or other means of permanent dedicated trail access shall be provided.*

Coastal Act Section 30210 Access, Recreational Opportunities; Posting. *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

California Coastal Act Section 30211. *Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.*

Coastal Act Section 30212 New Development Projects:

(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where:
- *(1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources,*
- *(2) adequate access exists nearby, or,*
- *(3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway.*

(b) For purposes of this section, "new development" does not include:
- *(1) Replacement of any structure pursuant to the provisions of subdivision (g) of Section 30610.*
- *(2) The demolition and reconstruction of a single-family residence; provided, that the reconstructed residence shall not exceed either the floor area, height or bulk of the former structure by more than 10 percent, and that the reconstructed residence shall be sited in the same location on the affected property as the former structure.*

(3) Improvements to any structure which do not change the intensity of its use, which do not increase either the floor area, height, or bulk of the structure by more than 10 percent, which do not block or impede public access, and which do not result in a seaward encroachment by the structure.
(4) The reconstruction or repair of any seawall; provided, however, that the reconstructed or repaired seawall is not a seaward of the location of the former structure.
(5) Any repair or maintenance activity for which the commission has determined, pursuant to Section 30610, that a coastal development permit will be required unless the commission determines that the activity will have an adverse impact on lateral public access along the beach.

As used in this subdivision "bulk" means total interior cubic volume as measured from the exterior surface of the structure.

(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution.

Coastal Area Plan Coastal Trail Policy 4.1.4.E.1.1. *The California Coastal Trail (Coastal Trail) shall be provided through unincorporated Ventura County and shall be located as close to the ocean as feasible, preferably along the shoreline or within sight or sound of the sea.*

Coastal Area Plan Coastal Trail 4.1.4.E.1.3. *The Coastal Trail maps (Figures 4.1-1 – 4.1-7) shall be used to determine the general alignment of the Coastal Trail through unincorporated Ventura County. However, the provision of additional trail routes shall not be precluded on the basis that the trail route is not shown on the Coastal Trail maps. In addition to the Coastal Trail routes shown on Figures 4.1-1 – 4.1-7, the Coastal Trail may include, but is not limited to, the following:*

- *Alternative alignments established through public trail easements acquired through voluntary conveyance, acquisition, conveyance to satisfy conditions of approval of a coastal development permit, or other means; and*

- *Historic use trails where prescriptive rights exist, that provide a new or alternate Coastal Trail segment, or easements that provide a link between the mapped Coastal Trail and shoreline beaches or recreation areas – such as recorded vertical access easements, easements established via prescriptive rights, and public access rights reserved as offers to dedicate.*

Coastal Area Plan Coastal Trail Policy 4.1.4.E.1.4: *Mapped Coastal Trail routes shall be located on public land or within existing or acquired easements authorizing public use.*

Coastal Area Plan Coastal Trail Policy 4.1.4.E.1.5. *The Coastal Trail shall provide access to the County's recreational, natural, scenic, and historic resources or sites. Wherever feasible, ensure that trail segments are accessible to all members of the public, including citizens with disabilities.*

Coastal Area Plan Coastal Trail Policy 4.1.4.E.1.6. *Wherever possible, provide connections between the mapped Coastal Trail (MultiModal and Single-Mode Routes) and other existing or planned trail systems, vertical shoreline access points, transit stops, and coastal access parking or trail staging areas. (See Figures 4.1-1 – 4.1-7).*

Coastal Area Plan Coastal Trail Policy 4.1.4.E.1.7. *Sea level rise shall be considered when establishing the alignment of, and design standards for, the Coastal Trail.*

Coastal Area Plan Coastal Trail Policy 4.1.4.E.1.9. *Coastal Trail routes shall avoid Environmentally Sensitive Habitats (ESHA) to the maximum extent feasible. However, routes for hikers/walkers are considered a resource dependent use and may be located in ESHA and ESHA buffer zones where sited and designed to protect ESHA against any significant disruption of habitat values.*

Coastal Area Plan Coastal Trail Policy 4.1.4.E.1.11: *Coastal Trail routes shall remain free from impediments such as gates, guardhouses, and other structures that block access to or along the Coastal Trail.*

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.2: *The Multi-Modal Route shall be designed, at a minimum, to provide access to both hikers/walkers and bicyclists, unless equivalent replacement segments are established that, at a minimum, provide the following:*

- *A Single-Mode trail segment for hikers/walkers that includes a walkable surface at all times of the day/year as well as a trail alignment that provides a more pleasant trail experience, and*

- *A Single-Mode trail segment for bicyclists that is a Class 1 Pathway or a Class 2 bike lane.*

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.3: *Segregated Multi-Modal Routes (Type A-2) shall be provided, whenever feasible, but where there are siting and design constraints, a shared Multi-Modal Route (Type A-1) may be provided.*

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.4: *Coastal Trail segments located in areas with high user demand (e.g., near public parking lots,*

staging areas, popular beaches, or nature viewing areas) should be designed for both active and passive use (e.g., casual walkers, beach cruiser bikes, long-distance hikers or bicyclists) and, where feasible, shall be compliant with the requirements of the Americans with Disabilities Act of 1990 (ADA).

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.5: *Coastal Trail routes may be designed to accommodate specific user groups such as hikers, equestrians, and mountain bikers. The design of such routes should be tailored to suit the terrain or natural features of the area in which the trail is located as well as the needs of each targeted user group.*

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.6: *Trail classifications illustrated in Figures 4.1-1 through 4.1-7 shall be utilized during the preparation of detailed design and construction plans for the Coastal Trail. (See Program1.)*

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.8: *When the Multi-Modal Route is located within a public road right-of-way, its design features should include the following:*

a. *Walkers/Hikers: Coastal Trail facilities for hikers/walkers should be Class 1 Pathways, sidewalks, or natural surface trails that are separated from vehicular traffic. In areas with high user demand (e.g., near public parking areas, popular beaches, or nature viewing areas), hiking/walking trails should be physically separated from bicycle traffic where feasible. In areas with limited user demand, trail facilities may be limited to the side of the roadway closest to the ocean.*

b. *Bicyclists: Coastal Trail facilities for bicyclists should be a trail segment located outside the road travel way on one (or both) sides or the roadway (i.e., a Class 1 Pathway) or should be a dedicated bicycle lane (Class 2 bike lane), located on both sides of the roadway with striping and signage. Facilities located on only one side of the roadway shall be located on the side of the roadway closest to the ocean whenever feasible.*

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.17: *Coastal Trail improvements shall be designed to minimize adverse impacts on views of scenic resources (e.g., coastline, mountains) from public viewing areas.*

Coastal Area Plan Coastal Trail Design Policy 4.1.4.E.2.18: *The Coastal Trail shall be located, designed, and maintained in a manner that will avoid or minimize impacts to Native American cultural resources.*

Coastal Area Plan North Coast Recreation and Access Policy 4.2.2.B.1 *For all new development between the first public road and the ocean, granting of an*

easement to allow vertical access to the mean high tide line shall be mandatory unless:

a. *Adequate public access is already available within a reasonable distance of the site measured along the shoreline, or*
b. *Access at the site would result in unmitigable adverse impacts on areas designated as sensitive habitats or tidepools by the land use plan, or*
c. *Findings are made, consistent with Section 30212 of the Act, that access is inconsistent with public safety, military security needs, or that agriculture would be adversely affected, or*
d. *The parcel is too narrow to allow for an adequate vertical access corridor without adversely affecting the privacy of the property owner, or*

Coastal Area Plan North Coast Recreation and Access Policy 4.2.2.B.7. *Access to Emma Wood State Beach should be maintained for the maximum number of people.*

Coastal Area Plan Signs and Coastal Access Policy 4.2.2.B.19. *Coastal access signage shall be posted in conspicuous areas and located so that access is maintained, and visitors are directed to publicly available coastal access parking, beach access points, and public trails.*

Coastal Area Plan Signs and Coastal Access Policy 4.2.2.B.20. *For the California Coastal Trail, coastal access signage should include distinctive signs incorporating the California Coastal Commission coastal access logo (foot and wave) or markers, consistent with visual resources.*

Coastal Area Plan Signs and Coastal Access Policy 4.2.2.B.21. *Signs that adversely impact public access shall be prohibited except where there is no feasible alternative to protect public safety. In such cases, the impact to coastal access shall be mitigated and, where feasible, the sign shall be temporary and removed once the public safety issue is resolved.*

Coastal Area Plan Signs and Coastal Access Policy 4.2.2.B.22. *With the exception of road or informational signs, placement of signs within the public right-of-way shall be prohibited.*

Staff Analysis:
In the North Coast Sub-Area, the California Coastal Trail is a multi-modal route that extends from Rincon Point to Emma Wood State Beach. Segment N1 is a 4.0-mile-long improved, multi-modal pathway constructed by Caltrans as part of the Ventura to Santa Barbara Highway 101 High Occupancy Vehicle (HOV) Lane project. Segment N2 is located within a 7.1-mile stretch along State Route 1 (Old Pacific Coast Highway) right-of-way. On July 14, 2022, Ventura County approved Coastal Planned Development Permit Case No. PL22-0002 for the State Route 1

Pavement Rehabilitation Project referred to as “VEN-1 Cold Plane and Overlay AC Pavement Project” that involves repaving Segment N-2. Segment N3 is the Omer Rains Bike Trail, a 1.0-mile-long improved multi-modal pathway that is located east of the Emma Wood State Beach Recreational Vehicle (RV) camp sites.

At Post Mile 21.3 (Emma Wood State Beach) is where the Omer Rains Bike Trail begins/ends. When the Omer Rains Bike Trail exits Emma Wood State Beach, the bike trail intersects with SR 1 and the offramp for US 101 Exit 72, PCH / State Beaches and the onramp to southbound US 101. The offramp goes beneath US 101 before daylighting at the bike trail/State Route 1 intersection. This area presents a blind spot for motorists and bicyclists, for motorists, the road curves before coming out from beneath a dark tunnel, for bicyclists, to get to the northbound bike lane requires crossing SR 1 with vehicles exiting and getting onto U.S. 101 at a rate of speed of 45-55 mph. Project plans indicate a Class 1 bike lane after it leaves Omer Rains Bike Trail will be built and restriped to confine bicyclists to the seaward side of SR 1. The Class 1 bike lane will be separated from SR 1 by a railing except for areas where public parking occurs. The railing and bike lane continues across the bridge and the railing ends at the entrance to Emma Wood State Beach (State Beach Access Road). At this location (Post Mile 21.9), a crosswalk and two Pedestrian Hybrid Beacons will be installed to link bicyclists to the northbound bike lane along SR 1 past PM 21.9.

On December 12, 2018 a field survey was conducted by Caltrans and did not identify any cultural material. As stated in the Historic Property Survey Report prepared by Diana Valdez and Claudia Harbert from Caltrans, dated May 21, 2019, the project area contained artificial cut and fill from when the bridge and UPRR were originally constructed. No archaeological sites are recorded within 1 mile of the project area. The Caltrans Cultural Resources Database, the National Register of Historic Places, the California Register of Historical Resources, the California Historical Landmarks, the California Points of Historical Interest, and Ventura County Historical Landmarks and Points of Interest, all returned negative results for presence of additional cultural resources. The Coastal Trail will continue to be located within the Caltrans right-of-way. No cultural resources are expected to be encountered as the areas where the Class I Bike Lane is to be improved are in areas where the road prism has previously been constructed.

The demolition and construction of the bridge is expected to last approximately 26 months and will require the temporary closure of Exit 72 of north bound US 101. Access to Emma Wood State Beach will be available by rerouting US 101 north bound traffic approximately 7 miles north to the Seacliff exit. While the bridge is out of commission, a temporary bike/pedestrian path of travel will be constructed to provide access around the construction zone. As bicyclists exit the Omer Rains Coastal Bike Trail onto SR 1, the temporary path of travel will be separated from construction traffic by K rail. At Station 1131, a temporary 12 foot wide by 20-foot-long paved path will direct users to the southbound shoulder adjacent to the

Number 3 Lane on US 101. The path of travel will be separated from vehicular traffic by K-rail and traffic screening. At Station 1745, an 8-foot-wide temporary overcrossing (prefabricated bridge) will direct path users from US 101, over UPRR, and back onto SR 1.

A total of 25 existing signs will be replaced and a total of 17 new signs will be installed along and in proximity to the bridge. All signs would be located within the Caltrans right-of-way and are "wayfinding signs" (i.e., Coastal Access, Coastal Trail), directional, or are necessary to ensure public safety.

There are six shoreline access points along Segment N-2. Access will not be restricted; however, construction of the State Route 1 Pavement Rehabilitation Project (referred to as "VEN-1 Cold Plane and Overlay AC Pavement Project") and the proposed project will cause temporary delays. State Beach Access Road will be open during construction, any closures would be temporary, and a flagman would be used for traffic control.

Based on the discussion above, the proposed project is consistent with General Plan Conservation and Open Space Policies COS-2.6 and COS-2.7, General Plan Public Facilities, Services, and Infrastructure Policy PFS-10.8, Coastal Act Sections 30210 and 30211, and Coastal Area Plan Coastal Trail Policies 4.1.4.E.1.1, 4.1.4.E.1.3, 4.1.4.E.1.5, 4.1.4.E.1.6, 4.1.4.E.1.7, 4.1.4.E.1.9, 4.1.4.E.1.11, 4.1.4.E.2.2, 4.1.4.E.2.3, 4.1.4.E.2.4, 4.1.4.E.2.5, 4.1.4.E.2.6, 4.1.4.E.2.8, 4.1.4.E.2.17, 4.1.4.E.2.18, 4.1.4.E.2.19, 4.2.2.B.20, 4.2.2.B.21, 4.2.2.B.22.

7. **General Plan Policy Conservation and Open Space Policy COS-4.2(b) (Cooperation for Tribal Cultural Resource Preservation):** *For discretionary projects, the County shall request local tribes contact information from Native American Heritage Commission, to identify known tribal cultural resources. If requested by one or more of the identified local tribes, the County shall engage in consultation with each local tribe to preserve, and determine appropriate handling of, identified resources within the county.*

   General Plan Conservation and Open Space Policy COS-4.4 (Discretionary Development and Tribal, Cultural, Historical, Paleontological, and Archaeological Resource Preservation): *The County shall require that all discretionary development projects be assessed for potential tribal, cultural, historical, paleontological, and archaeological resources by a qualified professional and shall be designed to protect existing resources. Whenever possible, significant impacts shall be reduced to a less-than-significant level through the application of mitigation and/or extraction of maximum recoverable data. Priority shall be given to measures that avoid resources.*

Coastal Act Section 30244 Archaeological and Paleontological Resources: *Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

Coastal Area Plan Archaeological Resources Policy 4.1.1.1: *Discretionary development shall be reviewed to identify potential locations for sensitive archaeological resources.*

Coastal Area Plan Archaeological Resources Policy 4.1.1.2: *New development shall be sited and designed to avoid adverse impacts to archaeological resources to the maximum extent feasible. If there is no feasible alternative that can eliminate all impacts to archaeological resources, then the alternative that would result in the fewest or least significant impacts to resources shall be selected. Impacts to archaeological resources that cannot be avoided through siting and design alternatives shall be mitigated. When impacts to archaeological resources cannot be avoided, mitigation shall be required and shall be designed in accordance with established federal, state and/or County standards and shall be consistent with the policies and provisions of the LCP.*

Coastal Area Plan Paleontology Policy 4.1.2.1: *Discretionary development shall be reviewed to determine the geologic unit(s) to be impacted and paleontological significance of the geologic rock units containing them.*

Coastal Area Plan Paleontology Policy 4.1.2.2: *New development shall be sited and designed to avoid adverse impacts to paleontological resources to the maximum extent feasible. If there is no feasible alternative that can eliminate all impacts to paleontological resources, then the alternative that would result in the fewest or least significant impacts to resources shall be selected. Impacts to paleontological resources that cannot be avoided through siting and design alternatives shall be mitigated. When impacts to paleontological resources cannot be avoided, mitigation shall be required that includes procedures for monitoring grading and handling fossil discoveries that may occur during development.*

Staff Analysis:
A Historic Property Survey Report was prepared by Diana Valdez and Claudia Harbert with Caltrans, dated May 21, 2019. No archaeological sites are recorded within 1 mile of the project area and a records search determined returned negative results for presence of additional cultural resources.

On September 7, 2022, in accordance with Assembly Bill (AB) 52, Planning Division staff contacted the Barbareno-Ventureno Mission Indians for comment and review of the proposed project. As of the date of this staff report, no responses have been received regarding the proposed project.

The construction of the new bridge will be within the same construction footprint as the existing bridge, retaining walls will be extended and buried in place and the number of required substructures has been reduced from 31 to 6 columns. Although the proposed project is unlikely to result in impacts to archaeological resources, future ground disturbance activities will be subject to a condition of approval to ensure the protection of any archaeological resources if they are inadvertently encountered during ground disturbance activities (Exhibit 4, Condition of Approval No. 18).

According to the Ventura County Coastal Zoning Ordinance Section 8178-3.2.2, Table 1, California Geologic Survey Formations, the project site is overlain by the active beach deposits (Qb) which have no deposits, deposits that have been displaced or disrupted. Although the proposed project is unlikely to result in impacts to paleontological resources, future ground disturbance activities will be subject to a condition of approval to ensure the protection of any paleontological resources if they are inadvertently encountered during ground disturbance activities (Exhibit 4, Condition of Approval No. 19).

Based on the discussion above, the proposed project is consistent with General Plan Conservation and Open Space Policies COS-4.2(b), COS-4.4, Coastal Act Section 30244, Coastal Area Plan Archaeology Policy 1, and Coastal Area Plan Archaeological Resources Policies 4.1.1.1, 4.1.1.2, and Coastal Area Plan Paleontology Policies 4.1.2.1 and 4.1.2.2.

8. **General Plan Policy Hazards and Safety Policy HAZ-4.5 (Soil Erosion and Pollution Prevention):** *The County shall require discretionary development be designed to prevent soil erosion and downstream sedimentation and pollution.*

   General Plan Policy Hazards and Safety Policy HAZ-4.6 (Vegetative Resource Protection): *The County shall require discretionary development to minimize the removal of vegetation to protect against soil erosion, rockslides, and landslides.*

   General Plan Policy Hazards and Safety Policy HAZ-4.7 (Temporary Revegetation on Graded Areas): *The County shall require, as necessary, the use of soil stabilization methods on graded areas to reduce the potential for erosion, particularly during the construction phase.*

   Coastal Act Section 30253 Minimization of Adverse Impacts:

   (1) New development shall do all of the following:
   (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.
   (b) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding

area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.
(c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development.
(d) Minimize energy consumption and vehicle miles traveled.
(e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Coastal Area Plan North Coast Hazards Policy 4.2.4.A.2. *New development shall be sited and designed to minimize risks to life and property in areas of high geologic, flood, and fire hazards.*

Coastal Area Plan North Coast Hazards Policy 4.2.4.A.3. *All new development will be evaluated for its impacts to, and from, geologic hazards (including seismic safety, landslides, expansive soils, subsidence, etc.), flood hazards, and fire hazards. Feasible mitigation measures shall be required where necessary.*

Coastal Area Plan North Coast Hazards Policy 4.2.4.A.4. *The County may require the preparation of a geologic report at the applicant's expense. Such report shall include feasible mitigation measures which will be used in the proposed development.*

Coastal Area Plan North Coast Hazards Policy 4.2.4.A.6. *New development shall be sited and designed so as not to cause or contribute to flood hazards or lead to the expenditure of public funds for flood control works.*

Staff Analysis:
The Ventura OH Bridge (Bridge No. 52-040) needs to be replaced due to numerous cracks and spalls in the bridge columns and the steel bents being exposed to the elements, resulting in rust and delamination, which pose a safety hazard. The bridge provides essential public access for legally permitted development providing a major route for the residents, bicyclists, and motorists getting access onto SR 1 from the north and merging onto US 101 if travelling south.

For the design of the new bridge, Caltrans retained ESA to evaluate the potential hazards corresponding to extreme coastal events caused by landward propagation of high-energy waves and high-water levels during extreme storms and high tides. A Coastal Hazards Assessment was prepared by ESA, dated December 2022. Since the project site is exposed to high waves, the assessment analyzed extreme waves and water levels propagated landward (referred to as the wave runup) on different beach profiles. Other important factors for design that were considered include the effect of sea-level rise (SLR), which is incorporated in calculations, and estimation of wave runup extents. The bridge has been designed to afford a

clearance height beginning at approximately 10 feet from the road surface to approximately 50 feet at the highest elevation. This is to account for potential flooding, wave run-up, and sea level rise. Sea level rise was not considered when establishing the alignment of, and design standards for, the Class I Bike Lane as the alignment already exists within the Caltrans right-of-way and no alternative location exists within Segment N-2 of the Coastal Trail.

The existing State Beach Access Road leading into Emma Wood State Beach is confined by the rock revetment to the west and the slope supporting the bridge and SR 1 to the east. The State Beach Access Road would be widened from 8 feet to 10 feet, which will improve circulation through this area. The widening results in approximately 3,150 cubic yards of grading and construction of retaining walls to maintain the slope.

Based on the discussion above, the proposed project is consistent with General Plan Policy Hazards and Safety Policies HAZ-4.5, HAZ-4.6 HAZ-4.7, Coastal Act Section 30253, and Coastal Area Plan North Coast Hazards Policies 4.2.4.A.2, 4.2.4.A.3, 4.2.4.A.4, 4.2.4.A.6.

9. General Plan Policy Hazards and Safety Policy HAZ-10.2 (Air Quality Management Plan Consistency):
The County shall prohibit discretionary development that is inconsistent with the most recent adopted Air Quality Management Plan (AQMP), unless the Board of Supervisors adopts a statement of overriding considerations.

General Plan Policy Hazards and Safety Policy HAZ-10.3 (Air Pollution Control District Rule and Permit Compliance): *The County shall ensure that discretionary development subject to Ventura County Air Pollution Control District (VCAPCD) permit authority complies with all applicable APCD rules and permit requirements, including the use of Best Available Control Technology (BACT) as determined by the VCAPCD.*

General Plan Policy Hazards and Safety Policy HAZ-10.14 (Fugitive Dust Best Management Practices): *The County shall ensure that discretionary development which will generate fugitive dust emissions during construction activities will, to the extent feasible, incorporate appropriate BMPs to reduce emissions to be less than applicable thresholds.*

Staff Analysis:
The proposed project will require clearing and grubbing and grading. The project is located adjacent to US 101 and dust generated from construction may impede visibility, the Ventura County Air Pollution Control District (APCD) has conditioned the project to ensure fugitive dust and other air contaminants are minimized to the greatest extend feasible (Exhibit 4, Condition Nos. 28 and 29).

Based on the discussion above, the proposed project is consistent with General Plan Policy Hazards and Safety Policies HAZ-10.2, HAZ-10.3 and HAZ-10.4.

10. **General Plan Policy Water Resources Policy WR-1.2 (Watershed Planning):** *The County shall consider the location of a discretionary project within a watershed to determine whether or not it could negatively impact a water source. As part of discretionary project review, the County shall also consider local watershed management plans when considering land use development.*

General Plan Water Resources Policy WR-1.12 (Water Quality Protection for Discretionary Development): *The County shall evaluate the potential for discretionary development to cause deposition and discharge of sediment, debris, waste and other pollutants into surface runoff, drainage systems, surface water bodies, and groundwater. The County shall require discretionary development to minimize potential deposition and discharge through point source controls, storm water treatment, runoff reduction measures, best management practices, and low impact development.*

General Plan Water Resources Policy WR-2.2 (Water Quality Protection for Discretionary Development): *The County shall evaluate the potential for discretionary development to cause deposition and discharge of sediment, debris, waste, and other contaminants into surface runoff, drainage systems, surface water bodies, and groundwater. In addition, the County shall evaluate the potential for discretionary development to limit or otherwise impair later reuse or reclamation of wastewater or stormwater. The County shall require discretionary development to minimize potential deposition and discharge through point source controls, storm water treatment, runoff reduction measures, best management practices, and low impact development.*

Staff Analysis:
State Beach Access Road and SR 1 separate the project site from the Pacific Ocean. To ensure no contaminants enter the ocean, the project has been conditioned to submit an Erosion Control Plan as part of the Grading Permit. The Erosion Control Plan will include, but not be limited to, what Best Management Practices (BMPs) will be used and where, and measures to prevent erosion, contain sediment and control runoff.

There are five ephemeral streams within the 500 ft buffer survey area, the streams and adjacent vegetation will not be impacted based on location of construction activities.

Based on the discussion above, the proposed project is consistent with General Plan Water Resources Policies WR-1.2 WR-1.12, and WR-2.2.

Final

VENTURA OVERHEAD BRIDGE REPLACEMENT PROJECT

Coastal Hazards Assessment

Prepared for
Caltrans, under contract with
GPA Consulting, Inc.

December 2022

County of Ventura
Planning Director Hearing
Case No. PL22-0114
Exhibit 6 - ESA Coastal
Hazards Assessment

Final

VENTURA OVERHEAD BRIDGE REPLACEMENT PROJECT

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Disclaimer and Use Restrictions for Shore Response and Coastal Hazards Predictions: Please note that in providing opinions of probable future shore position and configuration, wave runup and overtopping, and coastal erosion and flooding hazards, ESA has no control over the factors and events that will affect these future conditions. Erosion, accretion, and the parameters that force these processes are inherently variable. The actual future geometry and hazards may be impacted by the availability of sediment, climate fluctuations and change, variability in weather, seismic events, tsunamis, and humans' actions. In addition, biological processes and changes can affect shore stability. ESA makes no warranty, expressed or implied, as to the accuracy of such opinions as compared to actual future conditions. Estimates should be updated when new information and methods are available.

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1 INTRODUCTION

California Department of Transportation (Caltrans) plans to replace Ventura Overhead Bridge (Bridge #52-0040, built in 1934) located at Emma Wood State Beach in Ventura County. For the design of the new bridge, Caltrans needs information on the potential hazards corresponding to extreme coastal events caused by landward propagation of high-energy waves and high water levels during extreme storms and high tides. Since the project site is exposed to high waves coming from northwest, west, and southwest, it is important to estimate how extreme waves and water levels propagate landward (referred to as the wave runup) on different beach profiles. Other important factors for design are the effect of sea-level rise (SLR), which needs to be incorporated in calculations, and estimation of wave runup extents.

1.1 Background and Project Description

The project entails the complete replacement of the Ventura Overhead Bridge on State Route 1 (SR 1) post-mile (PM) 21.54 in Ventura County. The bridge is located immediately south of the entrance to the Emma Wood State Beach North Beach Campground. The bridge crosses the Union Pacific Railroad tracks that run along the Ventura County shoreline. The project includes options for enhancing bike and pedestrian access, such as upgraded bridge rails that meet the requirements of the Coastal Zone Management Act of 1972 and Class 1 Bike Lanes (measuring 8 feet in width with a barrier) to be built on the southbound side of the bridge facing the ocean from PM 25.3 to 25.8. Appendix A includes draft project plans for construction of the bridge. Note that Caltrans proposes to raise the bridge and portions of the approaches by up to eight to ten feet. Caltrans describes the project as having a 75-year design life, which is typical guidance for Caltrans' bridges (Caltrans 2020, AASHTO 2017).

The existing bridge is aged and deteriorating in terms of its structural integrity. In terms of vulnerability, the bridge is vulnerable to extreme waves and high water levels that are expected to increase in size and frequency in the future. The existing piles and pile foundations are exposed to wave runup and overtopping during extreme events. This exposure may result in vulnerability to the bridge deck and risks to public safety. Long-term erosion and the presence of coastal armoring (sea wall and revetments) have also resulted in the progressive loss of beach and increased overtopping and wave loadings to the Emma Wood State Beach North Beach Campground access road (referred to as State Parks Access Road), the existing bridge, and the railroad. The new bridge design intends to address existing and future coastal hazards to SR 1 and formulate measures to mitigate the hazards. Based on information provided by Caltrans, the proposed project will upgrade the Bent Cast-In-Drilled-Hole (CIDH) Pile Foundations to Type 2 Shafts, which would increase the structural resilience to seismic action and result in the least amount of damage possible.

Hazard mapping products developed by ESA (e.g., Coastal Resilience), USGS (e.g., Coastal Storm Modeling System or CoSMoS), and others indicate that the project area and vicinity are vulnerable to existing and future flooding and erosion. However, these hazard maps are based on modeling that was conducted at a regional scale, and therefore these maps are limited in their applications to detailed planning-level assessments. ESA's study and this report therefore provide a more detailed project-specific coastal hazards assessment.

The California Coastal Commission (CCC) reviewed draft plans and materials for the project and provided several comments for Caltrans to consider for preparation of permit applications. In their comments, the CCC noted that:

- The project is likely to be within Ventura County's Local Coastal Program permit jurisdiction, but that a "boundary determination should be conducted once the project plans are more fully developed."[1] An LCP amendment wouldn't be necessary, but a County of Ventura Coastal Development Permit (CDP) would be appealable to the CCC.

- Risk from sea-level rise and coastal hazards should be analyzed as part of the project, including wave action and erosion.

Based on the input from the CCC, Caltrans requested that ESA complete a Coastal Hazards Assessment for the project. Caltrans requested that ESA complete the work as follows:

- Conduct technical analyses and preparation of a slide deck that summarizes the methods and preliminary findings of the study.

- Present the preliminary findings to Caltrans staff.

- Present the findings to staff from the CCC and Ventura County. Both the CCC and Ventura County provided comments on the analysis as presented and accompanying slide deck. Comments included:

  – The CCC commented that they would like to see additional discussion as to the potential risks to the bridge from erosion in the absence of the existing armoring (i.e., a scenario where the State Beach Access Road is retreated).

  – Comments from Ventura County relevant to the Coastal Hazards Assessment included the following requests for:

    - The basis of selecting a design life of 75 years.

    - A parcel/aerial map that verifies that Caltrans' Right-of-Way (ROW) does not include any of the existing shore protection structures (e.g., revetments, etc.).

    - Information about how the supports will be grounded to withstand wave action and erosion.

    - Consider if there are changes to the current shoreline profile or if the adjacent parcels would erode.

[1] Caltrans/California Coastal Commission Input Form dated June 2020, provided to ESA for review

    - Consider identifying periodic monitoring and trigger-based actions as part of a phased adaptation approach for the bridge.

- Draft a report summarizing the technical methods and the findings once the CCC, County, and Caltrans agreed that the technical analysis was sufficient for advancing the project and preparation of permit applications.

1.2 Regulatory Requirements Relevant to Coastal Hazards

The project is located with the jurisdiction of the Ventura County LCP, which means that the County would be the responsible agency to issue a CDP for the project. However, the project is within the California Coastal Commission's (CCC) zone of retained jurisdiction, which means that the Ventura County CDP would be appealable to the CCC. The purpose of this study is to support a CDP application. This study is therefore subject to the requirements of the Ventura County LCP and CCC as summarized below. FEMA flood hazard zones are also summarized below for context.

1.2.1 Ventura County LCP

The Ventura County LCP describes a series of goals and policies in three different segments of the Ventura County coast. The project is in the North Coast segment, for which there are several relevant flood and erosion hazards identified. In general, the LCP section on hazards requires that development be sited to minimize risks to life and property in areas of high flood hazards and should not cause or contribute to flood hazards. The LCP section on hazards does not include any requirements to assess how the hazards might change with sea-level rise. The current LCP does not include any specific sea-level rise policies, but we understand that draft policies are in development. Therefore, we assume that sea-level rise requirements would defer to the CCC Sea-Level Rise Policy Guidance (CCC 2018). Note that the project does not propose to construct any new shoreline protective devices. Furthermore, the hazard policy refers to the General Plan Hazards Appendix for direction for evaluating wave hazards but upon review of the appendix there was no relevant information or requirements for analyzing flood hazards associated with wave action. Therefore, we have deferred to the FEMA (2005) Guidelines for Coastal Flood Hazard Analysis and Mapping on the Pacific Coast to inform the technical approaches used to assess coastal flooding and erosion at the project site and to determine the approximate flood hazard limits for existing and future conditions with sea-level rise.

1.2.2 California Coastal Commission Sea-Level Rise Guidance

The CCC (2018) guidance recommends a series of steps that describes how a project can address sea-level rise as part of a CDP process with a goal to ensure careful attention to minimizing risk to development and avoiding impacts to coastal resources over the life of the project:

> Step 1. Establish the projected sea level rise range for the proposed project's planning horizon using the best available science, which is currently the 2018 OPC SLR Guidance.

Step 2. Determine how physical impacts from sea level rise may constrain the project site, including erosion, structural and geologic stability, flooding, and inundation.

Step 3. Determine how the project may impact coastal resources, considering the influence of future sea level rise upon the landscape as well as potential impacts of sea level rise adaptation strategies that may be used over the lifetime of the project.

Step 4. Identify alternatives to avoid resource impacts and minimize risks throughout the expected life of the development.

Step 5. Finalize project design and submit CDP application.

This report is focused on identifying the sea-level rise amount for the project to consider and the related effects on extreme coastal hazards that may constrain the project site through flooding and erosion (Steps 1 and 2).

1.2.3 FEMA Flood Hazard Zones

Flood hazard mapping by FEMA in coastal zones is focused on the storm surge and wave-driven flooding with relatively high velocities. FEMA designates special flood hazard areas (SFHA) in the coastal area using the following zones:

- Zone VE: a Coastal High Hazard Area (CHHA) that is part of a coastal SFHA where wave heights are larger than 3 feet and a detailed study has been done for the area and base flood elevations have been calculated. Structures in areas mapped with V or VE designation are subject to stricter building requirements because of the higher risk of damage from strong waves.

- Zone AE: parts of the SFHA on flood maps in coastal areas that have at least a 1-percent-annual-chance of being flooded and wave heights are less than 3 feet.

- Zone AO: areas at risk of flooding during the base flood, where water 1 to 3 feet deep flows over sloping ground. These areas usually mark areas at risk of flooding from wave overtopping, where waves are expected to wash over the crest of a dune, bluff, or structure and flow into the area beyond.

Note that while the technical analyses and hazard maps developed in this study utilize the FEMA designation of flood zones listed above, they are not FEMA maps and not to be used in place of adopted FEMA Flood Insurance Rate Maps, which are developed in coordination with communities and led by FEMA teams. The hazard maps presented in this report are for the sole use of Caltrans to inform the planning and design of the bridge replacement project relative to extreme coastal hazards for existing and future conditions with sea-level rise.

1.3 Purpose

The purpose of this study is to assess the coastal hazards under existing and future SLR conditions by calculating the extreme wave runup extents. Accordingly, ESA aimed at coming up with extreme wave and water level scenarios combining the historical data with the existing and projected future sea level rise to calculate wave runup extents for different beach configurations.

1.4 Scope of Study

The study is focused on the completion of a coastal hazards analysis for the project site that is consistent with the California state guidelines including California Coastal Commission (CCC) Sea Level Rise Policy Guidance (CCC 2018) and Caltrans Highway Design Manual (Caltrans 2019). The analysis assesses the extreme wave runup extents on the project site for existing and future conditions, which is used to inform the project design. The technical analysis is based on a combination of existing information and new calculations to assess the exposure of the project to flooding and erosion.

ESA's scope of work included the following:

- Visit the site to make observations and collect site data, including elevations and typical geometries of the shore at distinct shore segments
- Review relevant studies
- Select sea-level rise scenarios consistent with the project life
- Conduct a technical analysis including assessment of the shore change, wave uprush (i.e., wave runup) at up to three profiles
- Identify preliminary coastal design criteria to inform bridge and structural design
- Identify potential adaptation measures that could be taken in the future when certain thresholds of sea-level rise or impacts are reached
- Reporting and documentation

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2 PROJECT SETTING

This section presents information on the physical context of the project site, including its history and landscape.

2.1 Project Location

The project site is located on the shore of the Santa Barbara Channel in Ventura County, California (Figure 1). The Santa Barbara Channel is an ecologically rich portion of the Southern California Bight that separates the mainland of California from the northern Channel Islands. The region is mountainous and dominated by coastal hills and a rugged landscape. The geography of the shore in this area heavily influences the oceanic and marine environment. The Santa Barbara Channel is described as a transition zone where cold waters north of Point Conception mix with warm waters of Southern California, which results in highly variable and complex currents, waves, and marine conditions (California Sea Grant n.d.).

SOURCE: Google Earth

Ventura Overhead Bridge Replacement Project

Figure 1
Vicinity Map

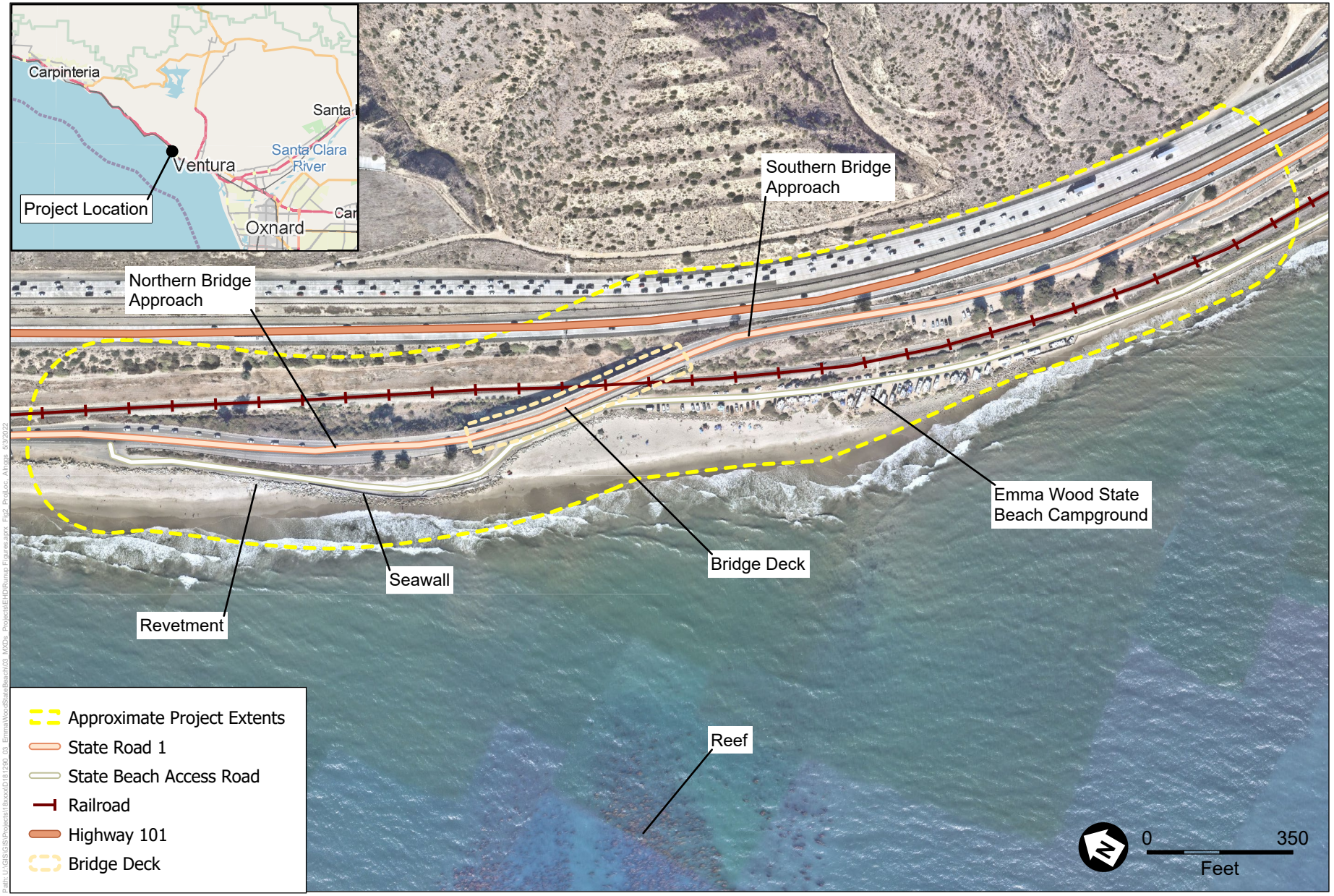
2.2 Existing Project Site

The project site is located on California State Route 1 (Route 1, SR 1, or the Pacific Coast Highway), along Highway 101 and the railroad. It is located within Emma Wood State Beach, part of the California State Parks system. It sits 3.5 miles northwest of the City of Ventura and 25 miles southeast of Santa Barbara. The project site consists of the bridge; however, the study area includes the adjacent beach and the State Beach Access Road. Alongshore, there is a rock revetment as well as two sea walls. The northern sea wall is about 450 feet long and is partially damaged and replaced with another seawall 10 feet landward. The southern seawall starts on the southern end of the project area and continues offsite. Offshore of the site there exists a natural reef that begins approximately 600 feet from the revetment and continues to about 2,000 feet offshore.

2.2.1 Primary Site Features

Figure 3 shows the primary features of the site that we considered in this study:

- *Highway 101*: Located landward of the project site with embankments on landward and seaward sides.
- *California State Route 1 ("Route 1" hereafter*): Merges with Highway 101 at the southern end of the project site, splits from Highway 101 then onto the Ventura Overhead bridge, and continues along the seaward side of Highway 101 on the northern side of the project.
- *Railroad*: Located between the access road and Highway 101 with embankments on both sides. The overhead bridge crosses the railroad where Route 1 splits from Highway 101.
- *State Beach Access Road*: The access road is located at the edge of the revetment along the project site providing access to the campgrounds at Emma Woods Beach.
- *Bridge Approach Embankments*: The northern and southern approaches to the overhead bridge are earthen embankments with slopes of approximately 2:1 (horizontal to vertical).
- *Revetments*: Most of the intertidal shore is backed by shore protection comprised of rock revetments, located along the seaward edge of the State Beach Access Road. The rock revetments are visible and extend from the seaward edge of the Access Road (approximately elevation 15 feet NAVD) to the beach (approximately elevation 1 to 4 feet NAVD), with an average slope of 3:1 (H:V). See Figure 3 for photos of the revetments.
- *Seawalls*: Seawalls exist where rock revetments are not sufficient or don't exist. On the northern half of the project site, the seawall is behind the rock revetment, about three feet higher than the road. The seawall on the south side of the project area stands alone without the rock revetment, also extending from the beach to about three feet above the road. The height of the wall is unknown in this location as it probably extends deeper than the current sand height. See Figure 3 for photos of the seawall.
- *Beach*: The beach located immediately north of the project area is relatively narrow compared to other beaches in the vicinity of the project. During most high tides there is no beach and during low tide the beach width varies from approximately 100-200 feet wide.
- *Reef*: Approximately 670 feet seaward from the bridge piles there is a substantial reef with a large kelp colony. The reef is similar to those north of the project site in Solimar (~1.5 miles), though it is unique in its shape which is perpendicular to the beach alignment.



SOURCE: Nearmap, 2021; ESA, 2022

Ventura Overhead Bridge Replacement Project

Figure 2
Location Map

ESA

SOURCE: ESA, December 2021 Ventura Overhead Bridge Replacement Project

Figure 3
Photos of the project site: State Park Access Road (top left, facing south), the beach and revetment to the north (top right), shore armoring in front of the bridge (bottom left) and immediately south (bottom right)

2.2.2 Existing Condition

Overall, the infrastructure onsite is in a deteriorating condition. The beach is narrowing and the frequent wave overtopping of the revetments and seawalls results in closures of the State Beach Access Road. Whenever there is swell, during higher tides, the waves overtop the access road. The frequency of flooding causes potholes and asphalt erosion. The revetment appears stable, though there are portions where the rocks may need replacement in the future as they appear to be displaced. In the northern portion of the site, pieces of the seawall have collapsed onto the revetment. Erosion on the road edge where the seawall was attached has exposed rebar reinforcement.

The bridge was built in 1934. Pilings that run along the centerline of the bridge and some of them on the ocean facing side of the bridge appear to have been reinforced after the original build year. Erosion appears on the bridge abutments, and they have been reinforced with large riprap on the north side. Overall, the concrete appears worn and crumbling in spots. This description is provided for discussion purposes only. The scope of this study does not include an assessment of the bridge condition.

Figure 4 presents pictures of the site along the State Park Access Road, including potholes and other observed damage (right), and overtopping observed during the site visit (left).

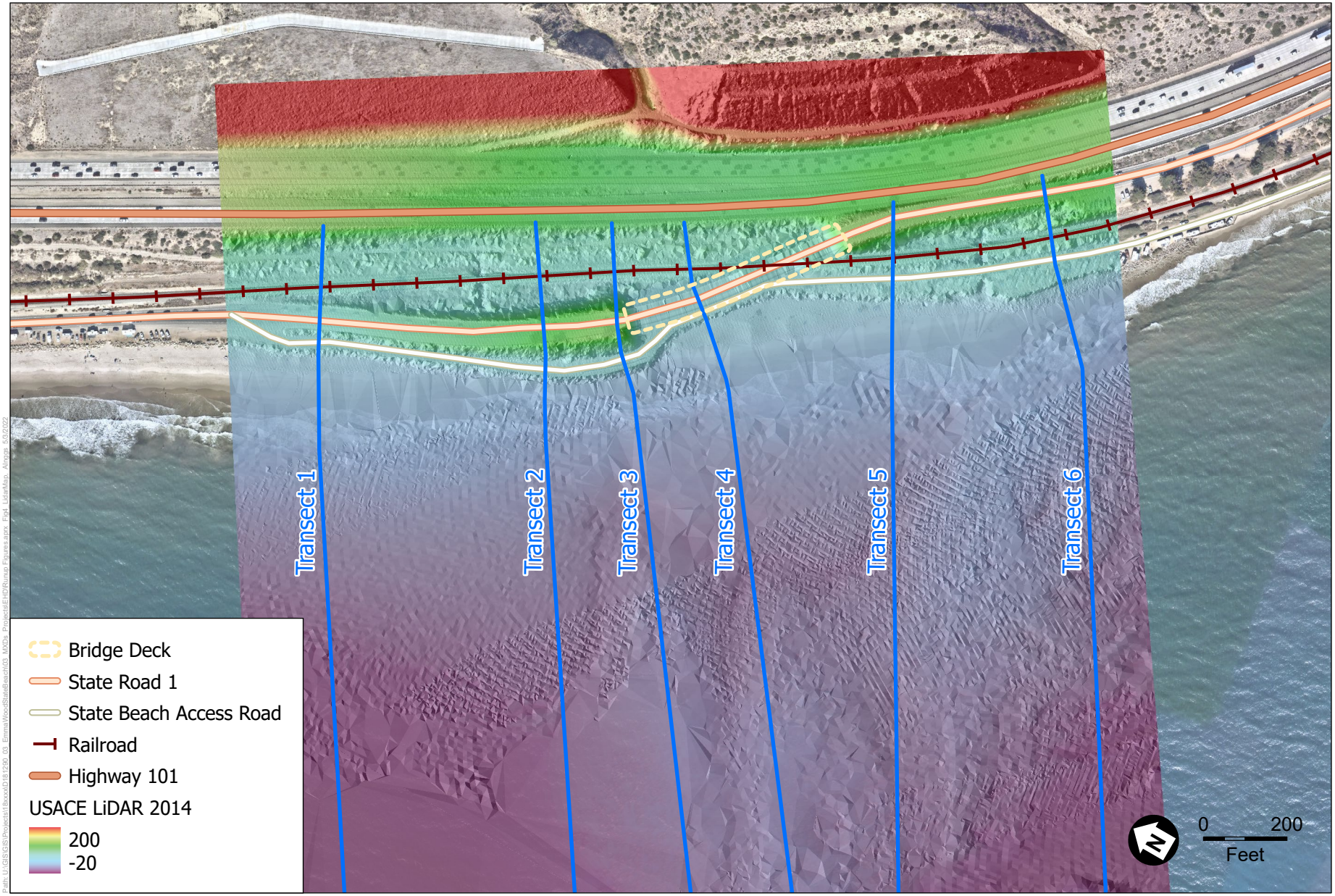
Ventura Overhead Bridge Replacement Project

Figure 4
Photos of the project site showing overtopping on the Access Road (top left), exposure of reinforcements at the edge of the revetment (top right), bridge (bottom left), and northern seawall (bottom right)

2.2.3 Elevations and Topography

The project site is located on a partially sloped, developed parcel immediately landward of a narrow beach. The beach access road elevations are approximately 14 to 18 ft NAVD. The bridge deck and ramps are sloped with elevations of approximately 18 to 48 feet NAVD. Landward of the railroad and Highway 101, the grades slope upwards steeply to Red Mountain.

Figure 5 presents a topographic and bathymetric map of the project site based on LiDAR (Light Detection and Ranging) data collected in 2014 (USACE 2015). This data set was used as the basis for determining the site grades and beach characteristics. The offshore reef was captured in this data set.



SOURCE: USACE 2014; ESA, 2022

NOTE: Elevations are in feet NAVD vertical datum.

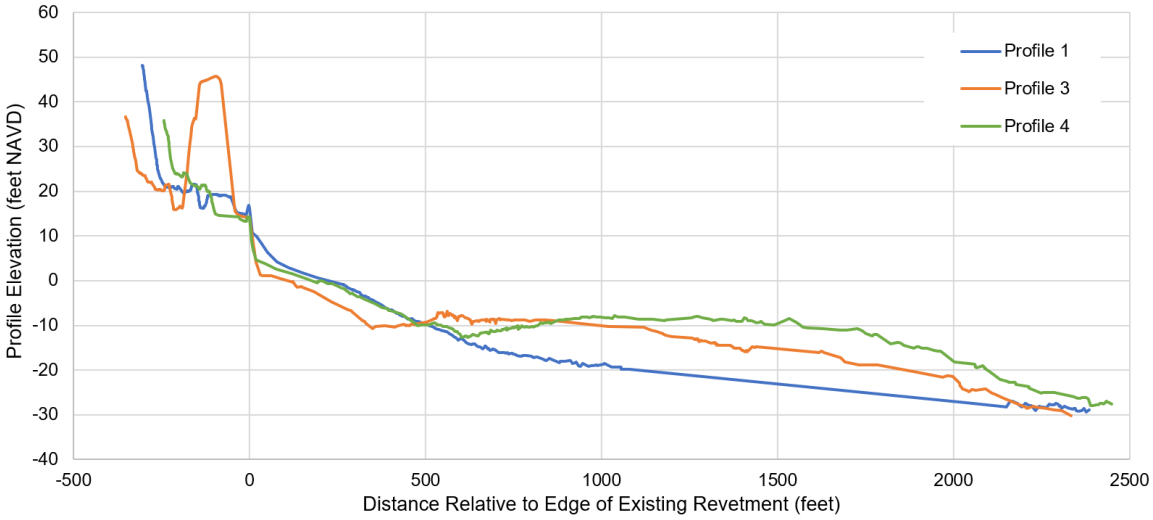
Ventura Overhead Bridge Replacement Project

Figure 5
Lidar Map

ESA

To supplement the USACE topo-bathy, ESA surveyed the site in December 2021 to verify elevations and geometries along several shore profiles at the project site. Specifically, ESA surveyed six cross-shore transects from the shoreline covering the revetment, Access Road, embankments, and Route 1. ESA made site observations and collected elevation points along each transect using the real-time kinematic global positioning system (RTK GPS). ESA surveyed each transect to measure accurate existing conditions for this analysis. Points for Transects 1, 4, and 5 were surveyed from the shoreline to the railroad tracks. Points for Transects 2 and 3 were surveyed from the shoreline to Route 1.

Six transects were initially identified for the study, but this study focused on Transects 1, 3, and 4 after initial investigations indicated only slight variations between adjacent transects. Figure 6 presents shore profiles of the three selected transects, which represent a composite of the LiDAR and ESA survey data. Some of the areas in the intertidal and subtidal nearshore zone did not have LiDAR or survey coverage and therefore were linearly interpolated. Existing bridge elevations were gathered from Caltrans preliminary plans.



SOURCE: ESA Survey 2022, USACE LiDAR 2015

Ventura Overhead Bridge Replacement Project

Figure 6
Typical Shore Profiles for Transects 1, 3, and 4

2.3 Coastal Hydrology

This section summarizes the relevant information for the coastal water levels, waves, and geomorphology of the project site and vicinity.

2.3.1 Tides and Water Levels

The tides in the project area exhibit mixed semi-diurnal characteristics, with two high tides and two low tides of unequal height occurring approximately every 24 hours. The tide range along the project site varies from approximately 3.5 feet during neap tides to over 7 feet during spring times. Table 1 presents the published tidal datums for the Santa Barbara and Santa Monica tidal gages (NOAA NOS Stations 9411340 and 9410840, respectively), and the interpolated tidal

datum for this project. NOAA calculates the elevation of mean higher high water (MHHW) by averaging the higher-high water height of each tidal day observed over the tidal epoch (a 19-year period of water level averaging known as the national Tidal Datum Epoch), and follows a similar procedure for other tidal datums. Note that the highest observed water level of 8.3 feet NAVD measured at the Santa Monica tide gauge occurred during the El Niño winter of 1982-1983. Note also that these tidal datums are for the 1983 to 2001 tidal epoch, which is the most recent available. Current tidal datums may be slightly higher due to relative sea-level rise over the last 30 years.

TABLE 1
TIDE DATUMS AT VENTURA BASED ON SANTA BARBARA AND SANTA MONICA TIDE STATIONS

Datum	Description	Santa Barbara Sta. 9411340 (feet NAVD)	Ventura Overhead[a] (feet NAVD)	Santa Monica Sta. 9410840 (feet NAVD)
Max	Highest Observed Tide	7.52[b]	--	8.31[c]
HAT	Highest Astronomical Tide	7.10	7.1	7.13
MHHW	Mean Higher-High Water	5.26	5.3	5.24
MHW	Mean High Water	4.51	4.5	4.50
MTL	Mean Tide Level	2.68	2.7	2.62
MSL	Mean Sea Level	2.65	2.6	2.60
MLW	Mean Low Water	0.84	0.8	0.74
NAVD	North American Vertical Datum of 1988	0.00	0.0	0.00
MLLW	Mean Lower-Low Water	-0.13	-0.1	-0.19
LAT	Lowest Astronomical Tide	-2.18	-2.2	-2.22
Min	Lowest Observed Tide	-3.00[d]	--	-3.03[e]

NOTES:
a. Tidal datums at Ventura were computed as a linear interpolation between published tidal datums at Santa Barbara and Santa Monica tide gauges, 1983-2001 tidal epoch, and rounding to the nearest tenth of a foot.
b. Highest observed tide at Santa Barbara tide gauge occurred at 4:36 PM on 12/13/2012
c. Highest observed tide at Santa Monica tide gauge occurred at 7:54 AM on 11/30/1982
d. Lowest observed tide at Santa Barbara tide gauge occurred at 8:00 AM on 12/17/1933
e. Lowest observed tide at Santa Monica tide gauge occurred at 3:42 PM on 12/17/1933

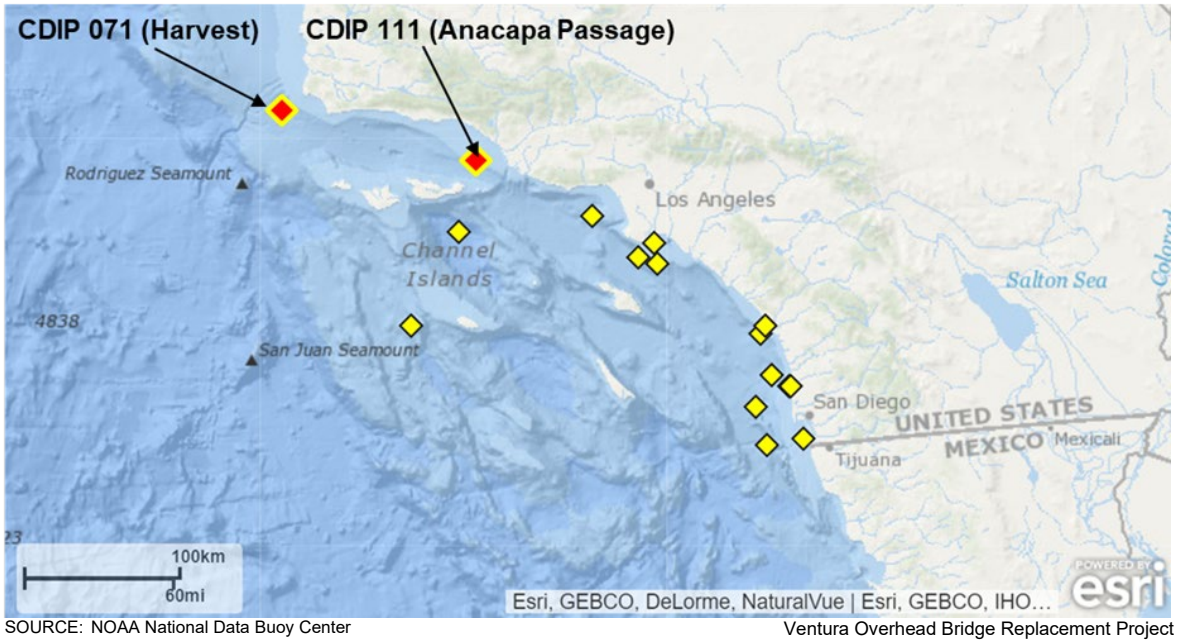
SOURCE: OPC 2018, CCC 2018

2.3.2 Wave Climate

The wave climate of Southern California is characterized by intermittent long-period swells during the winter and summer months. During winter, large swells originating from storms in the North Pacific approach the Southern California region from the west and northwest directions. During summer and fall, swells originating from storms in the Southern Pacific dominate the wave climate and approach the area from the southwest and south directions, often with wave periods greater than 20 seconds. Because wave power is proportional to the period, longer period wave events often result in the greatest coastal flood impacts and highest wave runup. South-facing shores of Southern California are also exposed to North Pacific tropical storm systems, which generally approach the region form the south-southeast.

The wave climate of the project study area is greatly influenced by the nearshore bathymetry and the Channel Islands located offshore. Although the islands can block the offshore wave energy from reaching the shore of the project site, specific swell directions can penetrate to the Ventura shoreline. Based on a review of available wave energy transformation coefficients, aerial imagery, and photos and videos of waves breaking offshore of the site, west swells (direction approximately 260 to 275 degrees) appear to focus at the site, resulting in relatively larger surf as compared to the shores on either side of the project site.

Figure 7 presents a map of the Southern California bight that indicates the locations of buoys operated by Scripps Institution of Oceanography (SIO) as part of their Coastal Data Information Program (CDIP). Two buoys are noted on the figure: CDIP 071 (Harvest) located in deep water offshore of Point Conception, CDIP 111 (Anacapa passage) located in nearshore conditions at the southern outlet of the Santa Barbara Channel.

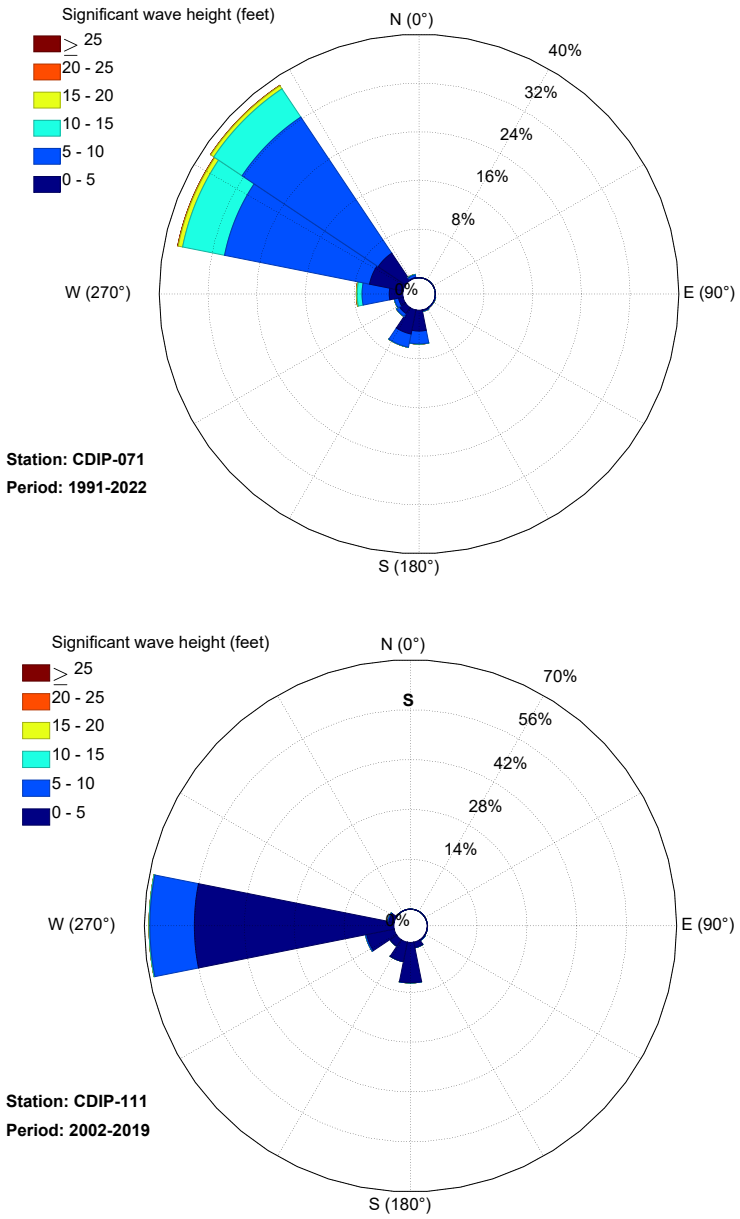


SOURCE: NOAA National Data Buoy Center

Ventura Overhead Bridge Replacement Project

Figure 7
Location of Wave Buoys Operated by Scripps in Southern California (Relevant Buoys Highlighted)

Figure 8 presents wave roses for CDIP buoys 071 (offshore) and 111 (nearshore) that describe the wave climate of Southern California in general and the Santa Barbara Channel, respectively. The top panel shows the offshore wave conditions with predominant swell direction form the northwest. The largest waves also approach from the northwest directions. Closer to the shore, sheltered by the mainland and Channel Islands, the bottom panel indicates that the waves are smaller and the predominant wave direction shifts to the west.



SOURCE: CDIP

Ventura Overhead Bridge Replacement Project

Figure 8
Wave Roses indicating change in wave direction and height for offshore location at Harvest (top) and Anacapa Passage (bottom) buoys

2.3.3 Storms and Extreme Events

The site is vulnerable and susceptible to wave overtopping during storm events with high water levels and large waves. However, we found little information documenting overtopping and damages to the site. Figure 9 presents two photos of Emma Wood State Beach south of the project site following a large coastal storm on December 11, 2015. Based on inspection of available data and imagery, the elevations and shore conditions in the picture are similar to those at the project site. The storm event of December 11, 2015, caused considerable damage in the

vicinity, including damage to the Ventura Pier and significant erosion at Surfer's Point, where the City of Ventura declared an emergency. The photos below indicate that overtopping of the backshore moved cobbles, boulders, and other materials, including logs, across the State Park Access Road. Puddles and wet sediment indicate recent significant wave overtopping extending past the landside of the Access Road and onto the bank of the railroad berm.

SOURCE: https://www.tripadvisor.co.nz/ShowUserReviews-g60769-d3785932-r332985921-Emma_Wood_State_Beach-Ventura_California.html

Ventura Overhead Bridge Replacement Project

Figure 9
Storm Damages after December 11, 2015, Storm

Storm impacts to the project site and vicinity are documented from a large winter storm that occurred on January 18, 1988 (also referred to as the Great Storm of January 1988). The storm caused overtopping of Highway 101 in the vicinity of Emma Wood State Beach and covered the roadway with sand, cobbles, and debris (Armstrong and Flick 1989). The January 1988 storm event was an exceptionally strong event, with waves measured at 33.4 feet and 15 seconds offshore of the Channel Islands (Seymour 1989). The January 1988 storm was determined to result in the highest total water level computed in our analysis below.

2.3.4 Existing FEMA Flood Insurance Rate Map

The project is not located in an existing FEMA floodplain but is adjacent to FEMA designated special flood hazard areas "VE," which is a flood hazard area with high velocity hazards and wave heights greater than 3 feet. Figure 10 shows the project site on a FEMA Flood Insurance Rate Map (FIRM) that depicts the VE zones for a 1-percent-annual-chance of flooding for any given year, also described as the Base Flood Elevation (BFE). The FEMA FIRM reports a VE zone with elevation 20 feet NAVD for areas along the northern bridge approach embankment, indicating that the State Park Access Road is overtopped during the 100-year event but the Highway 1 roadway remains outside of the FEMA hazard area. The FEMA FIRM reports a VE zone with elevation 19 feet NAVD for areas adjacent to the bridge and along the southern bridge approach embankment. Note that most of the shore and a portion of the State Park Access Road is within the 100-year flood hazard zone mapped by FEMA. Although the project is not located in a 100-year flood hazard area mapped by FEMA, application of the CCC (2018) guidance recommends planning and designing the project for the future coastal hazards with sea-level rise.

SOURCE: FEMA NFHL Viewer

Ventura Overhead Bridge Replacement Project

Figure 10
Existing FEMA Flood Insurance Rate Map for Project Site

2.4 Climate Change and Sea-Level Rise

This section includes a description of the sea-level rise scenarios that were selected for this study and used in the wave runup analysis presented in Section 4, as well as a brief discussion on climate change and its effects on extreme storm events.

2.4.1 Sea-Level Rise Projections

Projections of sea-level rise vary along the coast of California due to the regional oceanic effects as well as vertical land motion (VLM). Beside varying geographically, the projections also vary based on the choice of future global emissions scenarios (greater levels of carbon emissions relate to higher sea-level rise). Table 2 presents sea-level rise projections for the local Santa Barbara tide gauge as tabulated by the CCC (2018) for low, medium-high, and extreme risk aversion scenarios.

TABLE 2
SEA-LEVEL RISE PROJECTIONS FOR SANTA BARBARA TIDE GAUGE IN FEET

Year	Low Risk Aversion[a]	Medium-High Risk Aversion[b]	Extreme Risk Aversion[c]
2030	0.4	0.7	1.0
2040	0.7	1.1	1.6
2050	1.0	1.8	2.5
2060	1.3	2.5	3.6
2070	1.7	3.3	4.9
2080	2.1	4.3	6.3
2090	2.6	5.3	7.9
2100	3.1	6.6	9.8
2110	3.2	6.9	11.5
2120	3.7	8.2	13.7
2130	4.2	9.5	16.0
2140	4.8	11	18.6
2150	5.3	12.6	21.4

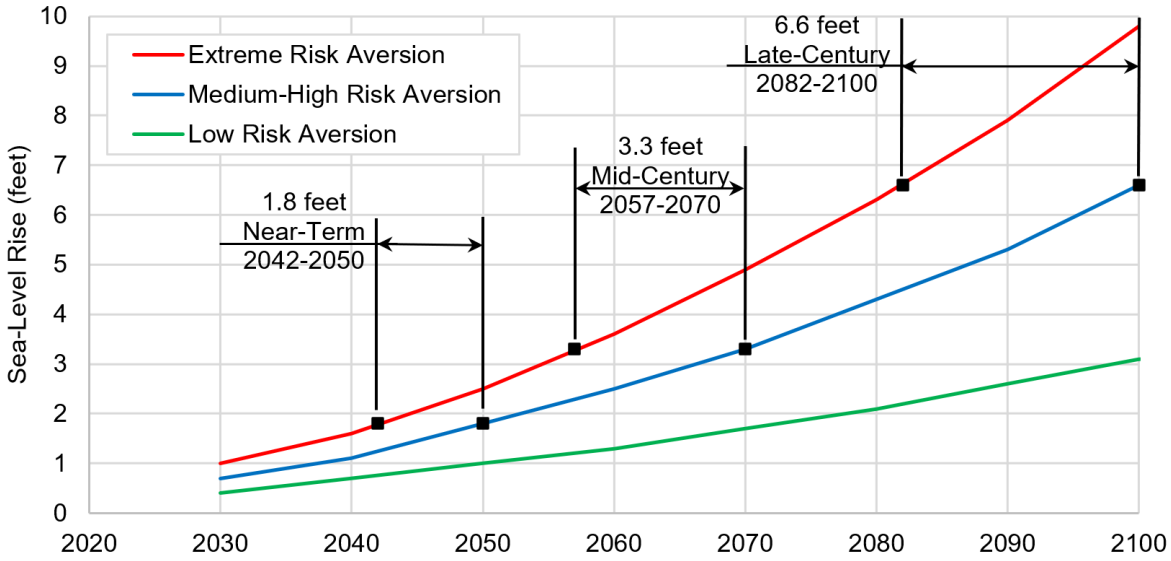
NOTES:
a. The low risk aversion projection is a probabilistic projection based on Kopp et al. (2014) and is described as the upper limit of the "likely range," for which there is a 17% probability that sea-level rise would exceed the projected value by the corresponding time.
b. The medium-high risk aversion is a probabilistic projection based on Kopp et al. (2014) and is described as having a 1-in-200 chance (0.5% probability) that sea-level rise would exceed the projected value by the corresponding time.
c. The extreme risk aversion, also referred to as the H++ Scenario, is based on Sweet et al. (2017), and is described as a single scenario with no associated probability and representative of a worst-case sea-level rise scenario associated with catastrophic melting of the Western Antarctic ice sheet.

SOURCE: OPC 2018, CCC 2018

The state guidance includes three projections associated with low, medium-high, and extreme risk aversion projections to be used accordingly for projects that have high to low levels of adaptive capacity, respectively. The low risk aversion projection is considered the "likely" range of sea-level rise and is associated with a 17% chance of occurrence (based on the range of climate model results). The medium-high risk aversion projection is associated with a 0.5% chance of occurrence and is considered a conservative approach for projects with relatively low adaptive capacity. The extreme risk aversion is a worst-case scenario without an assigned probability and is based on the maximum physically plausible sea-level rise increase due to rapid ice sheet loss on Antarctica. The state has required use of the extreme risk aversion projection for analyzing critical infrastructure.

Figure 11 presents the state's sea-level rise projections for each risk aversion scenario and selected sea-level rise analysis scenarios. The near-term, mid-century, and late-century time frames are selected to conform with planning and design time frames. The time frames relate to the project's expected life of 75 years as described in Section 1.1. The range of sea-level rise for each time frame is provided to inform selection of design criteria and development of options to adapt to higher sea levels. For example, recent state guidance for critical transportation infrastructure recommends assessing a project's performance and resilience under the medium-high risk aversion scenario as well as the extreme risk aversion scenario. These are intended to

help a project design incorporate how it may be adapted in the future, such as by providing accommodation space for a roadway to be elevated or relocated.



SOURCE: OPC 2018, CCC 2018

Ventura Overhead Bridge Replacement Project

Figure 11
Sea-Level Rise Projections and Selected Analysis Horizons

2.4.2 Climate Change Implications on Extreme Storm Events

Although climate change is expected to have significant effects on sea-level rise and global circulation patterns, its direct implications on individual storm tracks and wave energy affecting California is less understood. As summarized above, both extratropical and tropical storm events have historically impacted Southern California. There is some indication that climate change may increase the intensity of storms, but implications on the storm tracks are not clear. Modeling of projected storms and waves in the North Pacific that leverages output of the global circulation models show small or no increase in projected storm surge and wave activity through 2100 along the California coast (Bromirski et al. 2012; Erikson et al. 2015). These studies focused on extra-tropical storm systems while recent research indicates that tropical storms may increase in intensity and frequency (Zhang et al 2017) and southern California has experienced tropical storm land fall within the period of record (Seymour et al 1984). Although the magnitude of changes in surges and waves appear to be limited, sea-level rise will greatly increase the damages to the coasts during extreme storms (Cayan et al. 2008).

3 WAVE RUNUP ANALYSIS

This section presents details on the methods used for estimating elevations and landward extents of wave runup along with information on wave and water level data collection for response-based analysis. The following sections present:

- An overview of the technical approach that provides context of the parameters and methods.
- The wave runup analysis, including a summary of methods used and the results of the potential extreme wave runup and the landward extents calculations for existing and future conditions with sea-level rise.
- The approach to compile series of wave and still water levels to be applied to the wave runup analysis, including wave transformation from multiple data sources.
- Analysis on the extreme elevation of wave runup, extreme runup landward extents along with coastal flooding caused by wave overtopping.

3.1 Summary of Approach

ESA performed calculations of landward extents and elevations of wave runup using an in-house modeling framework incorporating FEMA (2005) guidelines along with the extreme waves and water levels observed near the project site over the past 118 years.

3.2 Technical Methods

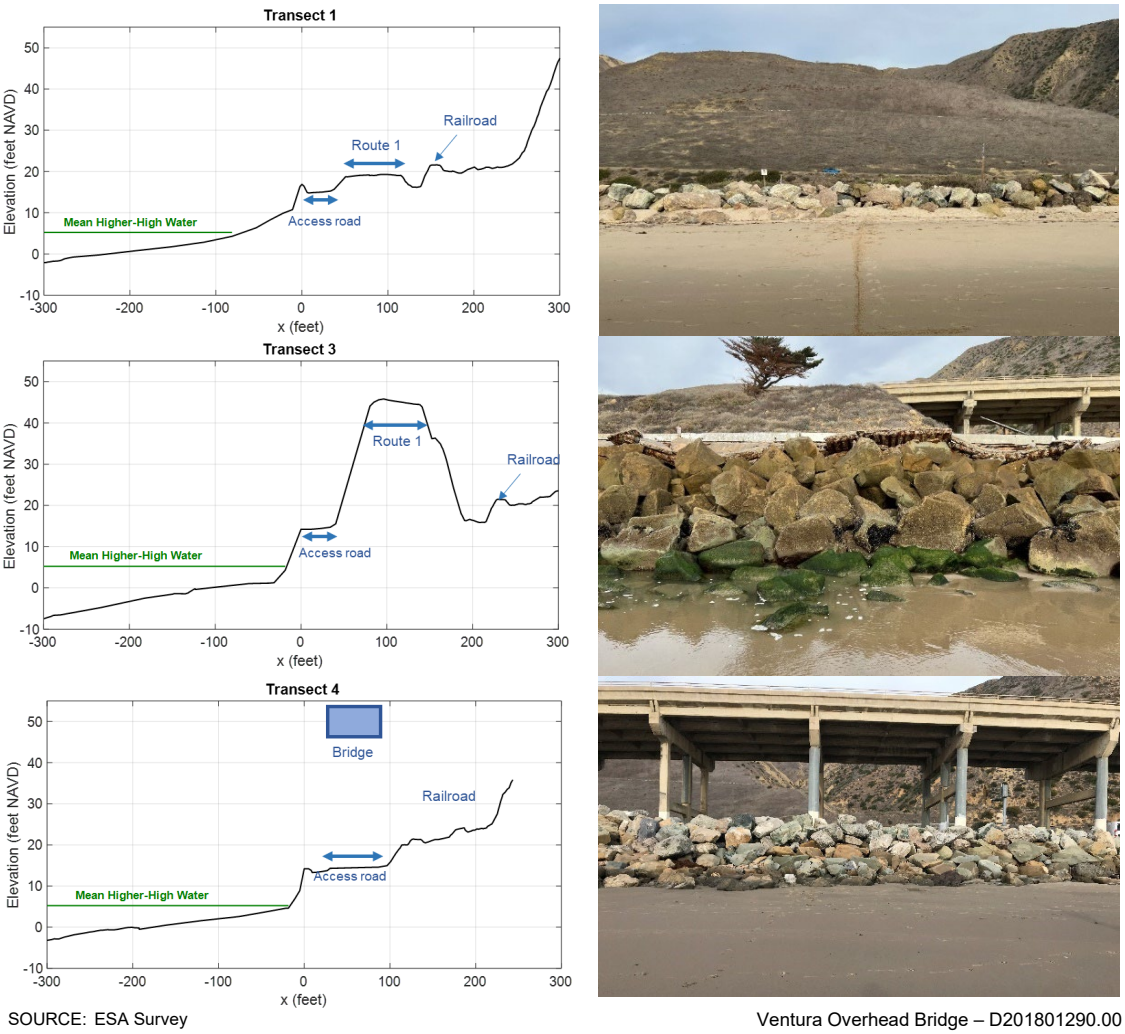
The following sub-sections detail the technical methods employed for wave runup calculations.

3.2.1 Shore Profiles and Shore Geometry

Three representative shore profiles were selected for the wave runup analysis shown in Figure 12. To develop the shore profiles, ESA developed composite profiles from the USACE topo-bathy and the ESA survey data at the locations shown in Figure 5. The selected profiles have the following specifications:

- Transect 1: Located where the Route 1 northern bridge approach transitions to the at-grade highway near the intersection with the State Park Access Road. At this location, the Route 1 roadway is on an earth embankment and the elevation of Route 1 is at 19 feet NAVD.
- Transect 3: Located where the Route 1 northern bridge approach transitions to the bridge, where the Route 1 roadway is on an earth embankment and elevation of Route 1 is at 45 feet NAVD.

- Transect 4: Located underneath the Route 1 bridge, where the proposed bridge deck elevation is approximately 53 feet NAVD and the proposed bridge soffit elevation is 48 feet NAVD. These proposed bridge elevations are shown in Figure 12. This transect is coincident with the railroad passing through the overhead bridge.



SOURCE: ESA Survey

Ventura Overhead Bridge – D201801290.00

Figure 12
Surveyed transects (left) used for wave runup analysis along with the corresponding site photos (right) facing landward along each profile

Based on the guidelines provided in Battalio et al. (2016), runup calculations with sea-level rise require the beach profiles to be adjusted to account for shoreline retreat due to long-term erosion with future projected sea-level rise. ESA completed a preliminary analysis of the effect of profile adjustment for sea-level rise projections using the Bruun rule (Bruun 1964), in which the beach profile retreats as a function of projected sea-level rise value and the nearshore slope. Figure 13 shows the adjustments of Transect 3 to the projected sea-level rise values using the Bruun rule. ESA found that profile adjustment for sea-level rise projections at this specific site have negligible effect on the runup calculations using composite slope method, and in fact using the existing shore profile yielded a conservatively higher value due to the deeper existing condition.

Therefore, wave runup calculations for existing and future conditions with sea-level rise were made using the existing shore profile without translation.

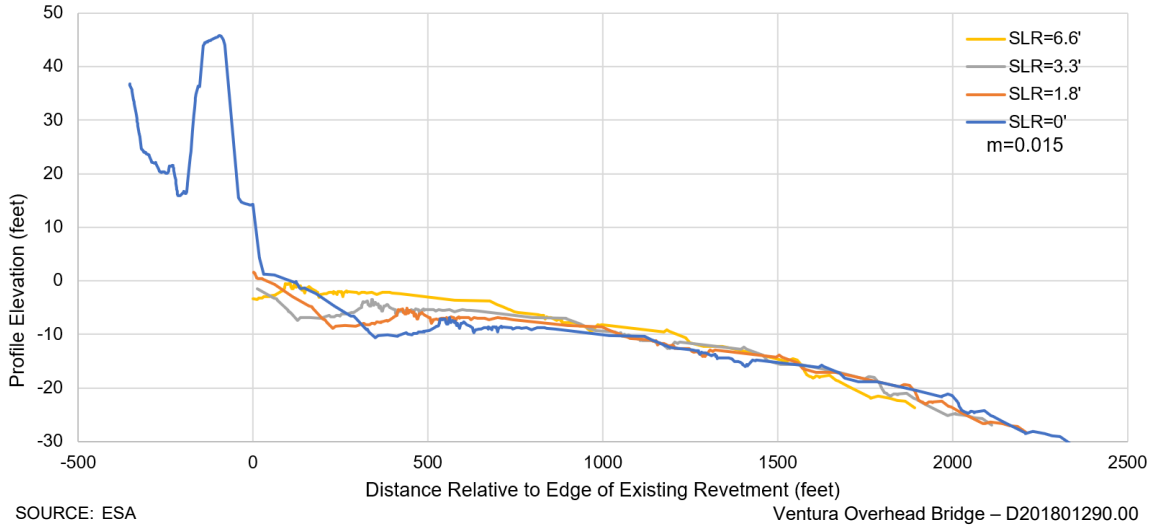


Figure 13
Geomorphic response of Profile 3 to sea-level rise using Bruun rule translation

The applicability of the Bruun rule profile translation at this site is questionable due to the reef located offshore of the site (shown approximately at distance 500 feet offshore of the revetment), and the possibility of large deposits of cobbles in the area. Because the reef is not expected to adjust with sea-level rise, and the behavior of cobbles in the nearshore is different than sand, estimating the geomorphic response of the shore to sea-level rise at this location is complex. It is possible that the reef could serve as an anchor point, facilitating more deposition in the nearshore intertidal zone than is apparent for existing conditions based on inspection.

The profile response described above assumes that the existing armor is maintained at the edge of the State Park Access Road, and the shore at the revetment and landward is not allowed to erode. The conditions of the existing revetment show significant wear and aging, including erosion and damage to parts of the roadway. In the event that the armor was removed and the State Park Access Road is retreated, the shore would likely quickly adjust and require armoring of the northern bridge approach (currently a relatively steep, vegetated, earth embankment) to prevent erosion impacts to the Route 1 roadway. Additional discussion of the implications of this scenario on wave runup elevations is presented in Section 3.5.3 below.

3.2.2 Wave Runup Parameters

As waves propagate shoreward, they lose energy due to nearshore processes such as wave breaking. However, a fraction of the incoming wave energy is transferred further landward causing intermittent bores crossing the shoreline and imposing hazards in the backshore. Figure 14 presents a definition sketch of the wave runup and the related parameters from the *Technical Methods Manual (TMM) for Relating Future Coastal Conditions to Existing FEMA Flood Hazard Maps* prepared for the California Department of Water Resources and the California Ocean Science Trust (Battalio et al. 2016). The sketch illustrates the concepts that are used to determine extreme wave runup hazards at a project site, consistent with the FEMA (2005) guidance:

1. "Wave A" represents the offshore wave conditions, which induces high wave setup (i.e., a super-elevation of the water surface across the surf zone) that increases the depths above the reference water level (RWL). The RWL is similar to the still water level (SWL) that is often used in the literature to refer to the water level not affected by the incoming waves.

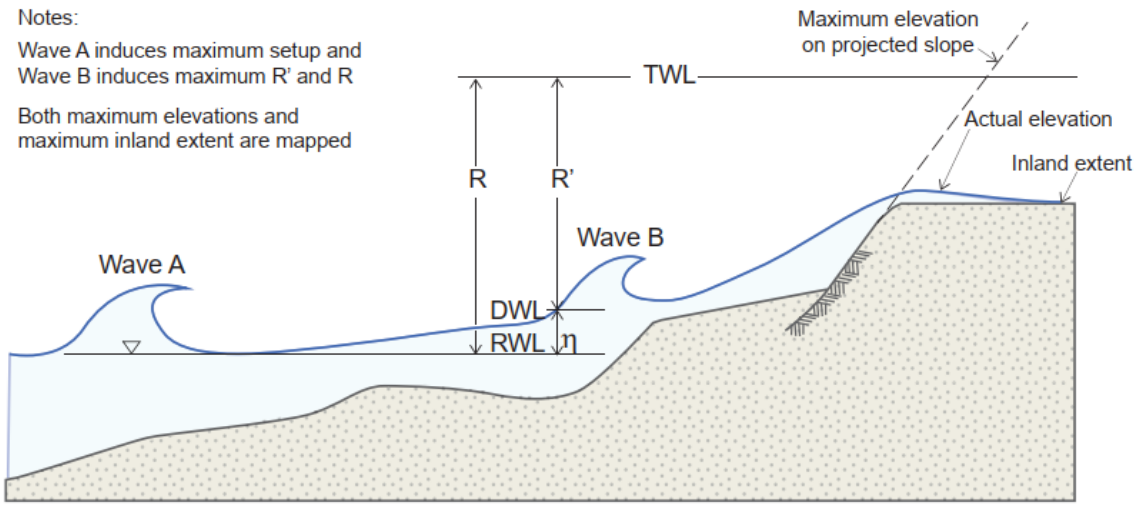
2. The relatively deeper water in the surf zone, referred to as the dynamic water level (DWL), allows depth-limited waves ("Wave B") to propagate closer to shore.

3. Wave B breaks in the surf zone and induces the maximum[2] runup on a projected backshore slope, shown as the dashed line. The potential maximum runup elevation also called the total water level (TWL), is used to define the FEMA 100-year base Flood Elevation (BFE). In subsequent discussion and figures, this potential elevation is also called *potential TWL*.

4. The actual wave runup (if greater than the backshore elevations) will overtop the barrier and rush landward to a location of maximum inland extent. This is another parameter that is mapped as a hazard zone by FEMA. In subsequent discussion and figures, this is called the *inland extent*.

The use of the two wave runup extent measures called here *potential TWL* and *inland extent* is beneficial to inform flood plain management, planning, and design. The potential TWL is a theoretical maximum wave runup that could be achieved if the area was filled. FEMA uses the potential TWL to define the FEMA base flood elevation for a V-zone (i.e., high-velocity hazard zone used by FEMA), which indicates how high a living or working space would need to be in order to avoid damages, presuming that fill or another obstruction may be located in the vicinity and cause the runup to extend higher (FEMA 2005). The inland extent is the landward limit of wave runup, thus defining the coastal flood plain. The height and extent of runup depends on the shore profile, which often changes with development. Providing the potential TWL and inland extent provide the potential vertical and horizontal dimensions of the wave runup hazard, where anything located within the space defined by these two dimensions may be subject to damage or injury during the flood event. Wave and water level parameters (e.g., significant wave height, wave period, and coincident still water level) of selected events were used as inputs to a runup program, which is valid for a range of profile configurations.

[2] Note that the use of "maximum" in this report refers to the maximum calculated parameter for a particular storm or wave event analyzed. Higher wave runup and other parameters may be possible in more extreme events (e.g., 500-year or greater events).



TWL = Total water level = RWL + R

RWL = Reference water level ~ still water level

DWL = Dynamic water level, typicallly 2% exceedence ~ mean setup (aka "static") + 2x standard deviation

η = 2% setup at RWL shoreline, wave A

R = runup, including setup, above RWL, wave B typically on projected slope above back shore

R' = runup, not including setup, above RWL, wave B typically on projected slope above back shore

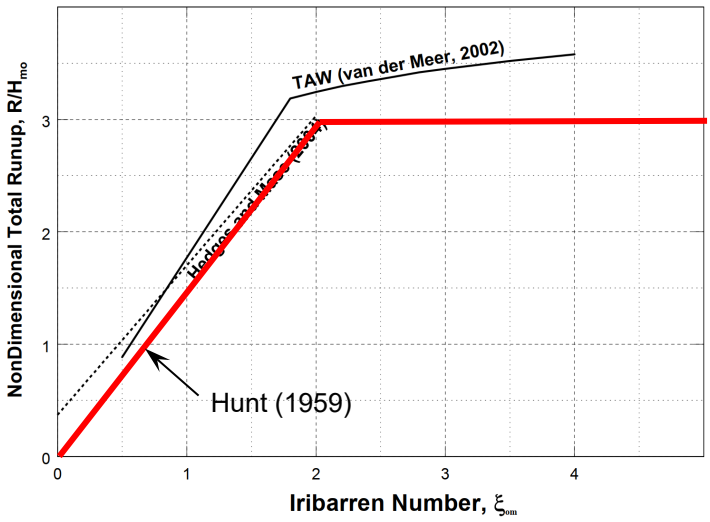
SOURCE: Technical Methods Manual (Battalio et al. 2016)

Ventura Overhead Bridge Replacement Project

Figure 14
Definition sketch of wave runup parameters

3.2.3 Composite Slope Method

The runup program known as the "Composite Slope Method" developed by ESA and consistent with FEMA guidelines, was used to iteratively calculate the wave runup elevation and inland extent by obtaining the dynamic water surface profile along each representative cross-shore transect and the cross-shore distribution of nearshore depth-limited waves. The dynamic water level (DWL, see the sketch in Figure 14) is the elevated water level close to the shoreline that is generated by sets of waves (or wave groups), which cause super-elevation of these water levels. Wave runup is computed using the method of Hunt (1959), which is based on the Iribarren number (also called the surf similarity parameter; Battjes 1974), a non-dimensional ratio of shore steepness to wave steepness. The runup is limited to a maximum of about three times the incident wave height, which is generally consistent with other methods that rely on the Iribarren number, as depicted in Figure 15. While there are a variety of runup equations (including TAW; Delft 2002), they provide a range of results, and hence the Hunt (1959) method was selected because it is the simplest and most direct.



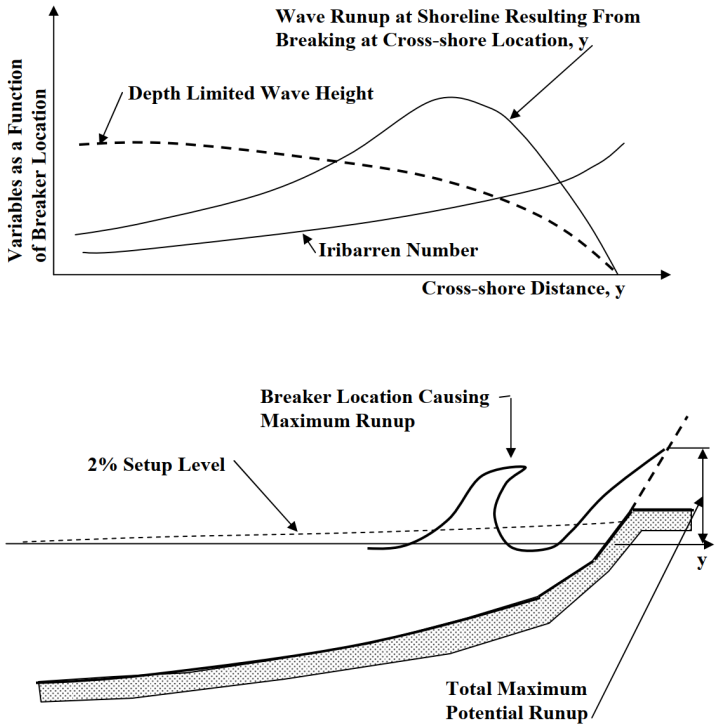
SOURCE: Modified from FEMA (2005)

Ventura Overhead Bridge Replacement Project

Figure 15
Non-dimensional wave runup as a function of Iribarren number for different wave runup models (Hunt 1959 used in this study)

The program also uses the Direct Integration Method (DIM) to estimate the static and dynamic wave setup and resulting high dynamic water surface profile (FEMA 2005). The methodology is consistent with the FEMA Guidelines for Pacific Coastal Flood Studies for barrier shores, where wave setup from larger waves breaking farther offshore and wave runup directly on barriers combine to generate the highest total water level and define the flood risk (FEMA 2005).

This program also incorporates overland and structure surface roughness, which act as friction on the runup of the waves, thus reducing the extent of wave runup. This method also uses a composite slope technique as described by Saville (1958) and outlined in the *Shore Protection Manual* (USACE 1984) and *Coastal Engineering Manual* (USACE 2003). Figure 16 presents a schematic of the composite slope methodology and parameters. The largest waves incident to the site will set up the dynamic water level (shown as 2% water level), which then allows for smaller depth-limited waves to propagate further toward shore and result in the maximum wave runup at the shoreline. As described above, the process is iterative and requires stepping through the profile across the entire surf zone to the shoreline to find the maximum wave runup.



SOURCE: FEMA (2005)

Ventura Overhead Bridge Replacement Project

Figure 16
Example of composite slope parameters and methodology: maximum runup caused by intermediate depth-limited wave

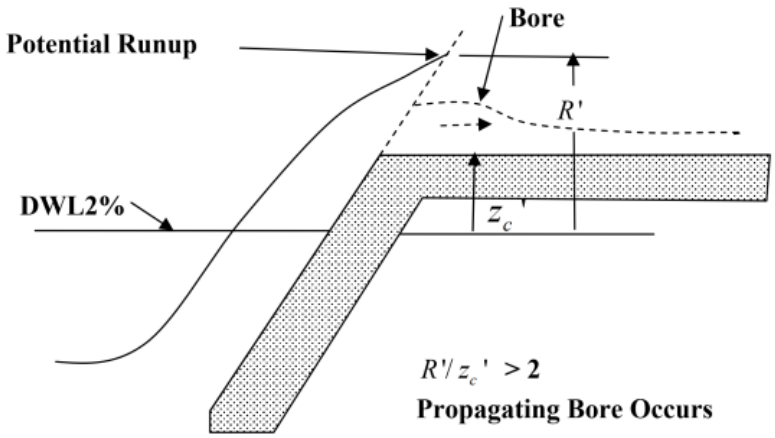
3.2.4 Wave Overtopping, the Cox-Machemehl Method

Wave overtopping occurs when the runup elevations exceed the beach crest (here the top of the revetment). Figure 17 presents a sketch of wave overtopping parameters at a barrier from FEMA (2005), which are used in the computation of the landward extents of the wave overtopping. The schematic illustrates how splash and bore water surfaces relates to the potential wave runup. Note that the computed TWL is the potential wave runup and may exceed water's actual elevation.

The Cox-Machemehl method is recommended by FEMA (2005) to calculate the landward extents of wave overtopping assuming bores generated at the beach crest, where the bore height (h) landward of the beach crest is calculated as follows:

$$h(y) = \left[\sqrt{h_o} - \frac{5(y - y_o)}{A\sqrt{gT^2}} \right]^2$$

where, h_0 is the bore height at the beach crest (the top of the revetment in simulated transects), y denotes the cross-shore coordinate (positive landward), y_0 is the cross-shore location of beach crest. Parameter A is a calibration coefficient set to 4 for this project site to match the landward extents computed in the composite slope method, and from estimates based on the photographs of the site following the December 11, 2015, storm (see Figure 9).



SOURCE: FEMA (2005)

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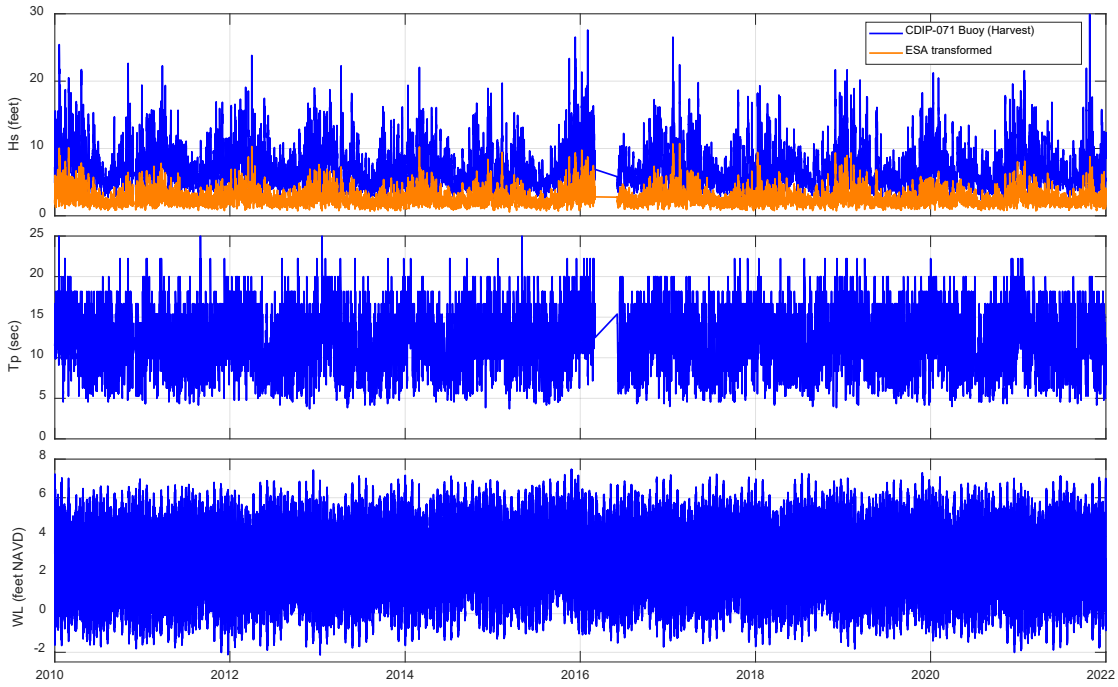
Figure 17
Definition sketch and parameters of wave overtopping over coastal barrier and bore generation

3.3 Compilation of Wave and Water Level Data

The following sub-sections provide a basis for selection of the waves and water level data used in the wave runup analysis, and a description of the technical methods selected to compute the existing and future conditions wave runup for the analysis.

3.3.1 CDIP Transformed Time Series (2010-2022)

ESA performed transformation of offshore waves from CDIP 071 (Harvest) buoy[3] located at an offshore deep water location northwest of the project site at the depth of 1,831 feet. The Harvest buoy is located southwest of Point Conception and is fully exposed to swells from the North and South Pacific. The transformation of offshore waves to the refracted nearshore waves were performed using the transformation coefficients obtained from prior ESA work (ESA 2013), which simulated shoreward propagation of deep water waves using the SWAN model and covered the present project site. Figure 18 shows the deep water wave height (top panel) recorded at CDIP 071 buoy along with ESA transformed/refracted wave heights and the wave periods (center panel). The bottom panel shows the coincident "verified" water levels (including tides and storm surge) recorded at NOAA-9410840 (Santa Monica, CA) tide gauge for the period of time coincident with wave data from 2010 to the beginning of 2022.



SOURCE: CDIP, NOAA, and ESA

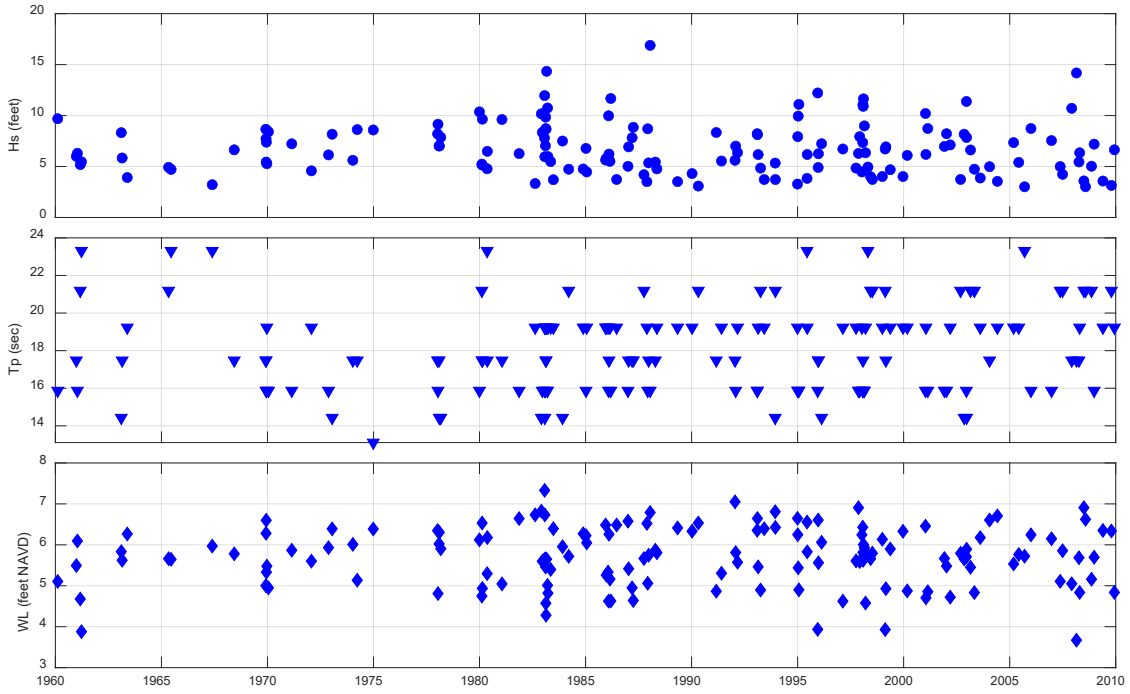
Ventura Overhead Bridge Replacement Project

Figure 18
Significant wave height at offshore and nearshore (top); peak wave period at offshore buoy (middle); verified hourly water levels from Santa Monica tide gauge (bottom)

3 https://cdip.ucsd.edu/m/products/?stn=071p1&param=waveHs

3.3.2 FEMA-IDS3 Data (1960-2009)

As a part of FEMA's Open Pacific Coast Study, Intermediate Data Submittal #3 (IDS3) (FEMA 2021) covering the present project site, nearshore wave hindcast data was developed for the period from 1960 to 2009 from SIO SHELF wave model, which transforms offshore waves (~1000 m water depth) to the nearshore waves at the edge of surf zone (~10 m water depth). FEMA used GPD/POT (Generalized Pareto Distribution with peaks-over-thresholds) distribution for statistical analysis of the time series of total water levels (TWLs) calculated from coincident wave heights and water levels and reported multiple peak events within each year. Figure 19 shows data points of peak TWLs reported by FEMA including the transformed wave heights (top), wave period (middle), and still water levels (bottom).



SOURCE: ESA, FEMA-IDS3

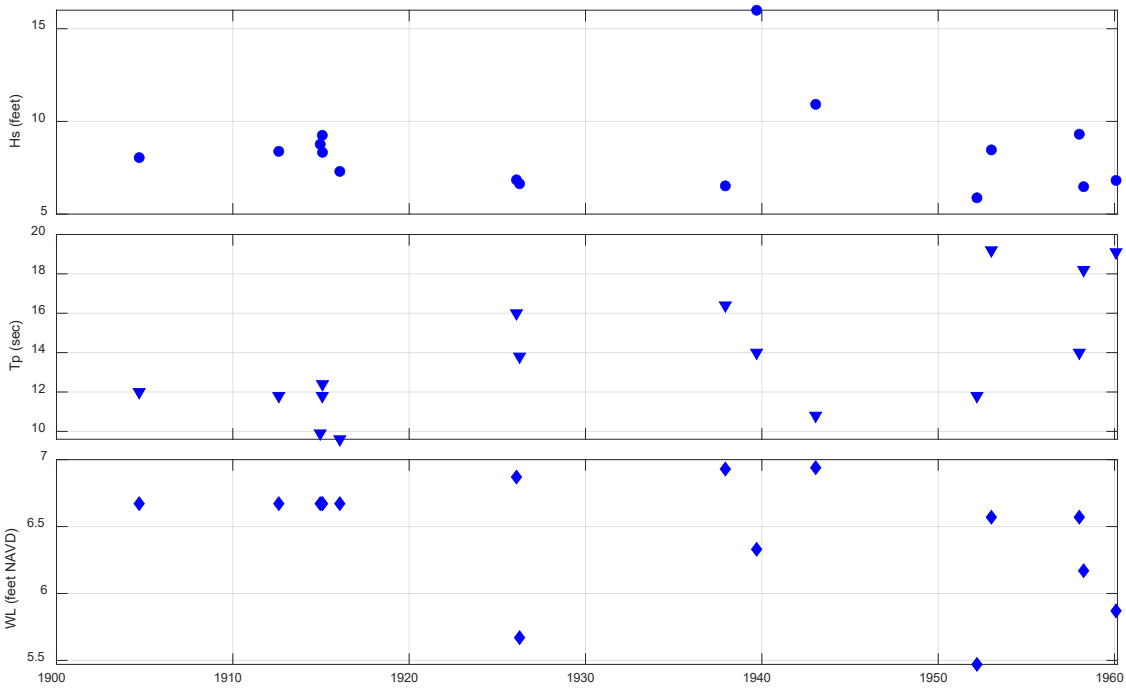
Ventura Overhead Bridge Replacement Project

Figure 19
Wave heights, peak periods, and water levels from FEMA-IDS3 data base for transect VE-506

3.3.3 Historical Hindcast Data (1904-1960)

To extend the nearshore record of annual maximum events, a record of the maximum historical events in Southern California dating from 1904 to 1960 were reviewed, transformed from deep water to the project site, and selected for use in the wave runup analysis. The hindcast data tabulated by Walker et al. (1984) were originally intended to update the standard coastal design criteria for Southern California after the damaging storms of 1983. The study found that the design wave height for a given recurrence interval had significantly increased, wave periods were much longer than previously considered, and the extreme wave conditions typically coincided with extreme water levels. The study included tables of the wave height, period, and direction for

the most extreme storms that occurred in the 20th Century prior to 1983. These bulk parameters (i.e., significant wave height, period and direction) are representative of the deep-water conditions that affect the extents of Southern California, but not the conditions incident to specific reaches of shore. The wave period and direction have significant effects on the transformed wave conditions at a specific location on the shore of Southern California: longer wave periods tend to focus wave energy through underwater canyons and bathymetric-related effects by wave refraction, and some swell directions can be blocked by the Channel Islands. Therefore, to use the hindcast data in the wave runup analysis, the offshore conditions need to be transformed to the project site. ESA used the transformation coefficients from CDIP-MOP portal[4], transect VE-472, which better represents the extreme waves propagating toward the site through Santa Barbara Channel (Figure 20).



SOURCE: ESA, Walker et al. (1984)

Ventura Overhead Bridge Replacement Project

Figure 20
Transformed Wave heights, peak periods, and water levels from historical data

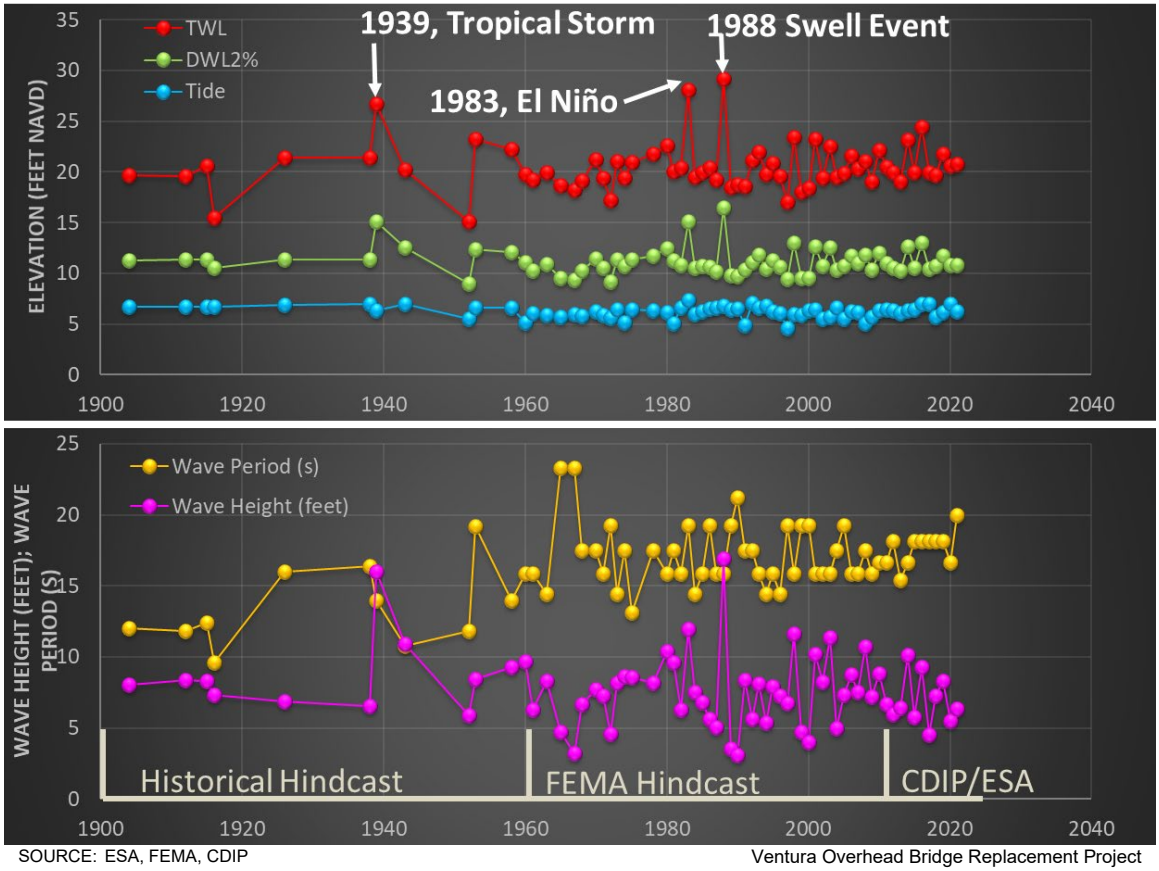
4 https://cdip.ucsd.edu/mops/

3.4 Results

This section provides information on the calculations of wave runup elevations and landward runup extents. Details are given on how ESA used response-based analysis and recurrence plots to estimate extreme runup values considered for design purposes.

3.4.1 Response-Based Analysis

ESA obtained time series of wave runup elevations and inland extents for the record of compiled wave and water level data (Section 3.3). Using the time series, a response-based analysis was used to obtain the annual maximum runup elevations and inland extents along with the corresponding wave heights/periods and water levels. This approach is a useful method for determining the response statistics when a sufficient duration of coincident data (i.e., forcing parameters) is available to develop a realistic time series of responses. Figure 21 shows the annual maximum TWLs calculated for Profile 3 and wave setup elevations ($DWL_{2\%}$) along with the coincident still water levels, wave heights, and wave periods for 66 annual maximum events obtained from response-based analysis.



SOURCE: ESA, FEMA, CDIP

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Figure 21
Time series of annual maximum total water levels (TWL) and wave setup elevations ($DWL_{2\%}$) on Transect 3 along with the coincident still water levels, wave heights and wave periods obtained from response-based analysis

The highest wave runup elevations are the extreme events summarized in Table 3. Also, note that these events have relatively long wave periods, and high water levels. The 1983 and 1988 storms have an offshore direction from the northwest, but the 1939 storm is a tropical storm with a wave direction from the south.

TABLE 3
SUMMARY OF OFFSHORE AND NEARSHORE WAVES AND WATER LEVELS FOR STORMS RESULTING IN TOP THREE ANNUAL MAXIMUM POTENTIAL WAVE RUNUP ELEVATIONS

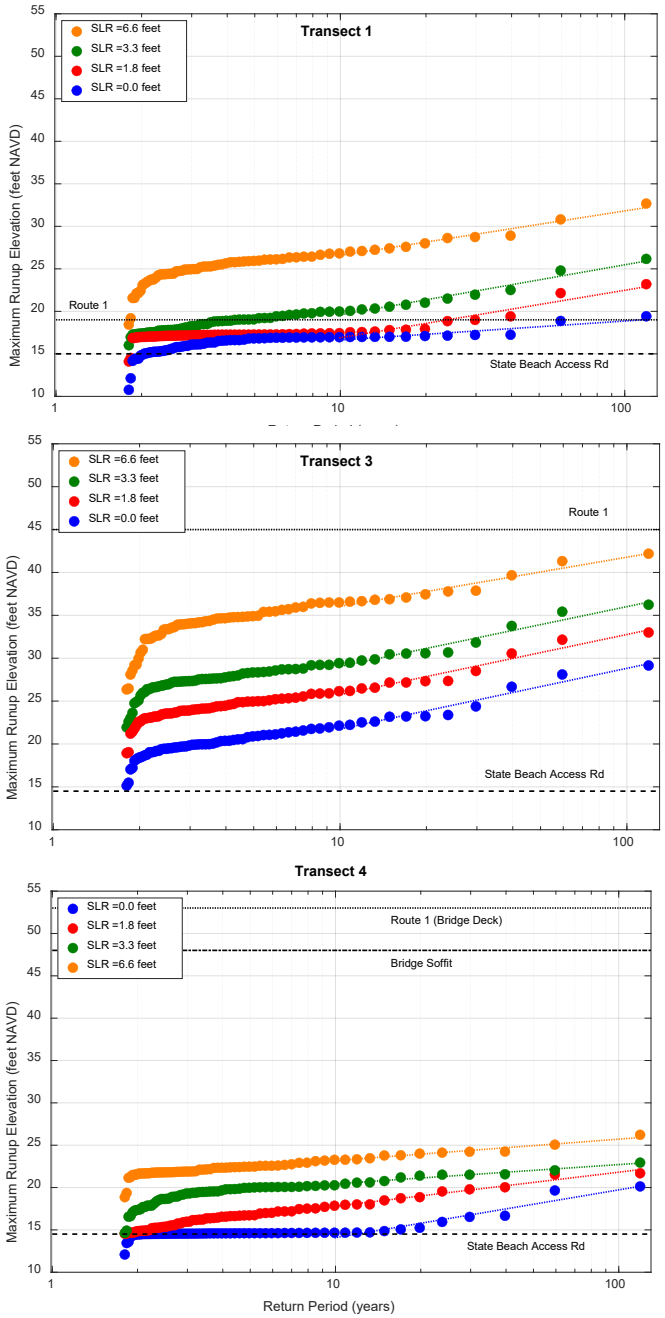
Date	Description	Offshore Waves			Nearshore Waves/Water Level		
		Height (feet)	Period (s)	Direction (deg)	Height (feet)	Period (s)	SWL (feet NAVD)
1/18/88	The Great Storm of January 1988	33.4	15	265	16.9	15.9	6.8
9/25/39	1939 Long Beach Tropical Storm (El Codonazo)	26.9	14	205	16.0	15.0	6.3
1/27/83	January 1983 El Niño	21.0	21	283	12.0	19.2	7.3

To analyze wave runup with sea-level rise, ESA increased water levels by the sea-level rise amounts from Section 2.4.1 and re-calculated annual maximum potential wave runup from 1904 to present using the same methods described in Section 3.2. This response-based analysis of wave runup with sea-level rise captures the non-linear response of wave runup to sea-level rise due to incoming waves propagating over deeper water (i.e., this approach calculates the changes in wave runup with sea-level rise, rather than simply increasing the wave runup elevation by the sea-level rise amount).

3.4.2 Maximum Wave Runup Elevations

Using the annual maximum TWLs for existing conditions (see Figure 21) and calculated for future conditions with sea-level rise, ESA obtained maximum runup elevations for a range of recurrence intervals from 1.8 years to 119 years, reflecting the history of available data (from 1904 to 2022). The runup elevations are reported for the existing conditions along with 1.8 feet, 3.3 feet, and 6.6 feet of sea-level rise. In this analysis, the return period is defined as the reciprocal (or inverse) of the annual exceedance probability. For example, a 100-year return period is an event that has a 1% chance of being exceeded in any given year. It is worth noting that 66 annual maximum events used for recurrence plots are assumed to be representative of the entire 118-year record of data.

Figure 22 shows the maximum TWL results for Transect 1 (top), Transect 3 (middle), and Transect 4 (bottom).



SOURCE: ESA

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Figure 22
Potential maximum runup elevations as a function of return period for three simulated transects

The results of the wave runup elevation recurrence plots for the simulated profiles show the following:

- Transect 1: This transect is located north of the overhead bridge where Route 1 meets the Access Road, and the elevation of Route 1 is relatively low (~19 feet NAVD). Accordingly, Route 1 is expected to be overtopped with a 100-year recurrence under existing conditions and overtopped/flooded with a 30-year, 10-year, and 1-year recurrence with 1.8, 3.3, and 6.6 feet of sea-level rise, respectively.

- Transect 3: This transect is located at the northern approach to the overhead. It is seen that the runup elevations for Transect 3 are generally higher than those calculated for Transect 1 and 4, which can be attributed to the relatively steep embankment (slope 1:1.5) of the bridge approach at Transect 3. However, since Route 1 is relatively high (~45 feet NAVD) at this transect, 100-year recurrence flooding or overtopping of Route 1 is not expected to occur under existing conditions, and is also not expected to occur with 1.8 and 3.3 feet of sea-level rise. Some 100-year recurrence overtopping might occur with 6.6 feet of sea-level rise. Accordingly, the elevation around 45 feet NAVD might be a reasonable value to consider for design purposes.

- Transect 4: This transect crosses the overhead bridge, where the bridge soffit[5] is at 48 feet NAVD. Runup calculations indicate that the Access Road (~14.5 feet) underneath the bridge to get flooded frequently. Results also suggest that runup elevations under existing and future sea level rise conditions can barely reach the soffit. Accordingly, the existing bridge elevation might be reasonable to consider for future design purposes.

The 100-year recurrence runup elevations for under existing and with sea-level rise are reported in Table 4 for the simulated profiles.

TABLE 4
POTENTIAL MAXIMUM WAVE RUNUP ELEVATIONS REPORTED IN FEET NAVD UNDER EXISTING AND SLR CONDITIONS FOR 100-YEAR RECURRENCE INTERVAL

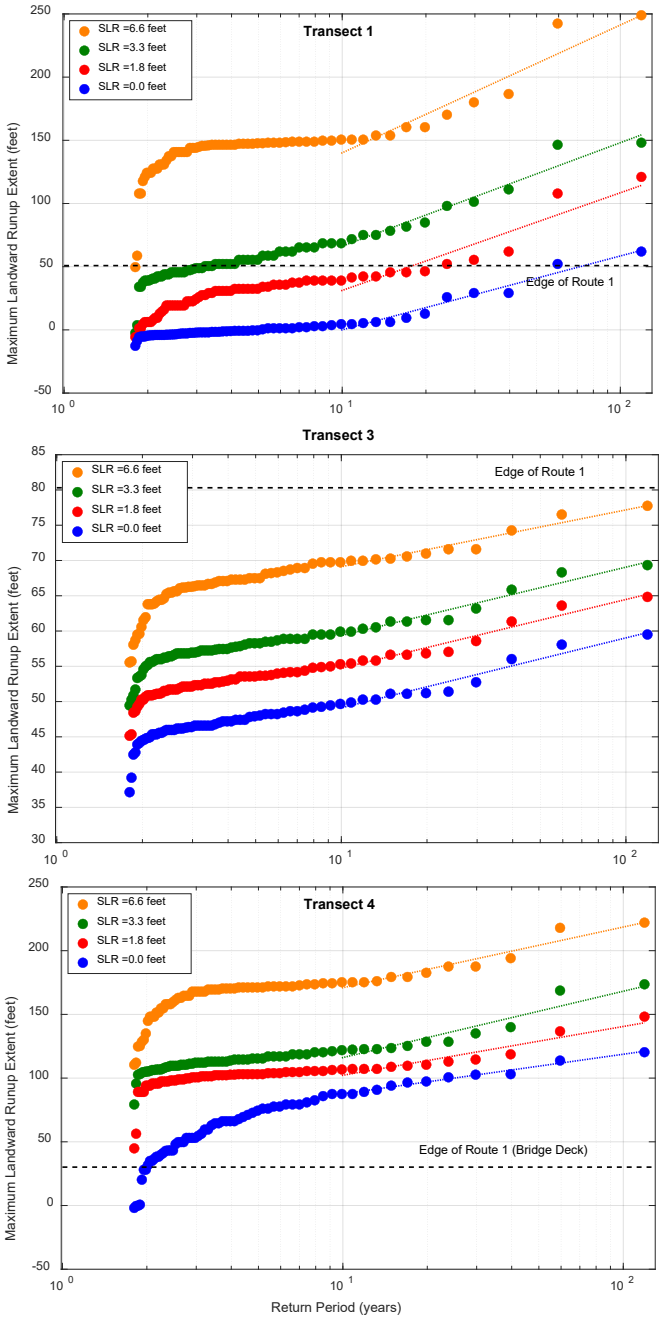
	Existing Conditions	1.8 feet SLR	3.3 feet SLR	6.6 feet SLR
Transect 1	19	22	25	32
Transect 3	29	33	36	42
Transect 4	20	22	23	26

SOURCE: ESA Calculations Using Composite Slope Method

3.4.3 Inland Extents of Wave Runup

The composite-slope methodology was further used to estimate the inland extents of extreme wave runup for 66 annual max events described earlier. Figure 23 shows the maximum inland extent of wave runup for existing and future SLR conditions for the simulated Transects 1 (top), 3 (middle), and 4 (bottom).

5 Soffit refers to the bottom of the bridge



SOURCE: ESA, FEMA, CDIP

Ventura Overhead Bridge Replacement Project

Figure 23
Landward extents (from the top of the revetment) of wave runup as a function of return period for three simulated beach profiles

The results of recurrence plots for the landward extent of wave runup for the simulated profiles show the following:

- Transect 1: In this transect the edge of Route 1 is about 50 feet landward of the top of the revetment. According to the recurrence plots (Figure 23, top) of landward runup extents, 100-year recurrence overtopping of Route 1 is expected under existing conditions. Regarding the future conditions, recurrence plots show 25-year recurrence overtopping of Route 1 with 1.8 feet SLR and annual or more frequent overtopping/flooding with 3.3 and 6.6 feet of sea-level rise.

- Transect 3: In this transect, the edge of Route 1 is about 80 feet landward of the top of the revetment. According to the recurrence plots (Figure 23, middle), Route 1 is not expected to be overtopped under existing conditions and is not expected to be overtopped with 1.8 and 3.3 feet of sea-level rise with the simulated recurrence intervals (1.8 to 118 years). Results suggest some overtopping might occur with 6.6 feet of sea-level rise for the 100-year recurrence interval.

- Transect 4: Recurrence plots for this transect (Figure 23, bottom) suggest that the access road seaward of the bridge is expected to be flooded/overtopped annually or more frequently under existing conditions, as well as future conditions with sea-level rise.

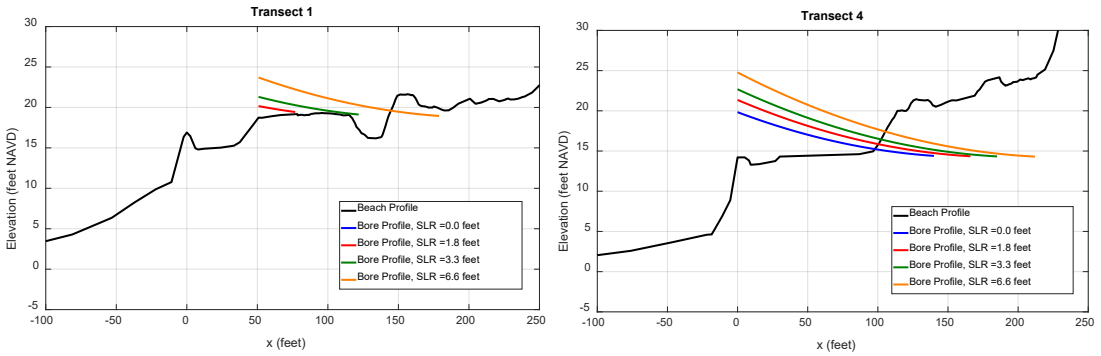
The 100-year recurrence landward extent of wave runup for existing and future conditions with sea-level rise are reported in Table 5 for the simulated profiles.

TABLE 5
POTENTIAL MAXIMUM WAVE RUNUP LANDWARD EXTENT FROM THE TOP OF THE REVETMENT (REPORTED IN FEET) UNDER EXISTING AND SLR CONDITIONS FOR 100-YEAR RECURRENCE INTERVAL

	Existing Conditions	1.8 feet SLR	3.3 feet SLR	6.6 feet SLR
Transect 1	58	108	148	241
Transect 3	59	64	69	77
Transect 4	119	140	168	219

SOURCE: ESA Calculations Using Composite Slope Method

Figure 24 shows the landward extents of the bores calculated from Cox-Machemehl method (Section 3.2.4). The bore elevations at the top of the revetment are calculated as a function of the 100-year wave runup elevations. The trend of landward extents of bores presented in Figure 24 are consistent with the inland extents of wave runup presented in Figure 23, with bores propagating further landward with sea-level rise. For Transect 1, the predicted bore extents (Figure 24, left) are further landward compared to the landward extents from runup calculations (Figure 23, top). For Transect 4, the predicted bore extents (Figure 24, right) are in similar ranges to the corresponding landward extents (Figure 23, bottom). Maximum landward extents of the bores for 100-year recurrence under existing and future conditions with sea-level rise are reported in Table 6 for the simulated transects.



SOURCE: ESA, FEMA, CDIP

Ventura Overhead Bridge Replacement Project

Figure 24
Profiles of overtopping bores calculated from Cox-Machemehl Equation for 100-year recurrence interval under existing conditions and sea level rise

TABLE 6
LANDWARD EXTENTS (FEET FROM THE TOP OF REVETMENT) OF THE OVERTOPPING BORES CALCULATED FROM COX-MACHEMEHL METHOD FOR 100-YEAR RECURRENCE INTERVAL

	Existing Conditions	1.8 feet SLR	3.3 feet SLR	6.6 feet SLR
Transect 1	50	77	122	179
Transect 4	140	166	185	212

SOURCE: ESA Calculations Using Composite Slope Method

The 100-year recurrence runup elevations and inland extents for existing and future conditions with sea-level rise are shown in plan and profile in Figure 25. Each sea-level rise scenario is represented by a different colored dot on each plan view and profile view. The plan view shows the potential maximum inland extent along each respective transect, and the profile view shows the potential maximum runup elevation, TWL, with respect to elevation (NAVD) and SR 1 stationing provided by Caltrans. The elevations and extents increase with sea-level rise and show that the extreme coastal hazards are expected to extend higher and further into the site over time.

The wave runup calculations for Transect 3 estimated the TWL on the embankment slope (northern bridge approach) and the calculations for Transect 4 estimated the TWL on the slope of the railway berm located under the bridge (see Figure 12). Therefore, to estimate the potential maximum TWL at the bridge structure, the dashed lines in the profile (starting at Station 1143+50) represent the potential runup elevation if the embankment (at Transect 3) were to extend south. Results indicate that wave runup does not overtop or reach the bridge structure for existing and future sea-level rise scenarios that we analyzed, but waves are expected to overtop the Route 1 roadway north of the bridge as the northern bridge approach decreases in elevation as it transitions to the existing highway. We also computed wave runup extending to and across the railroad for existing and future conditions with sea-level rise, which could affect the bridge piles.

DWG: P:\01 CAD\18xxxx\D2018012900.03 - Caltrans District 7 Ventura TO Ventura Overhead Bridge\DWG\VENTURA_OVRHD_FIGS_recover000.dwg USER: Amber.Inggs PLOT DATE: 5/3/2022 12:11:04 PM

Note: Solid lines represent the computed maximum potential TWL at selected profiles. Dashed lines represent a projection of Potential Max TWL at Transect 3.

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Figure 25
Plan and Profile with 100-year Total Water Level (TWL)

ESA

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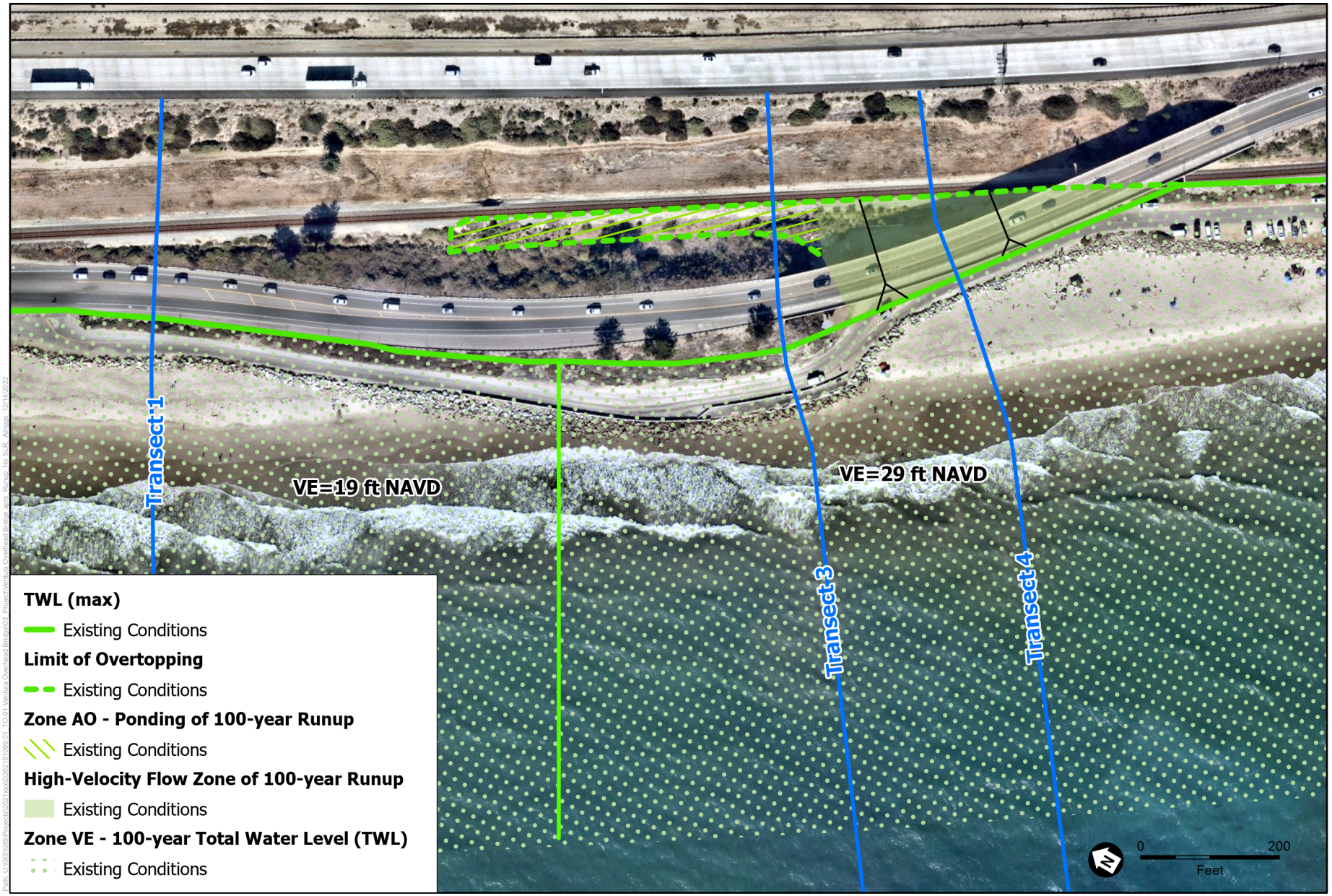
To provide a clear extent of the hazard zones associated with the wave runup and overtopping hazards for existing and future conditions with sea-level rise, we developed a series of FEMA-like hazard maps and shore-normal profiles that indicate the estimated "VE" zone and landward extents of overtopping hazards. Figure 26 presents the 100-year coastal hazards for existing conditions (i.e., no sea-level rise). Note that the computed TWL elevations and VE zone designations are similar to those in the existing FEMA FIRM (see Figure 10) along the northern bridge approach embankment but differ under the bridge at Transect 4, where the ESA methods computed wave overtopping extending inland toward the railroad. Figure 27 presents the 100-year coastal hazard zones for future conditions with 1.8 feet of sea-level rise. Figure 28 presents the 100-year coastal hazard zones for future conditions with 3.3 feet of sea-level rise. Figure 29 presents the 100-year coastal hazard zones for future conditions with 6.6 feet of sea-level rise. For each subsequent sea-level rise case, the wave hazards extend further landward, and the AO zone grows as more waves overtop the shore and fill the low areas between the Highway 1 and Highway 101 embankments.

Figure 30 presents flood profiles at Transects 1, 3, and 4 showing VE zones and high velocity flow zones. The top panel is for Transect 1 at the northern extent of the northern bridge approach embankment; the middle panel is for Transect 3 at the transition from the northern bridge approach embankment to the northern bridge abutment; the bottom panel is for Transect 4 located under the bridge. Each panel includes flood profiles for existing and future conditions with sea-level rise, denoted by the different colors. The VE zone represents the wave runup zone up onto the projected slope selected for the analysis. The dashed colored lines represent the bore profiles computed from wave overtopping using the Cox-Machemehl equation. These landward extents correspond to the mapped extents of wave runup in Figures 26 through Figure 29.



SOURCE: Nearmap

1. Elevations are in feet NAVD vertical datum. The acronym TWL is for total water level.
2. Flood zones depicted in map use FEMA flood zone designations but are not FEMA flood hazards. Hazard areas are approximate and for planning purposes by Caltrans only. ESA makes no warranty, express or implied, as to the accuracy of such opinions as compared to actual future conditions.

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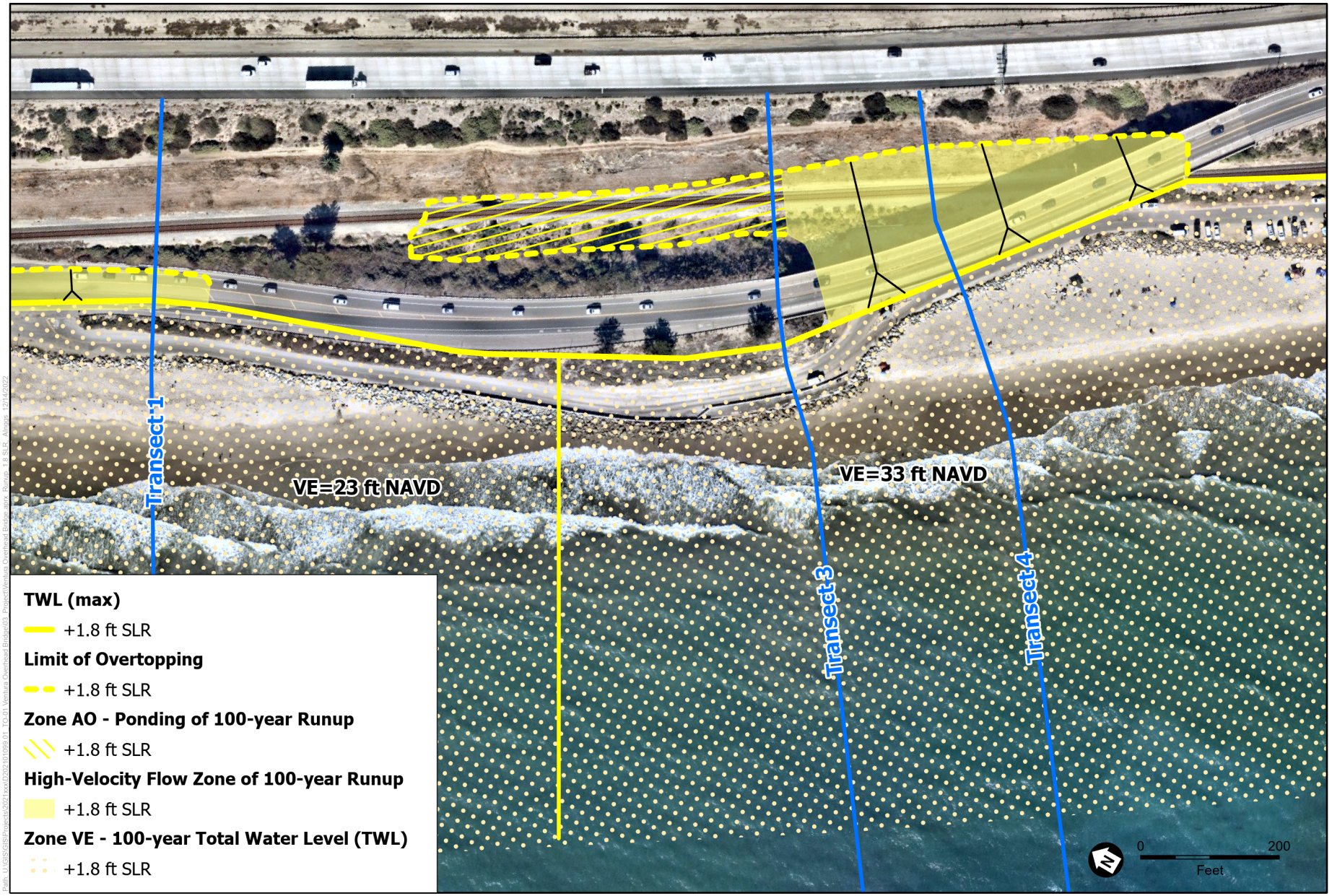
Figure 26
Existing Coastal Hazards During 100-yr Event



SOURCE: Nearmap

1. Elevations are in feet NAVD vertical datum. The acronym TWL is for total water level.
2. Flood zones depicted in map use FEMA flood zone designations but are not FEMA flood hazards. Hazard areas are approximate and for planning purposes by Caltrans only. ESA makes no warranty, express or implied, as to the accuracy of such opinions as compared to actual future conditions.

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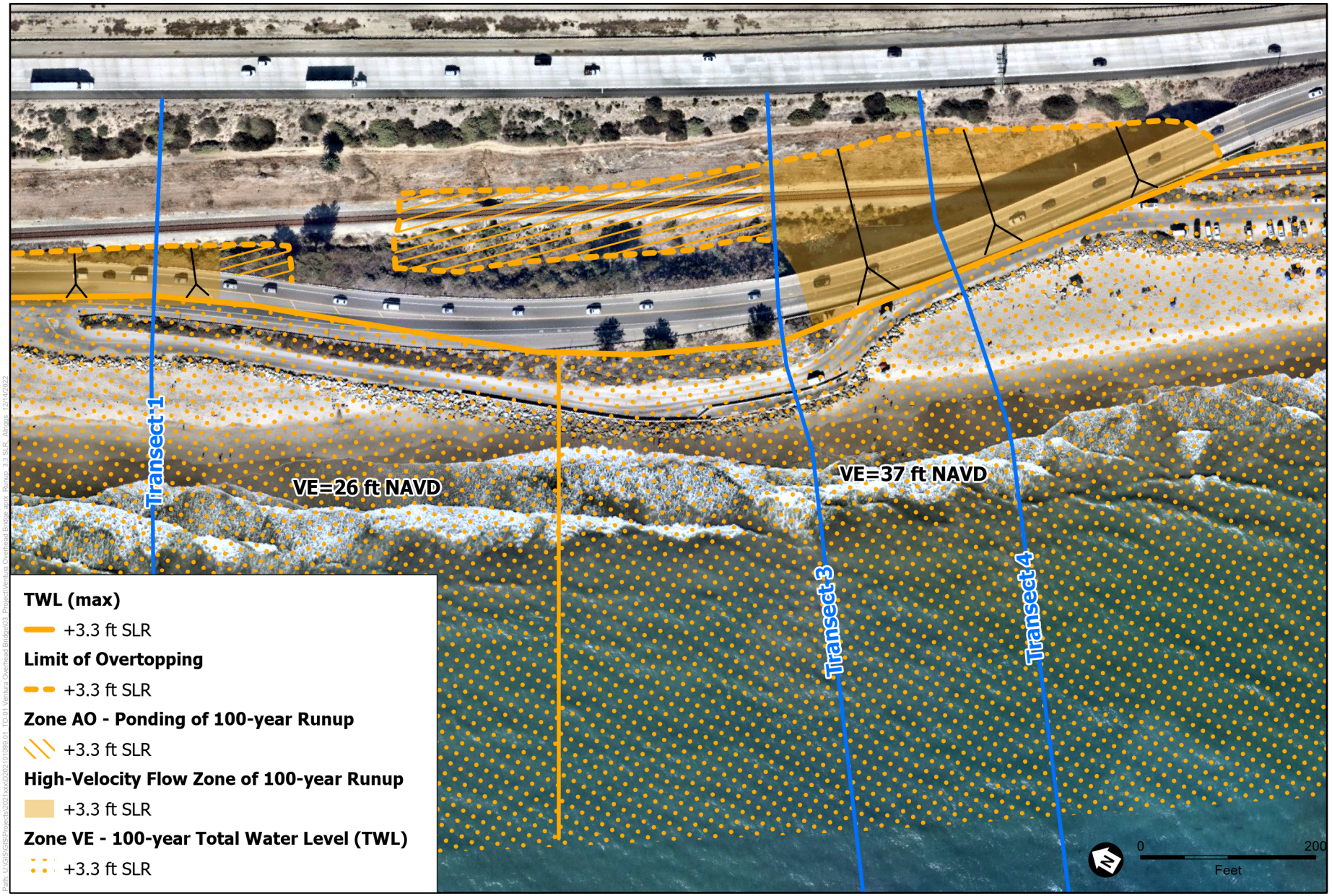
Figure 27
Coastal Hazards with 1.8 ft of Sea-Level Rise During 100-yr Event



SOURCE: Nearmap

1. Elevations are in feet NAVD vertical datum. The acronym TWL is for total water level.
2. Flood zones depicted in map use FEMA flood zone designations but are not FEMA flood hazards. Hazard areas are approximate and for planning purposes by Caltrans only. ESA makes no warranty, express or implied, as to the accuracy of such opinions as compared to actual future conditions.

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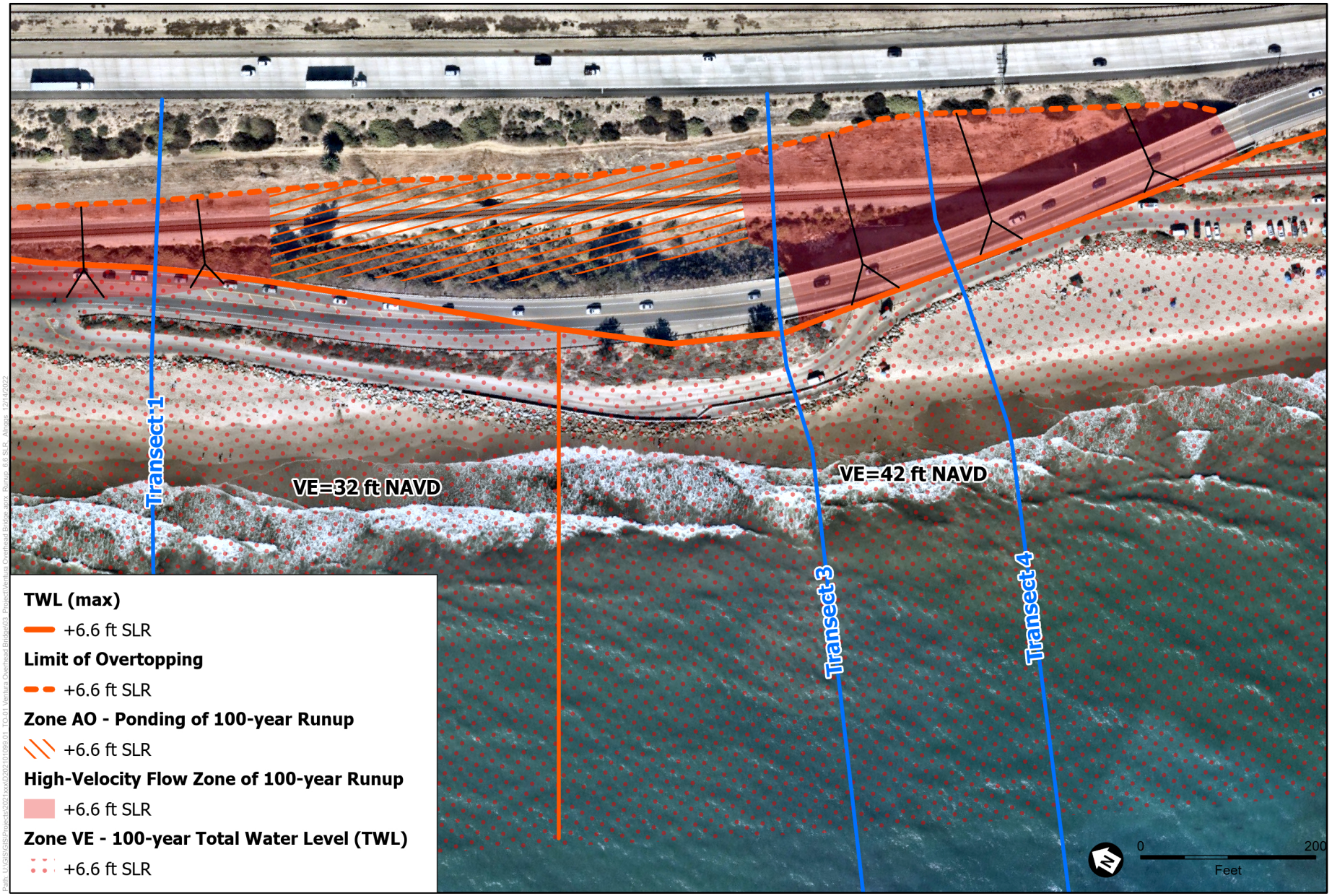
Figure 28
Coastal Hazards with 3.3 ft of Sea-Level Rise During 100-yr Event



SOURCE: Nearmap

1. Elevations are in feet NAVD vertical datum. The acronym TWL is for total water level.
2. Flood zones depicted in map use FEMA flood zone designations but are not FEMA flood hazards. Hazard areas are approximate and for planning purposes by Caltrans only. ESA makes no warranty, express or implied, as to the accuracy of such opinions as compared to actual future conditions.

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Figure 29
Coastal Hazards with 6.6 ft of Sea-Level Rise During 100-yr Event

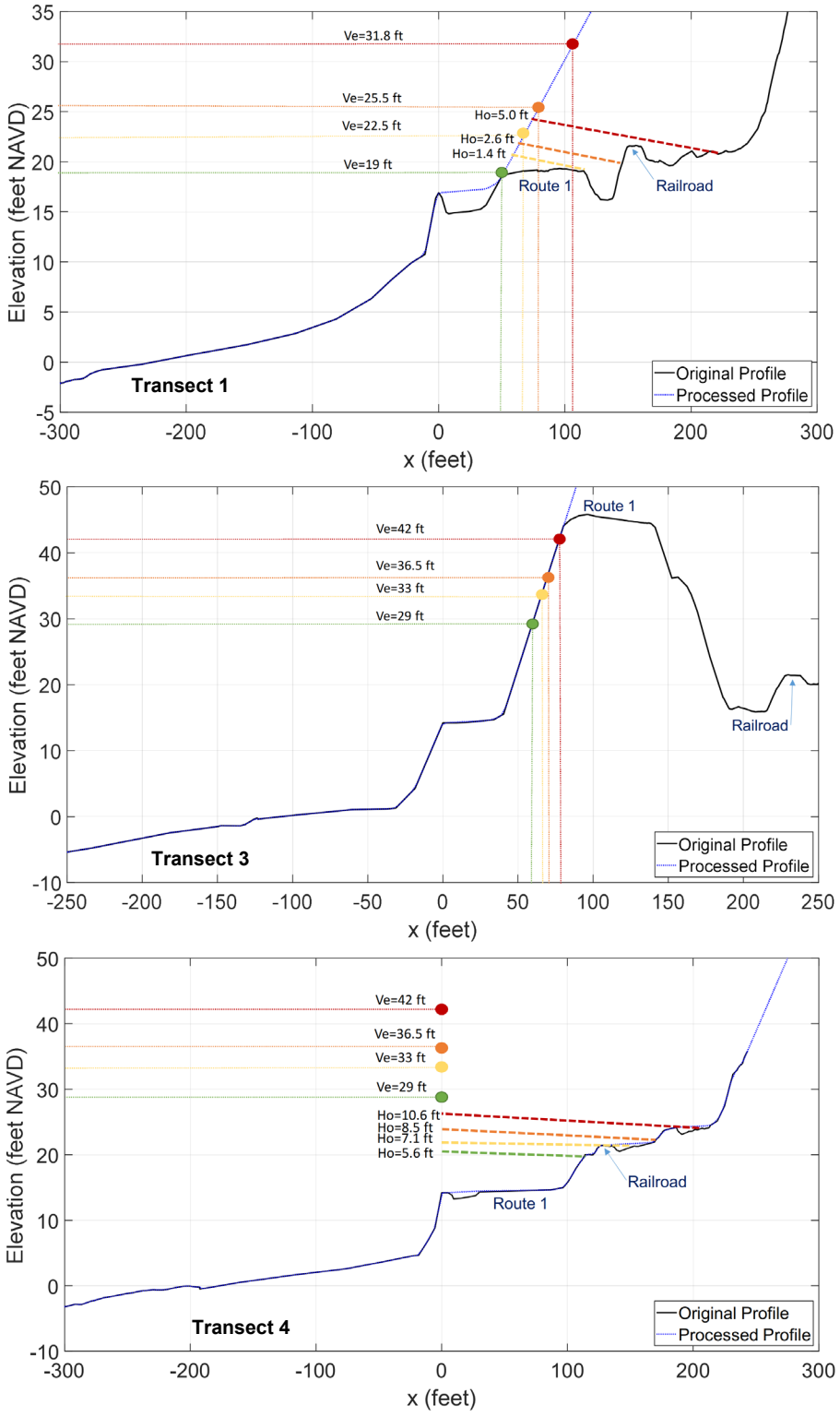

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Figure 30
Flood profiles at Transect 1, 3, and 4 showing VE zones and high velocity flow zones

3.5 Discussion

The following section provides additional discussion of the wave runup calculations, site safety criteria, and implications of erosion and other shore management scenarios, including the potential retreat of the State Parks Access Road.

3.5.1 Profile Influence on Wave Runup Calculations

Calculation of wave runup elevations along with inland extents of wave runup and overtopping bores for three transects indicated that the distribution of the annual maximum TWL as a function of return period is highly dependent on the profile configuration. That is, profile-specific features, including presence of a sandy beach, steep shore armoring, sharp changes in grade, and other features that influence surface roughness, affect the overall effective slope applied to the runup calculation, and so detailed assessment of specific profiles is critical to the wave runup analysis. At the northern end of the overhead bridge (Transect 1) where Route 1 is relatively low and close to the shoreline, significant overtopping and flooding is expected to occur under existing and future sea-level rise conditions. At the north bridge approach transect (Transect 3), where there is a steep embankment and Route 1 is relatively high, the results do not indicate overtopping of Route 1 for existing and future conditions with sea-level rise. At the overhead bridge (Transect 4), the Access Road seaward of the bridge and the railroad underneath the bridge are expected to be overtopped and flooded under existing and future conditions with sea-level rise.

3.5.2 Safety Criteria and Management During Storms

Note that the severity of wave runup and bore propagation on Route 1 (bridge approaches) and the Access Road predicted by this analysis indicate erosion and structural damage are possible, and access would not be safe during extreme events. To inform management of the roadway, such as potential road closure during expected storms and wave events, safety criteria need to be established. Guidance documents from the USACE and Europe include recommendations for tolerable wave overtopping discharges that could be used as a basis for developing traffic management approaches for storms (USACE 2003, EurOtop 2018). Since wave overtopping is expected to increase in magnitude and frequency with sea-level rise, periodically updating the management approach and defining measurable triggers would help maintain safe access of the vulnerable areas. Identifying the triggers and developing safety criteria is beyond the scope of this report.

3.5.3 Implications of Erosion and Potential Retreat of State Park Access Road

The potential erosion and management of the State Park Access Road could affect the future management of the Caltrans bridge facilities. Specifically, the existing coastal armoring structure protects the Access Road and the northern bridge approach earth embankment from more frequent wave action. The existing shore armor structure shows a degraded condition, with portions of the Access Road vulnerable to erosion, and the collapse of a portion of a concrete seawall structure. The analysis above assumes that the shore protection and the State Park Access Road are maintained into the future with sea-level rise.

Under a potential future scenario where the armor is removed, and the State Park Access Road is retreated, the risk to the highway is expected to increase. The greatest change resulting from the removal of the shore protection structure and State Park Access Road would be the increased exposure of the earth embankment (northern bridge approach) to wave action and potential for increased erosion. Under this scenario, we expect that the northern bridge approach would require installing protection from the erosive actions of waves and water levels. The following section identifies potential concepts for consideration. Based on the technical analysis described above, we don't expect the removal of the State Park Access Road to have a significant effect on the potential maximum TWL because the perturbation of the roadway is insignificant in the computed effective slope that yields the maximum wave runup. That is, since the breaker location resulting in the highest wave runup on a profile for a given event is typically located seaward of the existing State Park Access Road, and removal of the road would result in a shallow intertidal zone, we do not expect a significant increase in the TWL (see Appendix C for analyzed profiles with TWL results for selected events).

3.5.4 Potential Adaptation Approaches

The intent of the bridge design is to meet Caltrans coastal design criteria over a 75-year life span with projected future sea-level rise, thereby reducing vulnerability. The project proposes to increase the bridge elevation by up to 8 to 10 feet, which accommodates the estimated future 100-year TWL with 6.6 feet of sea-level rise. Therefore, adaptation measures are not expected to be needed with 6.6 feet of sea-level rise (i.e., by 2100 under the medium-high risk aversion projection or by 2080 under the extreme risk aversion projection or H++). However, areas to the north are lower and thus more vulnerable to flooding for future conditions.

To address vulnerable areas we identified the following potential adaptation approaches:

- Adaptation Plan
  - Development of an adaptation plan would include monitoring sea-level rise.
  - If sea-level rise tracks the extreme risk aversion projection (H++) and more than 6.6 feet of sea-level rise is expected over the life span of the bridge, adaptation will need to be re-assessed (i.e., given that adjacent low areas will be increasingly flooded).
- Adjacent Road Flooding
  - The project proposes to raise the bridge and approaches, which reduces vulnerability.
  - Road improvements to the north and south of the bridge replacement are not part of the proposed project. Analyses show and recognize that low-lying roads are vulnerable under existing conditions. One potential adaptation measure (separate from but related to the project) is increased road closures in response to increased flooding with sea-level rise.
- Revetment Removal and State Park Access Road Retreated
  - The revetment is not in Caltrans' jurisdiction and so issues relating to its maintenance are not their responsibility or under their control.

– If the revetment were to be removed and the State Park Access Road retreated, then the earthen embankment for the northern bridge approach would require protection. Some potential protection alternatives include:

  - Traditional shore protection structure (e.g., rock revetment, seawall, etc.)
  - Nature-based approach using a mass of cobble and sand
  - Nature-based approach using a mass of cobble and sand with low-profile shore retention structures to contain the cobbles and minimize longshore transport of cobble away from the area in front of the northern bridge approach.

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4 CONCLUSIONS & RECOMMENDATIONS

This section presents a summary of the main conclusions of the analyses that were conducted along with some recommendations. Based on the information presented above in this report, the following conclusions and recommendations are made:

- *Proposed Ventura Overhead Bridge Replacement Project*: The primary finding is that the Ventura Overhead replacement bridge proposed by Caltrans is not expected to be vulnerable to 100-year recurrence flooding or overtopping with up to 6.6 feet of sea-level rise, which is projected to occur between 2080 (H++) and 2100 (medium-high risk). Therefore, over the 75-year life span of the bridge, flooding and overtopping are unlikely, but possible. Wave overtopping of the railroad under the bridge could pose a hazard to bridge infrastructure but may be addressed through appropriate bridge design measures considering the estimated wave overtopping.

- *Adjacent areas not included in the scope of the Proposed Ventura Overhead Bridge Replacement Project:* Route 1 north and south of the proposed bridge replacement project, including portions of the bridge approaches, and the State Park Access Road, railroad berm, and adjacent areas are at risk of extreme wave runup and overtopping for existing conditions. The frequency and severity of flooding is expected to increase with sea-level rise. Wave overtopping during extreme events could pose a hazard to the infrastructure and operations. These hazards could be reduced by management actions or other improvements outside of the scope of the bridge replacement project. The bore profiles developed and presented in this study may provide useful information for existing and future hazards. Wave hazards are expected to progress inland over time with sea-level rise. The potential maximum wave runup elevation (potential total water level) at the top of the revetment will increase around two to three times the amount of sea-level rise (see Figure 22). The extent of wave runup inland from the top of the revetment will increase approximately 15-30 feet for every foot of sea-level rise in transects without high embankments (i.e., excluding the bridge approaches). Public access will not be safe where wave overtopping occurs. Strong overland propagation of runup and bores are likely to result in scour and structural damages unless these conditions are designed for. Hence, adaptation measures for these areas will likely be needed as sea-levels rise.

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6 ACKNOWLEDGMENTS

We acknowledge and appreciate the input and review of Caltrans staff. We also appreciate the review of preliminary findings by the California Coastal Commission staff and Ventura County Planning Department, and their comments, which were integrated into this report.

The following ESA staff contributed to this report:

Louis White, PE

Nick Garrity, PE

Amber Inggs, PE

Yashar Rafati, PhD

James Jackson, PE

Bob Battalio, PE

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Appendix A

Caltrans' Draft Project Plans Dated September 2021

INDEX OF PLANS

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

STATE OF CALIFORNIA

DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON

STATE HIGHWAY

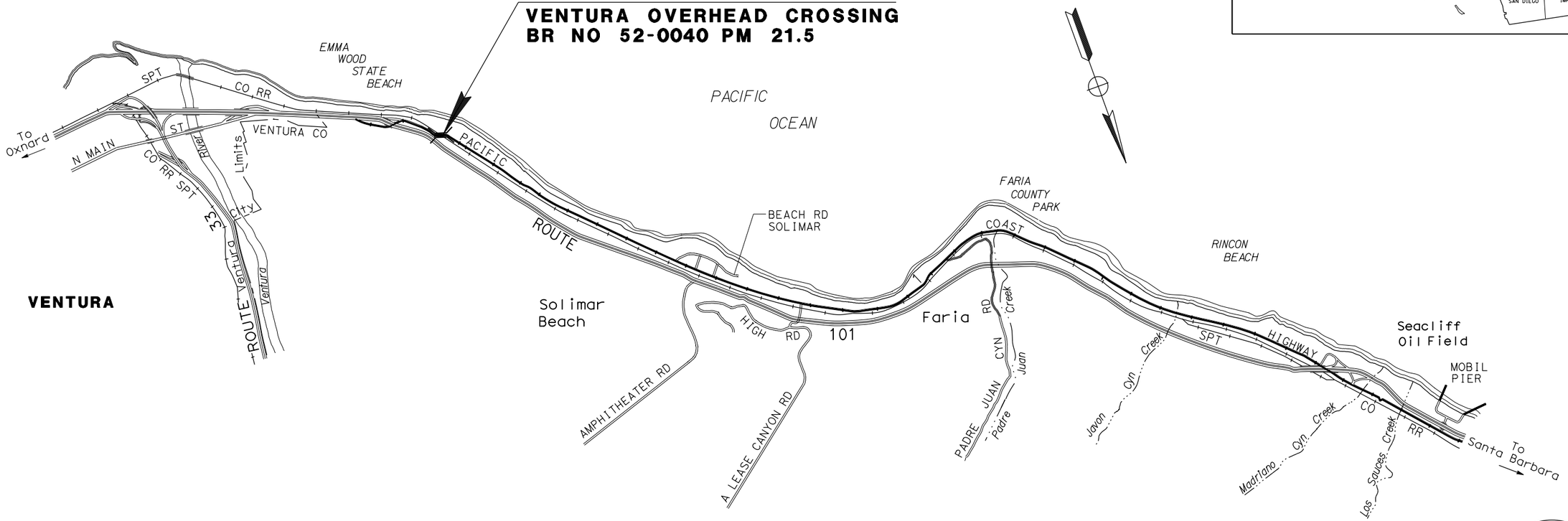
IN VENTURA COUNTY
IN VENTURA
AT VENTURA OH

TO BE SUPPLEMENTED BY STANDARD PLANS DATED 2018

LOCATION MAP

LOCATION OF CONSTRUCTION

VENTURA OVERHEAD CROSSING
BR NO 52-0040 PM 21.5



PROJECT ENGINEER
REGISTERED CIVIL ENGINEER

DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp.
CIVIL
STATE OF CALIFORNIA

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

CONTRACT No.	
PROJECT ID	

LAST REVISION
DATE PLOTTED => 15-SEP-2021
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PROJECT MANAGER

DESIGN MANAGER

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp. CIVIL
STATE OF CALIFORNIA

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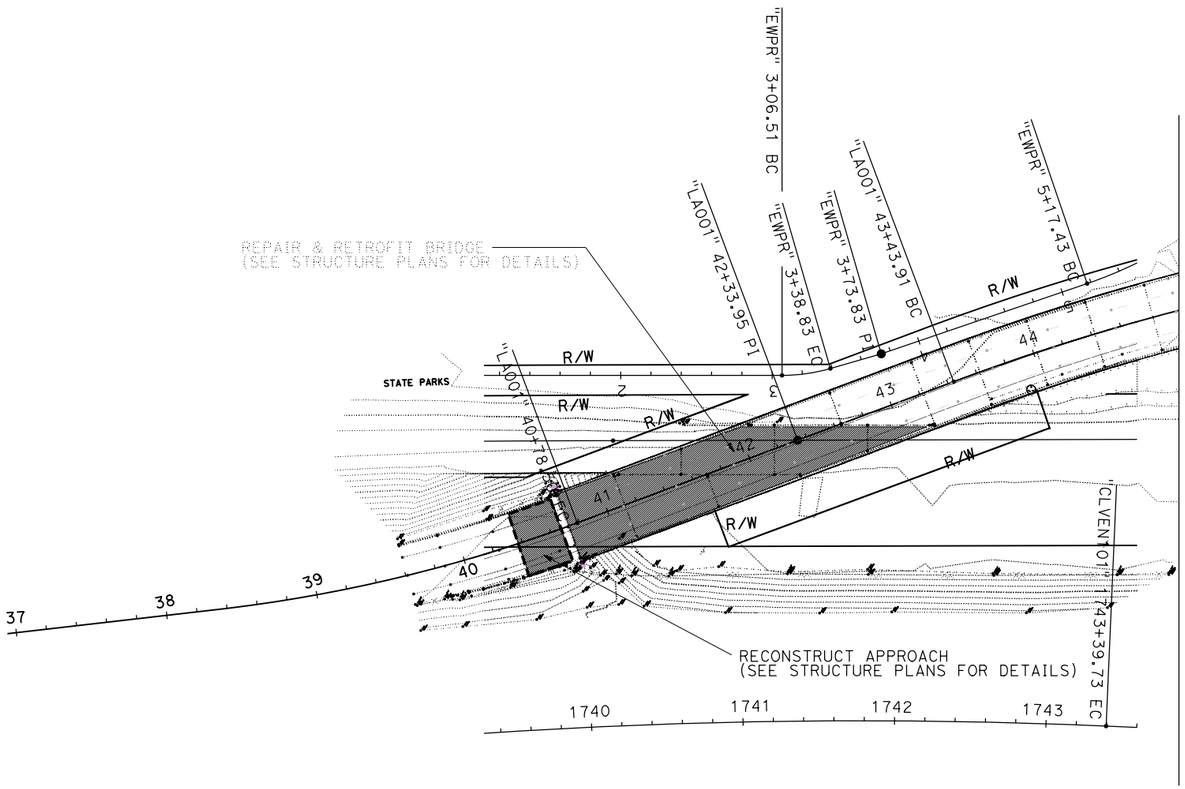
LEGEND:

- REQUESTED TEMPORARY CONSTRUCTION EASEMENT
- REQUESTED PERMANENT ACCESS PERMIT AREA
- REQUESTED HIGHWAY EASEMENT
- NEW STRUCTURE APPROACH TYPE R
- INDICATES LIMITS OF DEMO. SEE STRUCTURE PLANS FOR MORE DETAILS



THIS PLAN IS FOR INFORMATION ONLY

LAYOUT
1" = 50'

L-1

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DATE REVISED	ORLANCE LEE	DESIGNED BY
		CHECKED BY

FUNCTIONAL SUPERVISOR: ORLANCE LEE

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Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
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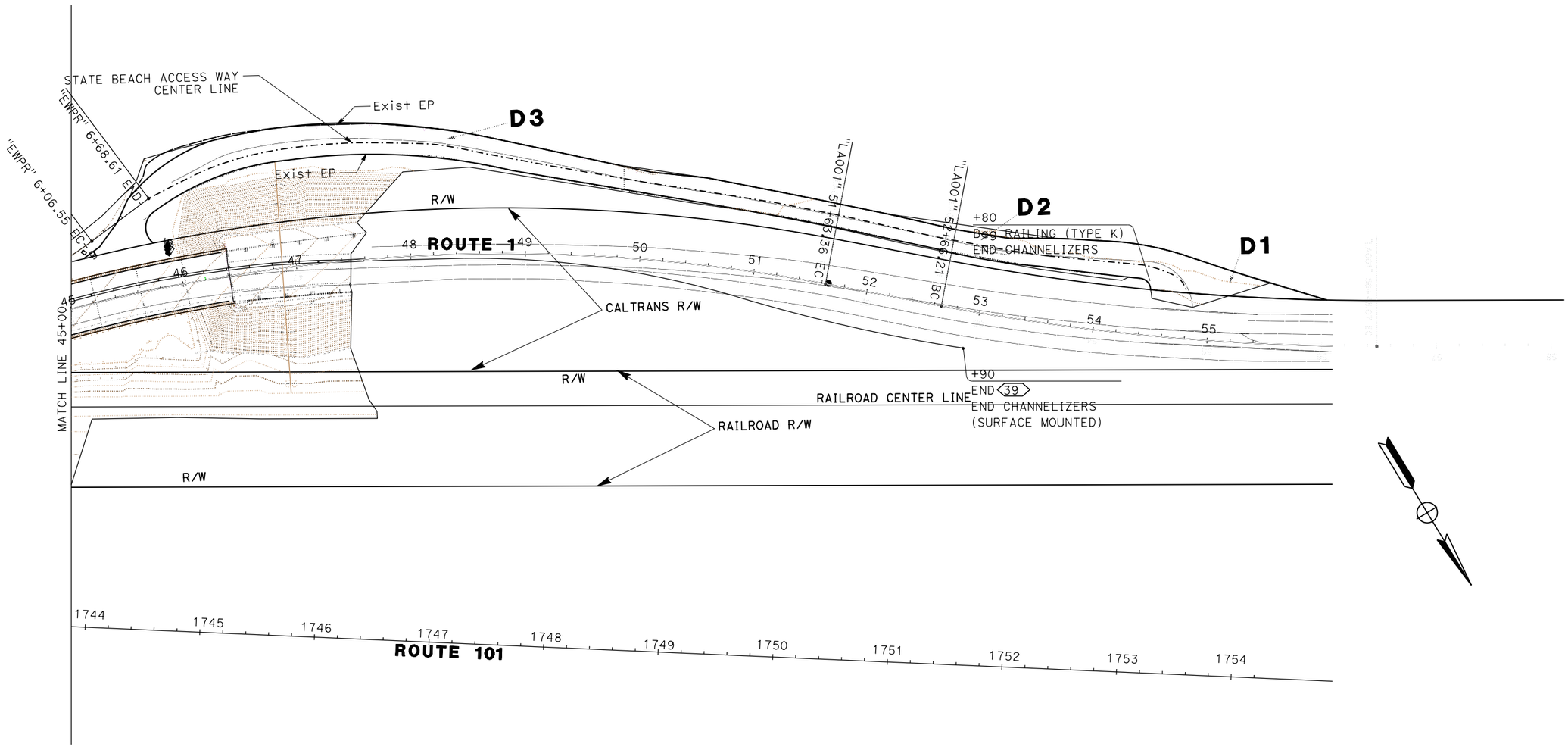

THIS PLAN IS FOR INFORMATION ONLY

LAYOUT
1" = 50'

L-2

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Caltrans® DESIGN	CHECKED BY	DATE REVISED	
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ORLANCE LEE	ORLANCE LEE		

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UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.5	x	xx

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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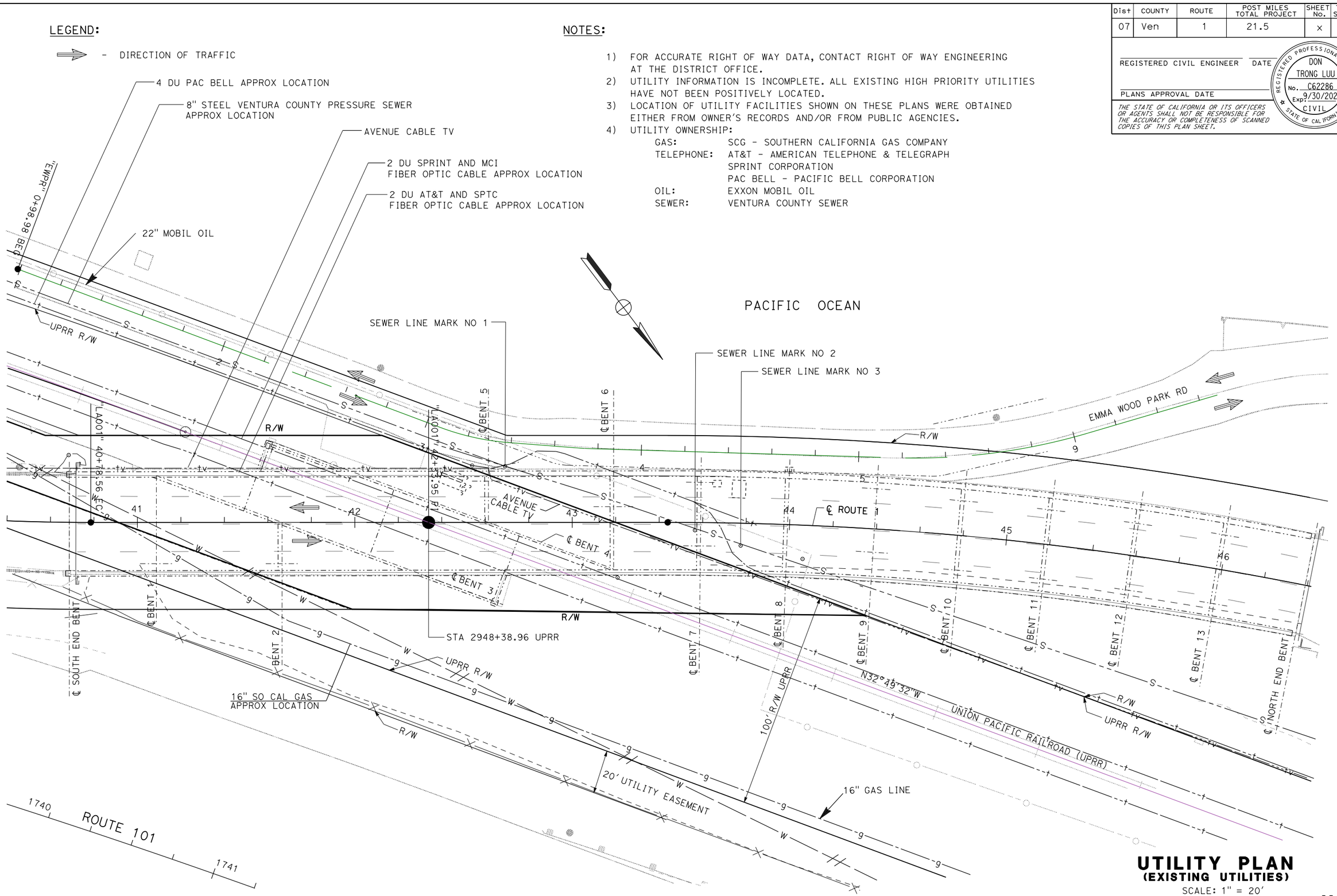
LEGEND:

⇒ - DIRECTION OF TRAFFIC

NOTES:

1) FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2) UTILITY INFORMATION IS INCOMPLETE. ALL EXISTING HIGH PRIORITY UTILITIES HAVE NOT BEEN POSITIVELY LOCATED.
3) LOCATION OF UTILITY FACILITIES SHOWN ON THESE PLANS WERE OBTAINED EITHER FROM OWNER'S RECORDS AND/OR FROM PUBLIC AGENCIES.
4) UTILITY OWNERSHIP:
   - GAS: SCG - SOUTHERN CALIFORNIA GAS COMPANY
   - TELEPHONE: AT&T - AMERICAN TELEPHONE & TELEGRAPH
     SPRINT CORPORATION
     PAC BELL - PACIFIC BELL CORPORATION
   - OIL: EXXON MOBIL OIL
   - SEWER: VENTURA COUNTY SEWER



UTILITY PLAN
(EXISTING UTILITIES)

SCALE: 1" = 20'

U-1

THIS PLAN TO BE USED FOR UTILITY INFORMATION ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® UTILITY ENGINEERING

FUNCTIONAL SUPERVISOR: RICKY LEE

CALCULATED-DESIGNED BY
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DON LUU

REVISED BY
DATE REVISED

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UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

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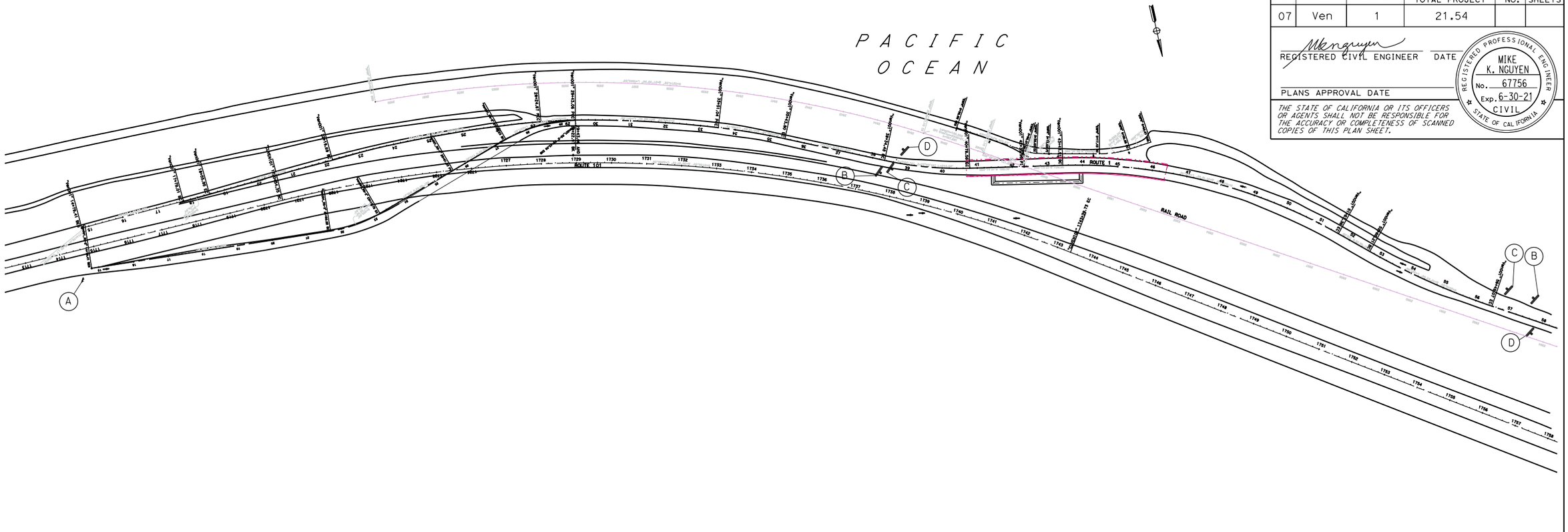

STATIONARY MOUNTED CONSTRUCTION AREA SIGNS

SIGN No. (X)	SIGN CODE FEDERAL		PANEL SIZE	SIGN MESSAGE	NUMBER OF POSTS AND SIZE	NUMBER OF SIGNS
A	ES-2a		48"X36"	EXIT CLOSED	2 - 6" x 8"	1
B	W20-1		30" x 30"	ROAD WORK AHEAD	1 - 4" x 6"	5
C	W20-3		36" x 36"	ROAD CLOSED 1000 FT	1 - 4" x 6"	2
D	G20-2		36" x 18"	END ROAD WORK	1 - 4" x 4"	2

NOTES:

1. SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.
2. WHERE APPROPRIATE, SIGNS MAY BE MOUNTED ON EXISTING POWER POLES AND ELECTROLIERS BY STRAP AND SADDLE BRACKET METHOD PER ENGINEER'S APPROVAL.

APPROVED FOR CONSTRUCTION SIGN WORK ONLY

CONSTRUCTION AREA SIGNS

NO SCALE

CS-1

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CHECKED BY: ORLANCE LEE
FUNCTIONAL SUPERVISOR: ORLANCE LEE
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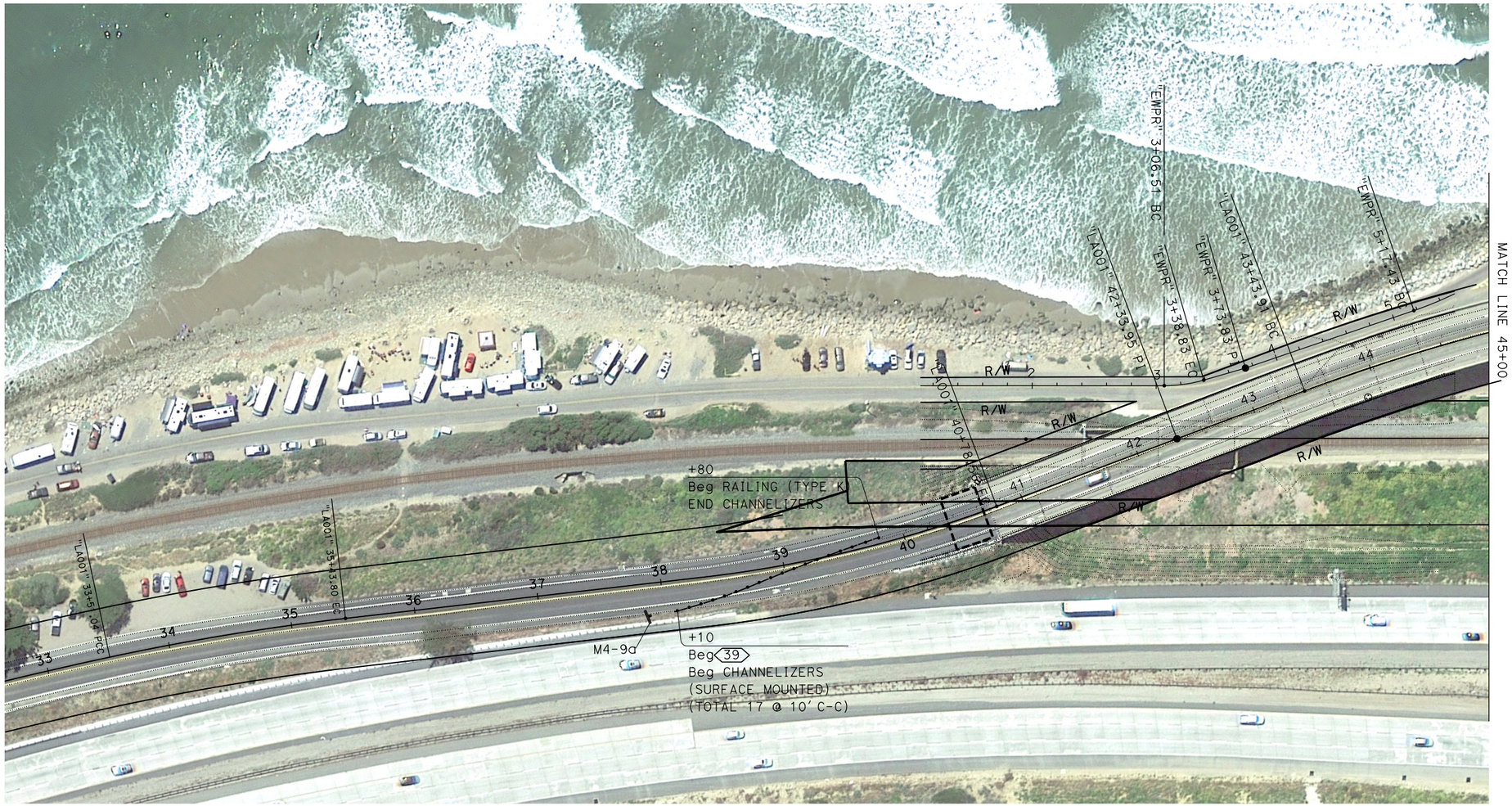
2. ALL TEMPORARY TRAFFIC STRIPES ARE PAINT (2-COAT).
3. SIGN LOCATIONS SHOWN ARE APPROXIMATE. EXACT LOCATION WILL BE DETERMINED BY THE ENGINEER.
3.

LEGENDS:

- DIRECTION OF TRAFFIC
- Temp TRAFFIC STRIPES DETAIL NUMBER
- CONSTRUCTION AREA
- TEMPORARY RAILING (TYPE K) WITH SCUPPERS
- CHANNELIZERS (SURFACE MOUNTED)



THIS PLAN IS FOR INFORMATION ONLY

APPROVED FOR STAGE CONSTRUCTION AND TRAFFIC HANDLING WORK ONLY.

STAGE CONSTRUCTION PLAN

STAGE 1

SCALE: 1" = 50'

SC-1

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REGISTERED PROFESSIONAL ENGINEER
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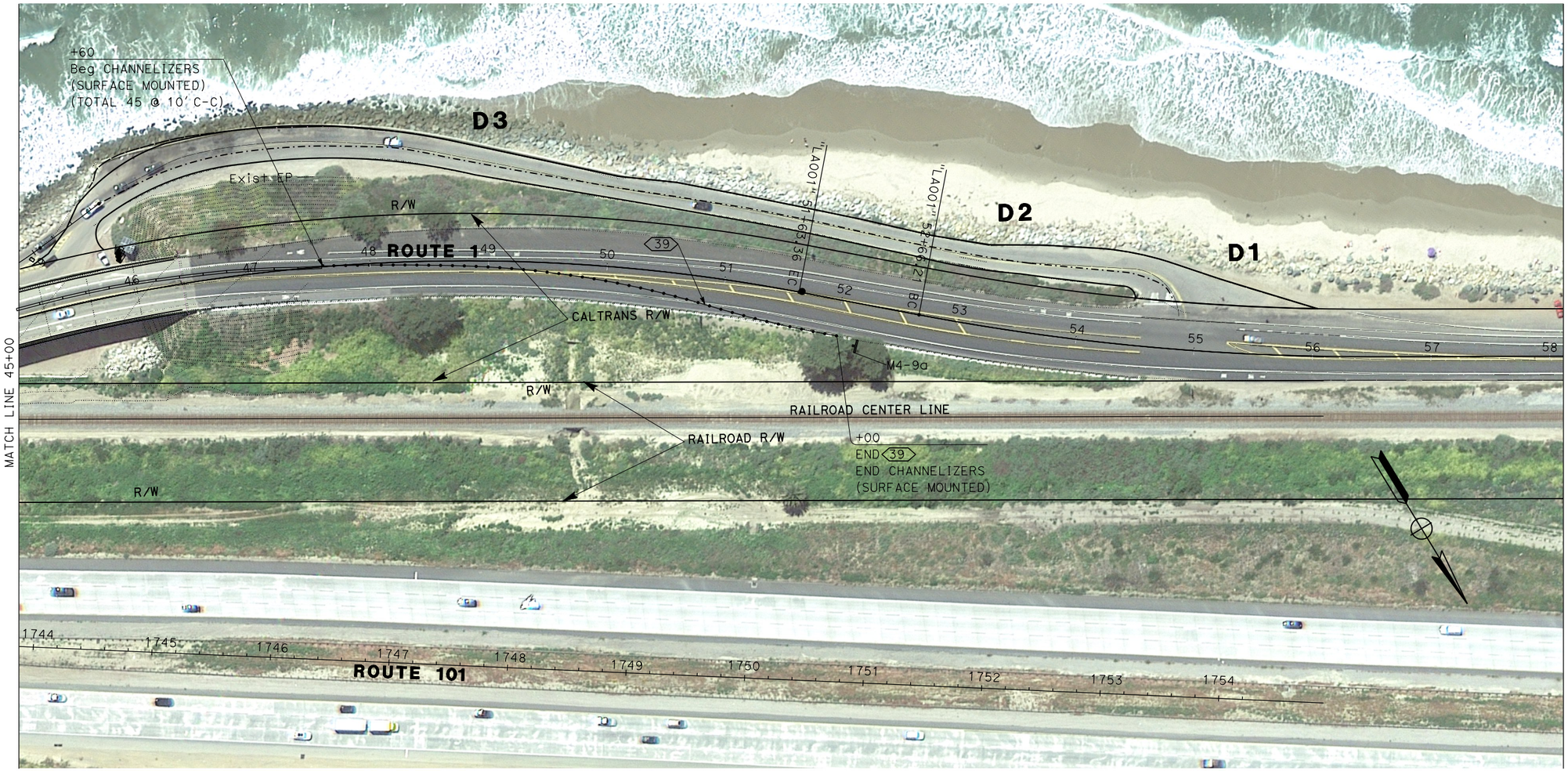

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STAGE CONSTRUCTION PLAN

STAGE 1

SCALE: 1" = 50'

SC-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
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FUNCTIONAL SUPERVISOR: ORLANCE LEE

CALCULATED-DESIGNED BY: MIKE NGUYEN
CHECKED BY: ORLANCE LEE

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UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp.
CIVIL
STATE OF CALIFORNIA

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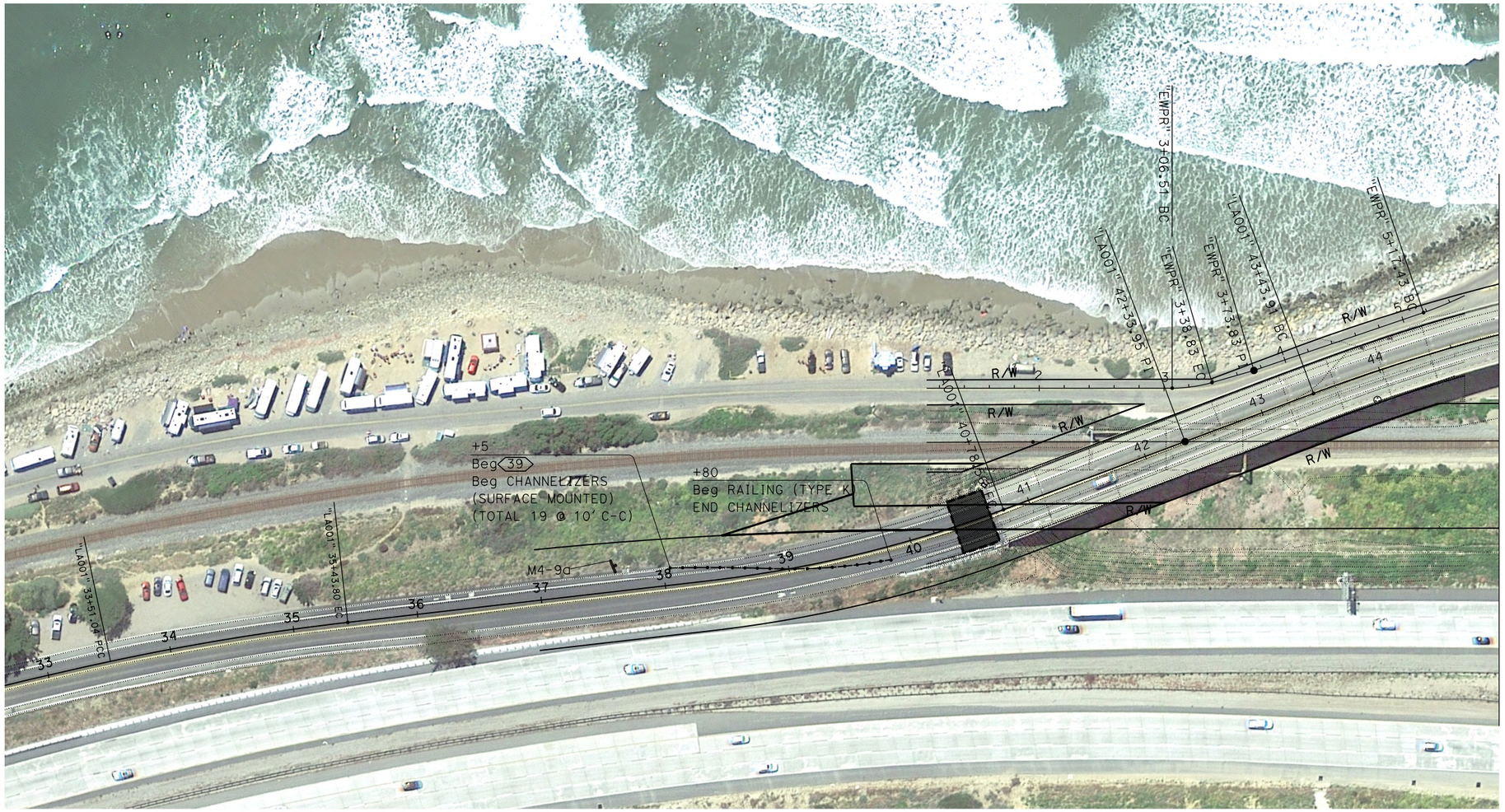

MATCH LINE 45+00

THIS PLAN IS FOR INFORMATION ONLY

STAGE CONSTRUCTION PLAN

STAGE 2

SCALE: 1" = 50'

SC-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: ORLANCE LEE
CALCULATED-DESIGNED BY: MIKE NGUYEN
CHECKED BY: ORLANCE LEE
REVISED BY
DATE REVISED
LAST REVISION
DATE PLOTTED => 15-SEP-2021
TIME PLOTTED => 10:34

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UNIT
PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

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REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp.
CIVIL
STATE OF CALIFORNIA

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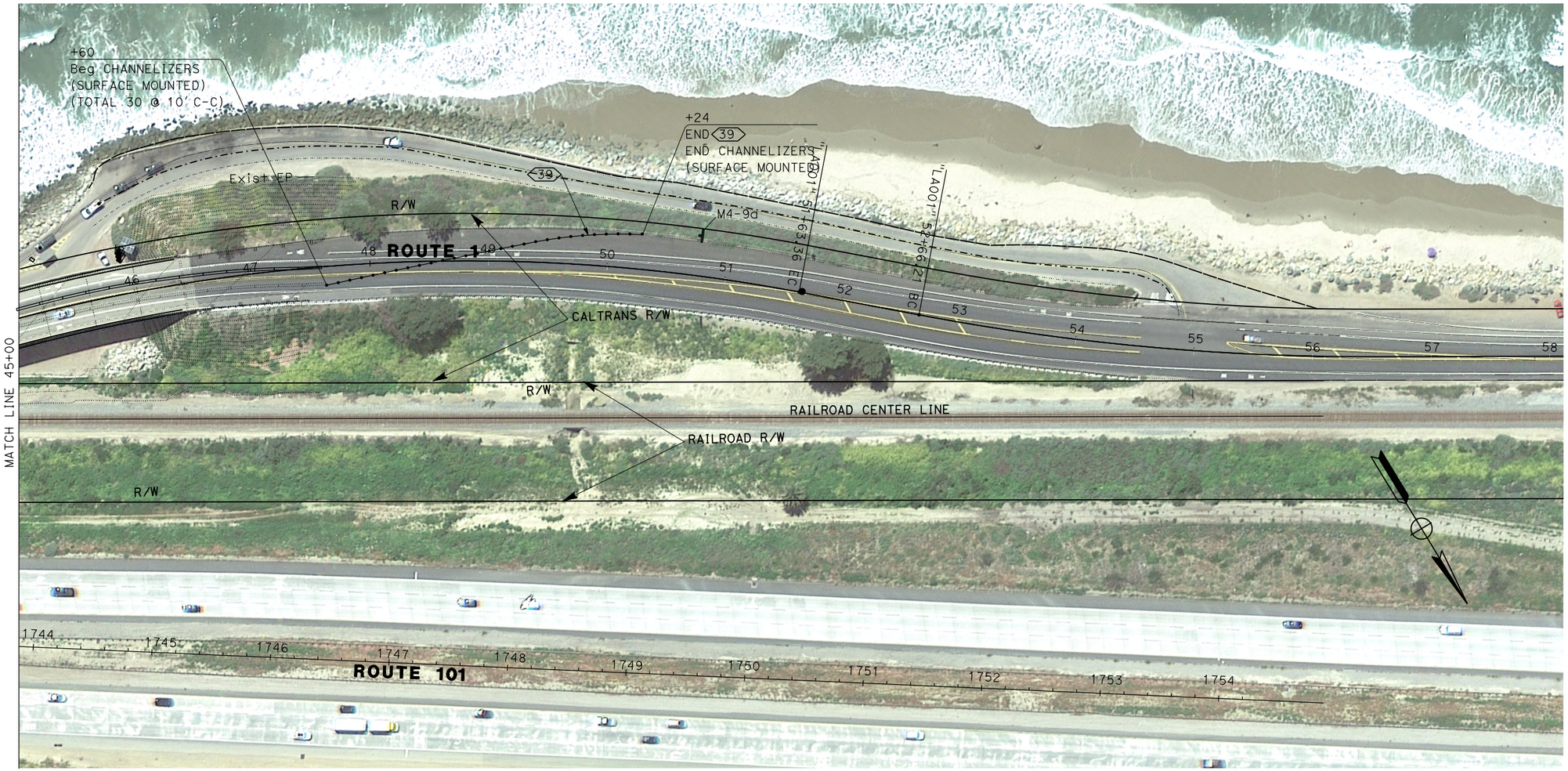

THIS PLAN IS FOR INFORMATION ONLY

STAGE CONSTRUCTION PLAN

STAGE 2

SCALE: 1" = 50'

SC-4

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	Ven	1	21.54		

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PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
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CIVIL
STATE OF CALIFORNIA

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STAGE CONSTRUCTION QUANTITIES (TEMPORARY)

SHEET NO.	STATION	DETAIL No. / TRIFFIC STRIPE	PAINT TRAFFIC STRIPE (2-COAT)	TEMPORARY RAILING (TYPE K)	CHANNELIZER (SURFACE MOUNTED)	REMARKS
			LF	LF	EA	
SC-1	36+10 - 45+00	39	690	520	17	STAGE 1
SC-2	45+00 - 52+00	39	700	260	45	
SC-3	38+05 - 45+00	39	695	520	19	STAGE 2
SC-4	45+00 - 50+24	39	524	260	30	
TOTAL		156	2,609	1,560	30	

STAGE CONSTRUCTION QUANTITIES

SCQ-1

CALCULATED-DESIGNED BY: MIKE NGUYEN
CHECKED BY: ORLANCE LEE
FUNCTIONAL SUPERVISOR: ORLANCE LEE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans® DESIGN

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LAST REVISION | DATE PLOTTED => 15-SEP-2021
TIME PLOTTED => 10:48

BORDER LAST REVISED 8/5/2020

USERNAME => s129377
DGN FILE => 0731960mc001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp 6-30-21
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-1

CALCULATED-DESIGNED BY	MIKE NGUYEN
CHECKED BY	ORLANCE LEE
FUNCTIONAL SUPERVISOR	ORLANCE LEE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
REVISED BY	
DATE REVISED	
LAST REVISION	DATE PLOTTED => 15-SEP-2021 TIME PLOTTED => 10:49

BORDER LAST REVISED 8/5/2020

USERNAME => s129377
DGN FILE => 0731960md001.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

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TRAFFIC HANDLING PLAN

NO SCALE

TH-2

APPROVED FOR TRAFFIC HANDLING WORK ONLY

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: ORLANCE LEE
CALCULATED-DESIGNED BY: MIKE NGUYEN
CHECKED BY: ORLANCE LEE
REVISED BY
DATE REVISED
LAST REVISION
DATE PLOTTED => 15-SEP-2021
TIME PLOTTED => 10:49

BORDER LAST REVISED 8/5/2020
USERNAME => s129377
DGN FILE => 0731960md002.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT
PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

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APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-3

CALCULATED-DESIGNED BY	MIKE NGUYEN
CHECKED BY	ORLANCE LEE
FUNCTIONAL SUPERVISOR	ORLANCE LEE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION	DESIGN
REVISED BY	
DATE REVISED	
LAST REVISION	DATE PLOTTED => 15-SEP-2021 TIME PLOTTED => 10:49

BORDER LAST REVISED 8/5/2020

USERNAME => s129377
DGN FILE => 0731960md003.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT

PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

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APPROVED FOR TRAFFIC HANDLING WORK ONLY

TRAFFIC HANDLING PLAN

NO SCALE

TH-3

CALCULATED-DESIGNED BY: MIKE NGUYEN
CHECKED BY: ORLANCE LEE
REVISED BY
DATE REVISED
FUNCTIONAL SUPERVISOR: ORLANCE LEE
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN

LAST REVISION
DATE PLOTTED => 15-SEP-2021
TIME PLOTTED => 10:49

BORDER LAST REVISED 8/5/2020
USERNAME => s129377
DGN FILE => 0731960md004.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT
PROJECT NUMBER & PHASE

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.54		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER
MIKE K. NGUYEN
No. 67756
Exp. 6-30-21
CIVIL
STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

PORTABLE CHANGEABLE MESSAGE SIGNS

PCMS No. (X)	SIGN MESSAGE		LOCATION
	7 DAYS BEFORE CONSTRUCTION	DURING CONSTRUCTION	
A	NB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	NB PACIFIC COAST HIGHWAY CLOSES	CONNECTION ROUTE 101 TO ROUTE 33
B	NB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	NB PACIFIC COAST HIGHWAY CLOSES	OFF RAMP FROM ROUTE 33 TO MAIN STREET
C	NB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	NB PACIFIC COAST HIGHWAY CLOSES	ON RAMP FROM MAIN STREET TO ROUTE 101 NORTH
D	NB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	NB PACIFIC COAST HIGHWAY CLOSES	OFF RAMP FROM ROUTE 101 TO ROUTE 1 SOUTHE
E	SB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	SB PACIFIC COAST HIGHWAY CLOSES	EXIT FROM NB ROUTE 1 TO STATE BEACH ACCESS Rd
F	SB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	SB PACIFIC COAST HIGHWAY CLOSES	FROM NORTH HOBSON Rd TO ROUTE 1
G	SB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	SB PACIFIC COAST HIGHWAY CLOSES	FROM NB ROUTE 1 BEFORE HOBSON Rd
H	SB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	SB PACIFIC COAST HIGHWAY CLOSES	OFF RAMP FROM NB ROUTE 101 TO CLIFF
I	SB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	SB PACIFIC COAST HIGHWAY CLOSES	OFF RAMP FROM NB ROUTE 101 TO ROUTE 1 NEAR VENTURA COUNTY FIRE STATION 25
J	SB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	SB PACIFIC COAST HIGHWAY CLOSES	NB ROUTE 1 TO ON RAMP 101 NORTH NEAR VENTURA COUNTY FIRE STATION 25
K	SB PACIFIC COAST HIGHWAY CLOSES MM-DD/TO/MM-DD	SB PACIFIC COAST HIGHWAY CLOSES	NB ROUTE 1 TO ON RAMP 101 NORTH NEAR VENTURA COUNTY FIRE STATION 25

TRAFFIC HANDLING DETAILS

NO SCALE

THD-1

REVISED BY | DATE REVISED

MIKE NGUYEN | ORLANCE LEE

CALCULATED-DESIGNED BY | CHECKED BY

FUNCTIONAL SUPERVISOR: ORLANCE LEE

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

Caltrans® DESIGN

LAST REVISION | DATE PLOTTED => 15-SEP-2021
TIME PLOTTED => 10:49

BORDER LAST REVISED 8/5/2020

USERNAME => s129377
DGN FILE => 0731960mf001.dgn

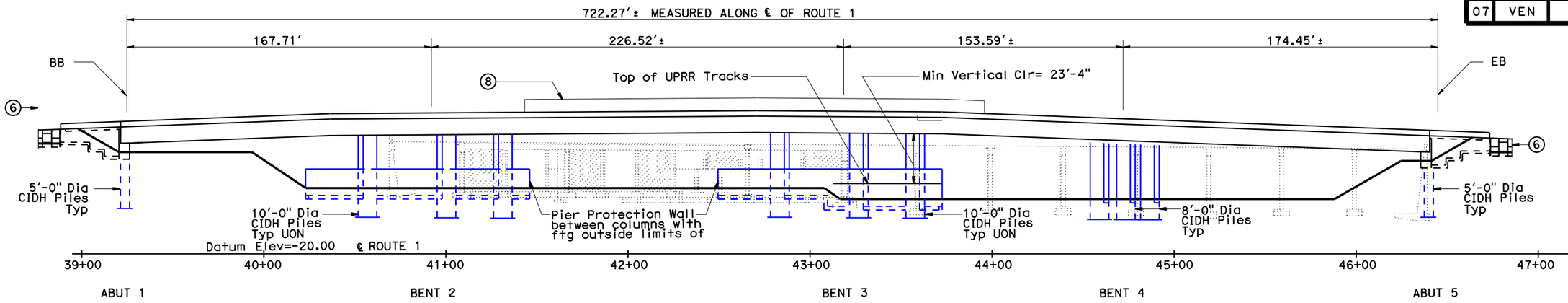
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT

PROJECT NUMBER & PHASE

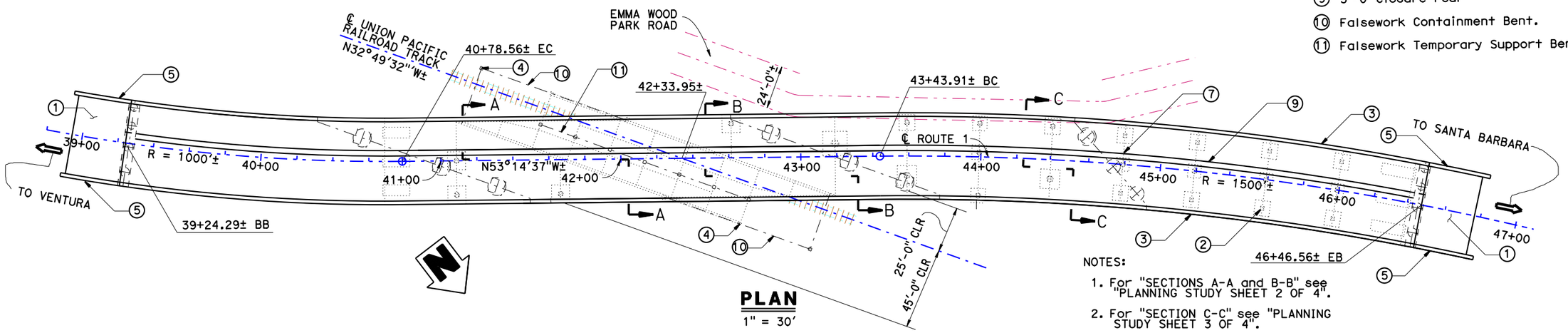
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

Dist	COUNTY	ROUTE	POST MILE
07	VEN	1	21.54



ELEVATION
1" = 30'

Pacific Ocean



PLAN
1" = 30'

LEGEND
- Existing Structure LOL
- Existing Structure
- New Construction

NOTES:

1. Structure Approach Type (30N) to be constructed in stages.
2. Demo Existing Bridge in Stages.
3. Concrete Barrier Type 90.
4. Repair Bent Columns 3A & 4A.
5. Type 1 Retaining Walls.
6. MSE Wall 199'-0"± Long.
7. Temporary Supports at each existing bent for support of temporary bike lane.
8. 10' high Chain Link Railing over UPRR.
9. 3'-0' Closure Pour
10. Falsework Containment Bent.
11. Falsework Temporary Support Bent.

NOTES:

1. For "SECTIONS A-A and B-B" see "PLANNING STUDY SHEET 2 OF 4".
2. For "SECTION C-C" see "PLANNING STUDY SHEET 3 OF 4".
3. Temporary Supports not shown for clarity.

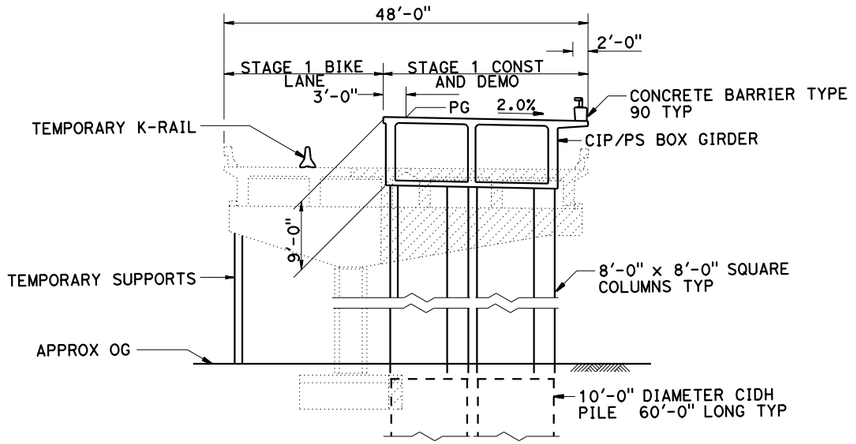
DESIGNED BY: Leon Valla	DATE: 3-01-2021	STRUCTURE DESIGN	PLANNING STUDY SHEET 1 OF 4
DRAWN BY: Leon Valla	DATE: 3-01-2021	DESIGN BRANCH 12	VENTURA OVERHEAD (BRIDGE REPLACE)
CHECKED BY: X	DATE: X		UNIT: 3606 / BRIDGE No.: 52-0040
APPROVED: X	DATE: X		PROJECT EA: 07-31960 / PROJECT No. & PHASE: 0716000025

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 1/11/2019)

DATE PLOTTED => 22-JUN-2021 TIME PLOTTED => 10:25
FILE => 52-0040 all latest files 4-22-2021.dgn USERNAME => s129377

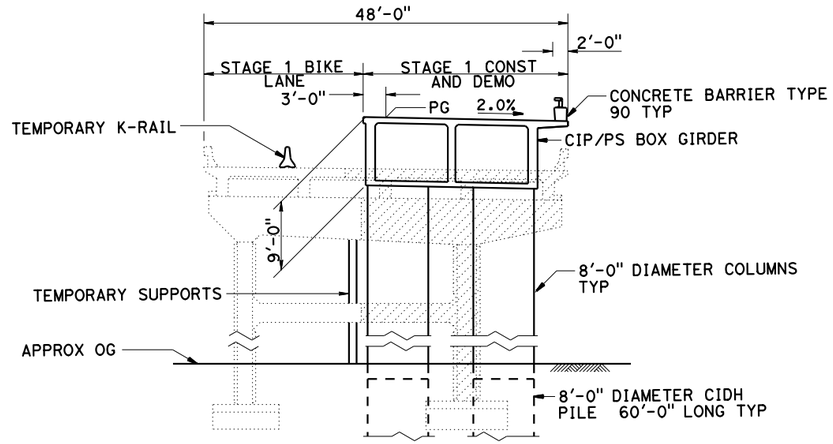
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

Dist	COUNTY	ROUTE	POST MILE
07	VEN	1	21.54



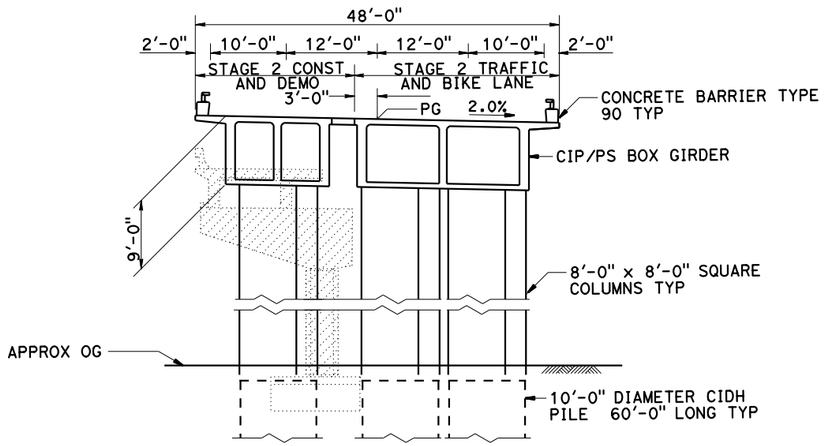
TYPICAL SECTION B-B STAGE 1

1" = 10'-0"



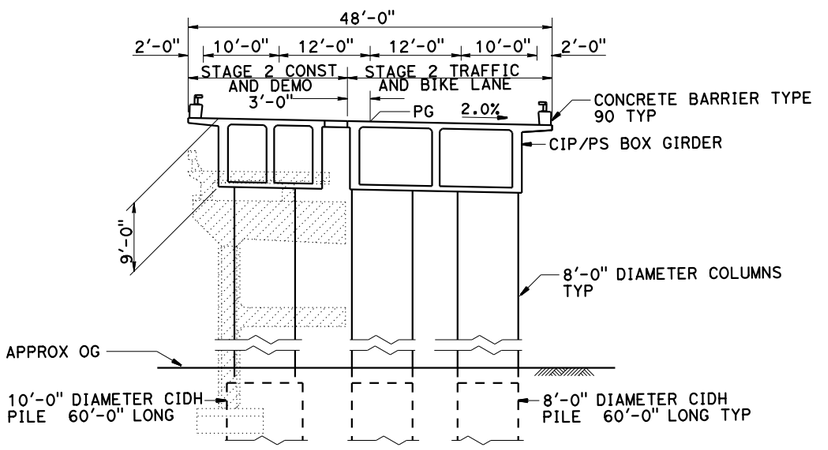
TYPICAL SECTION C-C STAGE 1

1" = 10'-0"



TYPICAL SECTION B-B STAGE 2

1" = 10'-0"



TYPICAL SECTION C-C STAGE 2

1" = 10'-0"

LEGEND

Existing Structure

New Construction

Demo

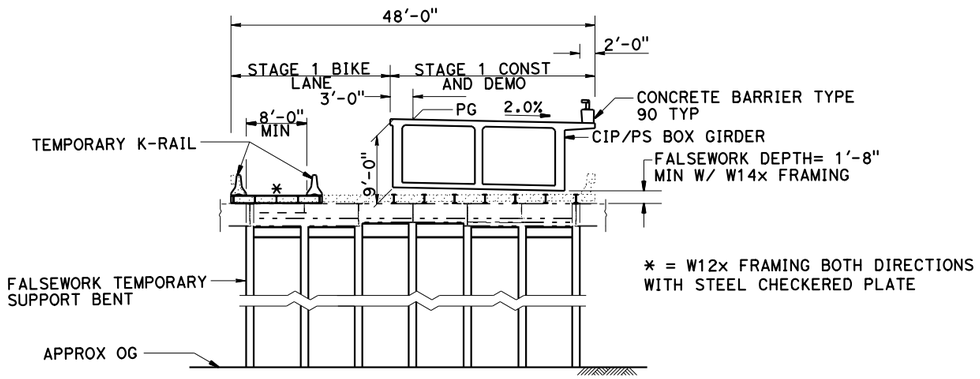
DESIGNED BY: Leon Valla	DATE: 3-03-2021	STRUCTURE DESIGN	PLANNING STUDY SHEET 2 OF 4
DRAWN BY: Leon Valla	DATE: 3-03-2021	DESIGN BRANCH 12	VENTURA OVERHEAD (BRIDGE REPLACE)
CHECKED BY: X	DATE: X		UNIT: 3606 / BRIDGE No.: 52-0040
APPROVED: X	DATE: X		PROJECT EA: 07-31960 / PROJECT No. & PHASE: 0716000025

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 1/11/2019)

DATE PLOTTED => 22-JUN-2021 TIME PLOTTED => 10:28
FILE => 52-0040 all latest files 4-22-2021 Version=> s129377

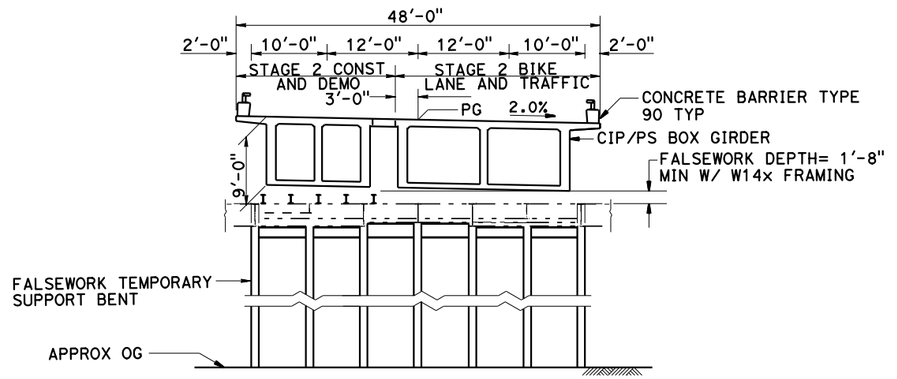
STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

Dist	COUNTY	ROUTE	POST MILE
07	VEN	1	21.54



TYPICAL SECTION A-A STAGE 1

1" = 10'-0"



TYPICAL SECTION A-A STAGE 2

1" = 10'-0"

LEGEND

Existing Structure

New Construction

Demo

DESIGNED BY: Leon Valla	DATE: 3-03-2021	STRUCTURE DESIGN	PLANNING STUDY SHEET 3 OF 4
DRAWN BY: Leon Valla	DATE: 3-03-2021	DESIGN BRANCH 12	VENTURA OVERHEAD (BRIDGE REPLACE)
CHECKED BY: X	DATE: X		UNIT: 3606 / BRIDGE No.: 52-0040
APPROVED: X	DATE: X		PROJECT EA: 07-31960 / PROJECT No. & PHASE: 0716000025

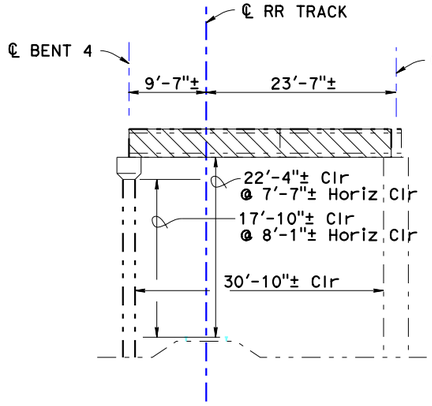
STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 1/11/2019)

DATE PLOTTED => 22-JUN-2021 TIME PLOTTED => 10:29

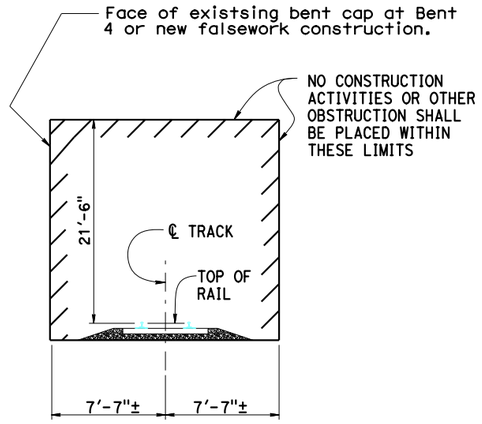
FILE => 52-0040 all latest files 4-22-2021.dgn => s129377

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION - DIVISION OF ENGINEERING SERVICES

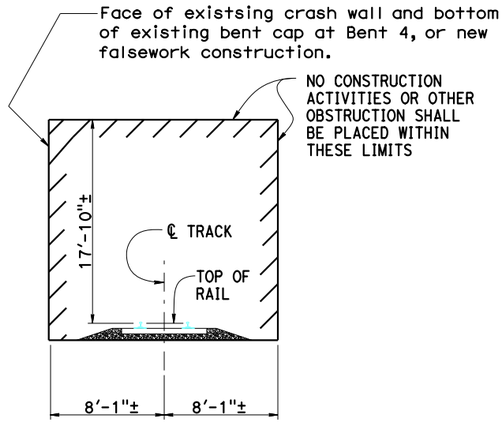
Dist	COUNTY	ROUTE	POST MILE
07	VEN	1	21.54



BENT 4A
MINIMUM CLEARANCE
NO SCALE



MINIMUM RAILROAD CONSTRUCTION CLEARANCES (NORMAL TO RAILROAD)
NO SCALE



MINIMUM RAILROAD CONSTRUCTION CLEARANCES (NORMAL TO RAILROAD)
NO SCALE

Railroad Traffic

Falsework Containment Opening required during the full duration of construction for the removed and replaced portion of existing bridge over the Union Pacific Railroad (UPRR).

Vertical Clearance	Horizontal Clear Width
21'-6"	15'-2"±

:CONSTRUCTION CONSIDERATIONS

Ⓐ The bridge will be closed to traffic for the duration of construction for the removal and replacement of existing structure. The cost of traffic handling, right of way, and permits to be determined by the district.

Ⓑ The California Costal Commission will authorize the use of Concrete Barrier Type 90 for the project.

Ⓒ Structural members to be removed will rerquire an environmental construction sequence for Asbestos Containing Material(ACM).

Ⓓ The structural horizontal layout is controlled by the UPRR limit of 70 ft clear assumed by Caltrans.

Ⓔ Relocation or installation of utilities or drainage facilities is not considered in this APS.

Vehicular Traffic

1. ___New alignment. No traffic at the site.
2. X Traffic will be detoured away from the site.
3. X Bike Traffic will be carried on the structure. Stage construction will be required.
4. ___Traffic will pass under the structure on _____ (Name of St. or Hwy.)
   A. ___No falsework allowed over traffic.
   B. ___Falsework opening(s) required:

		Temporary Vertical Clearance	Width of Traffic Opening
_____	Bnd	_____	_____
_____	Bnd	_____	_____
_____	Two-way	_____	_____

   C. ___Temporary traffic lane reduction needed for footing excavation.

DESIGNED BY Leon Valla	DATE 3-03-2021	STRUCTURE DESIGN	PLANNING STUDY SHEET 4 OF 4
DRAWN BY Leon Valla	DATE 3-03-2021	DESIGN BRANCH 12	VENTURA OVERHEAD (BRIDGE REPLACE)
CHECKED BY X	DATE X		UNIT: 3606 / BRIDGE No.: 52-0040
APPROVED X	DATE X		PROJECT EA: 07-31960 / PROJECT No. & PHASE: 0716000025

STRUCTURES DESIGN ADVANCE PLANNING STUDY SHEET (ENGLISH) (REVISION 1/11/2019)

DATE PLOTTED => 22-JUN-2021 TIME PLOTTED => 10:32
FILE => 52-0040 all latest files 4-22-2021.dgn USERNAME => s129377

Appendix B

Highway and Railroad Right of Way Information Provided by Caltrans

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

H. A. FOONG — No. 50858 — Exp. 9-30-23 — CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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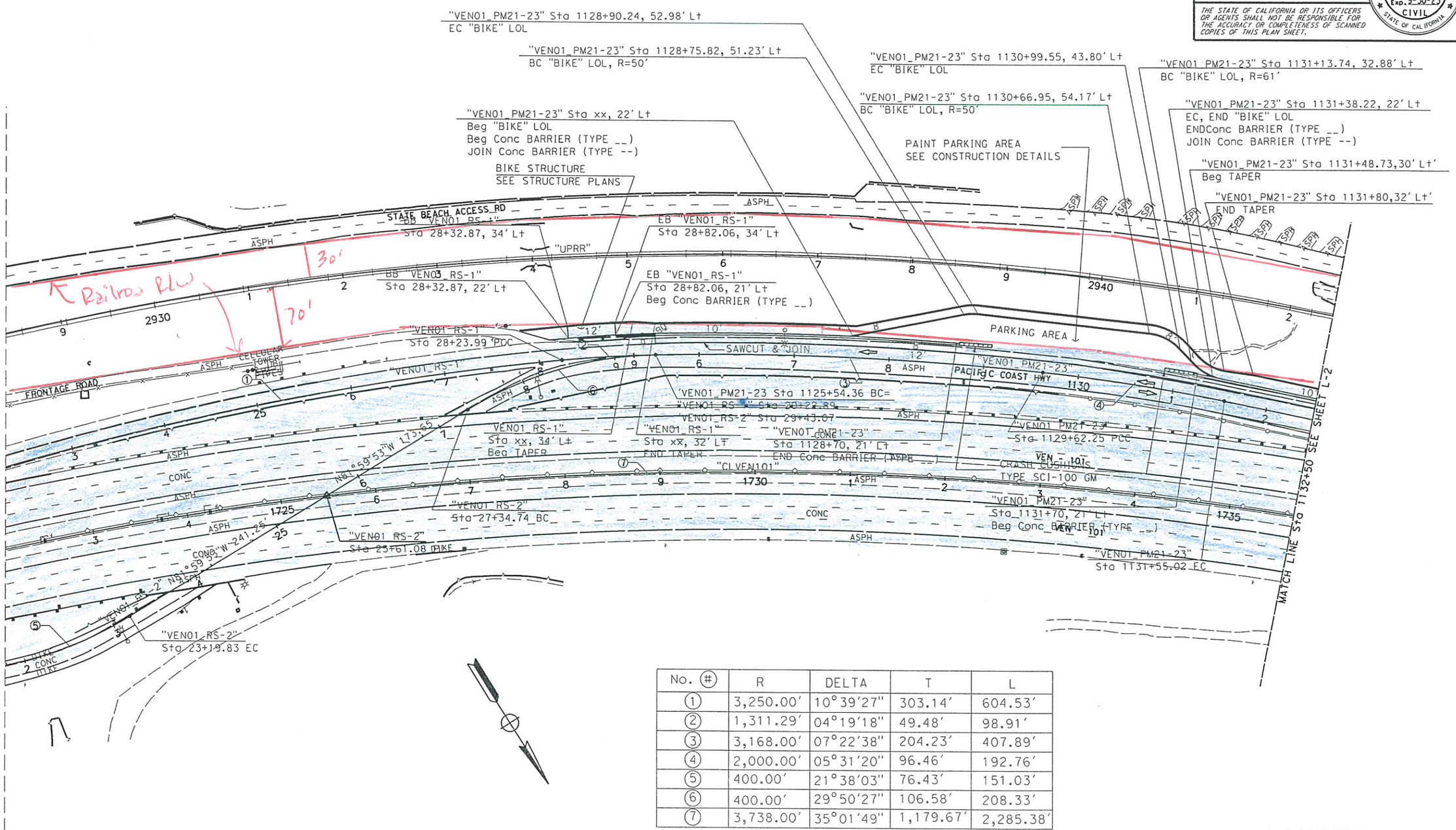
NOTES:

1. FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.
2. FOR XXXXX, SEE CONSTRUCTION DETAILS SHEETS.
2. FOR XXXX DETAILS, SEE CONSTRUCTION DETAILS SHEETS.



No. (#)	R	DELTA	T	L
①	3,250.00'	10°39'27"	303.14'	604.53'
②	1,311.29'	04°19'18"	49.48'	98.91'
③	3,168.00'	07°22'38"	204.23'	407.89'
④	2,000.00'	05°31'20"	96.46'	192.76'
⑤	400.00'	21°38'03"	76.43'	151.03'
⑥	400.00'	29°50'27"	106.58'	208.33'
⑦	3,738.00'	35°01'49"	1,179.67'	2,285.38'

LAYOUT

SCALE: 1"=50'

L-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION — DESIGN

CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
REVISED BY / DATE REVISED

LAST REVISION — DATE PLOTTED => $DATE — TIME PLOTTED => $TIME

BORDER LAST REVISED 8/5/2020 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT . 1819 | PROJECT NUMBER & PHASE .07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

H. A. FOONG No. 50858 Exp. 9-30-23 CIVIL — REGISTERED PROFESSIONAL ENGINEER — STATE OF CALIFORNIA

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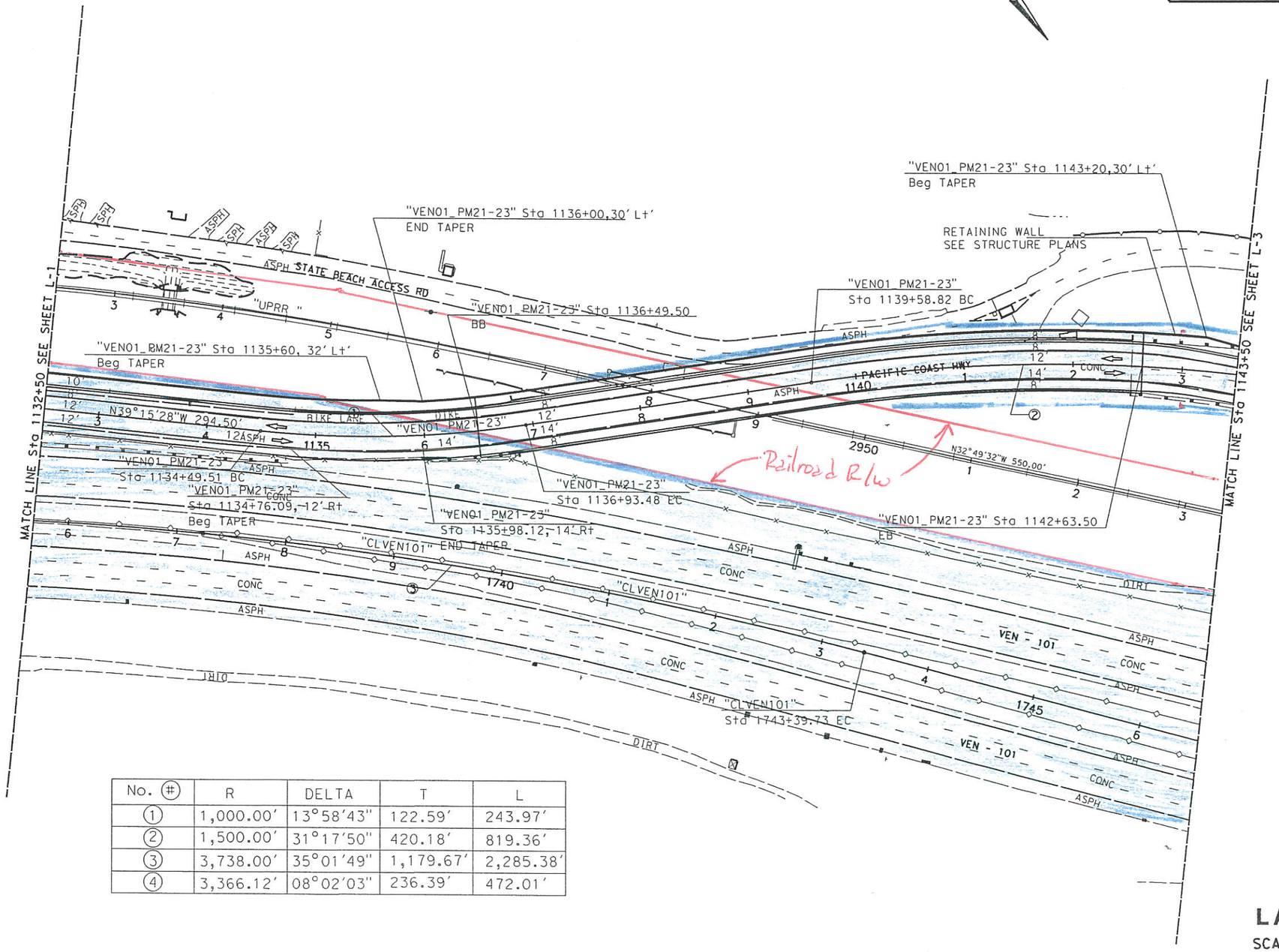
NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.



No. (#)	R	DELTA	T	L
①	1,000.00'	13°58'43"	122.59'	243.97'
②	1,500.00'	31°17'50"	420.18'	819.36'
③	3,738.00'	35°01'49"	1,179.67'	2,285.38'
④	3,366.12'	08°02'03"	236.39'	472.01'

LAYOUT
SCALE: 1"=50'

L-2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
REVISED BY
DATE REVISED
DATE PLOTTED => $DATE
TIME PLOTTED => $TIME
LAST REVISION

BORDER LAST REVISED 8/5/2020 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT . 1819 | PROJECT NUMBER & PHASE .07160000251

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
07	Ven	1	21.3/21.9		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

H. A. FOONG
No. 50858
Exp. 9-30-23
CIVIL
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

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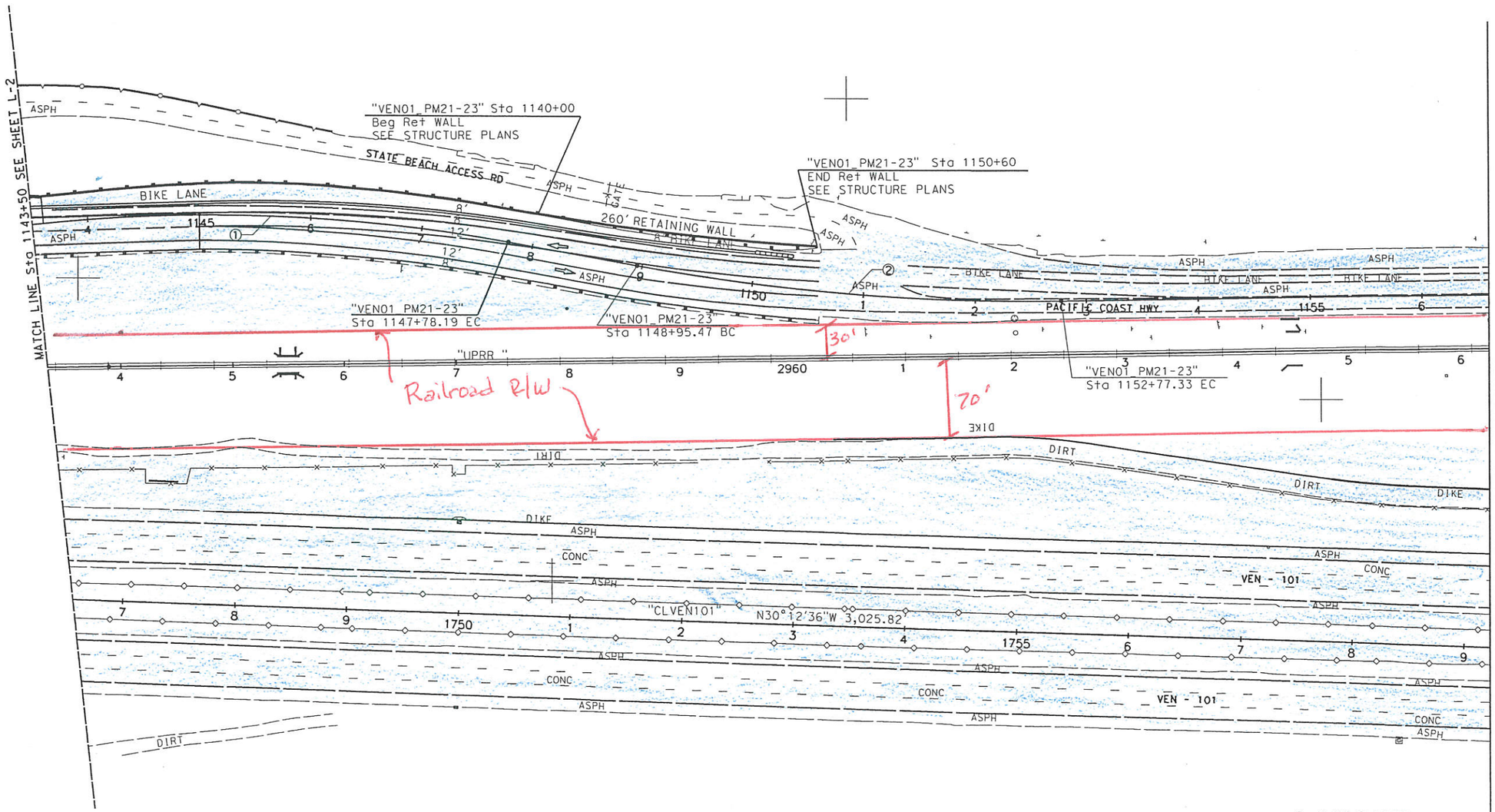
NOTE:
FOR ACCURATE RIGHT OF WAY DATA, CONTACT RIGHT OF WAY ENGINEERING AT THE DISTRICT OFFICE.

No. (#)	R	DELTA	T	L
①	1,500.00′	31°17′50"	420.18′	819.36′
②	2,010.00′	10°53′07"	191.51′	381.87′



LAYOUT
SCALE: 1"=50′

L-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
Caltrans
DESIGN
FUNCTIONAL SUPERVISOR: REFUGIO DOMINGUEZ
CALCULATED-DESIGNED BY: AARON FOONG
CHECKED BY: REFUGIO DOMINGUEZ
REVISED BY | DATE REVISED

LAST REVISION | DATE PLOTTED => $DATE | TIME PLOTTED => $TIME

BORDER LAST REVISED 8/5/2020 | USERNAME => $USER | DGN FILE => $REQUEST | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT . 1819 | PROJECT NUMBER & PHASE .07160000251

DPR REG. NO	STATE	FEDERAL PROJECT NO.	EFFECTIVE DATE	SHEET NO.	TOTAL SHEETS
7	CALIF				

DISTRICT R/W AGENT | BUREAU OF PUBLIC ROADS | DATE

VENTURA COUNTY

SEE MAP NO. 18595-C

SCG 115644

N 17°01'27" E

BOUNDARY LINE RANCHO EX MISSION SAN BUENAVENTURA

BOUNDARY LINE RANCHO CANADA DE SAN MIGUELITO

287110.79
605163.85

14.16 Ac.

VEN-2-D R-252

45821-1 Temp. Const. Ease.

45821-2 Temp. Const. Ease.

45821-3 Drain Ease.

45821-4 Slope Ease.

45821-5 Util. Ease. for Southern California Edison Co.

45821-6 Slope Ease.

45821-7 Slope Ease.

45821-8 Ease. to State for R/W purposes

4560-2 20' Ease.

4560-3 20' Ease.

A 4560-1

A 4560-2

A 4560-3

49660-1

62886

7 JU 2030

VEN-2-D 9

VEN-2-D 2

6.56 Ac.

1.36 Ac.

TANK

UNDERCROSSING

OR 18-197

OR: 2025-192

Previously acquired access rights

Proposed Easement for RR purposes beneath Freeway

50' No Vehicular Access

50' No Vehicular Access

SOUTHERN PACIFIC RAILROAD

N. 48°27'16" W.

FREEWAY

MAIN ST.

R/W LINE

N. 80°58'44" W. 2733.78'

S. 80°58'44" E. 333.38'

N. 72°35'17" W. 664.65'

Δ = 7°18'52"
R = 4500'
L = 574.48'

Δ = 3°43'34"
R = 10,000'
L = 650.33'

37 + 24.71 B.C.

287 735.44
602 166.79

RANCHO CAÑADA DE SAN MIGUELITO

BOOK "A", PAGE 309 OF PATENTS (Transcribed Records from Santa Barbara County)

INSERT MAP
NOT DRAWN TO SCALE

PARCEL NO.	GRANTOR OR GRANTEE	AREA* TO BE ACQUIRED	AREA* EXCESS	AREA* TOTAL	INST	RECORDING DATA DATE	RECORDING DATA O.R.
45821-1	CROWN ZELLERBACH CORP.	8.91 Ac.		42.57 Ac.	FEE		
45821-2	CROWN ZELLERBACH CORP.	0.30 Ac.			Drain Ease		
45821-3	" " "	0.14 Ac.			Drain Ease		
45821-4	" " "	0.19 Ac.			Slope Ease		
45821-5	" " "	0.18 Ac.			Temp Const. Ease		
45821-6	" " "	0.21 Ac.			Ease		
45821-7	" " "	0.06 Ac.			Ease		
A4560-1	ADRIAN G. WOOD et ux				FEE	7-20-61	2025-192
A4560-2	" "				Ease		
A4560-3	" "				Ease		
2	Alice Grubb et al				Ease	12-6-26	135-51
9	" " "				Ease	4-16-52	358-330
49660-1	WPD	58.96 Ac.		84.67 Ac.	FEE		
62886	Crown Zellerbach Corp.	3.45 Ac.		88.51 Ac.			
R-252	COUNTY OF VENTURA				REL	1-9-64	2460-37

REVISION DATES			
REV. BY	DATE	REV. BY	DATE
H.G.H.	2-15-68		
H.G.H.	8-26-68		
H.G.H.	10-10-68		
V.J.R.	2-18-69		
H.G.H.	5-14-69		
V.J.R.	1-22-70		
LW	10-8-70		
BMC	1-6-71		

STATE OF CALIFORNIA
TRANSPORTATION AGENCY — DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS
07 - VEN - 101 - 31.4
APPRAISAL MAP
STA. 10+00 TO STA. 41+00

SCALE 1" = 100'
DRAFT D. B. & H.G.H.
RWPE FAWCETT
FILE NO 18542-C
DATE 12-8-66
APPROVED NOAD

LEGEND: ACCESS DENIAL LINE ..... TOP OF CUT _____ TOE OF FILL
* UNLESS OTHERWISE NOTED ALL AREAS ARE IN SQUARE FEET
IF MORE THAN ONE BEARING AND DISTANCE ARE SHOWN FOR A LINE, THE ONE IN PARENTHESES IS PREVIOUS RECORD

Reference to be kept for 45821-1 Dec '72

DO NOT USE FOR APPR PURPOSES

SUPERCEDED — REFERENCE MAP ON 032602-0

1

B.P.R. REG. NO.	STATE	FEDERAL PROJECT NO.	EFFECTIVE DATE	SHEET NO.	TOTAL SHEETS
7	CALIF			6	7

DISTRICT R/W AGENT | BUREAU OF PUBLIC ROADS | DATE

PACIFIC OCEAN

SEE DETAIL

DETAIL
SCALE, 1 = 50'

EMMA K. WOOD STATE PARK

Mean High Tide Line

SOUTHERN PACIFIC RAILROAD

RTE. 1 HWY.

FREEWAY

RTE. 101

R/W LINE

RANCHO CAÑADA DE SAN MIGUELITO

BOOK "A", PAGE 309 OF PATENTS

(Transcribed Records from Santa Barbara County)

SEE MAP NO. 1+87+02 — ℄ F2240-4

SEE MAP NO. 1+88+18 — ℄ F2240-6

PARCEL NO.	GRANTOR OR GRANTEE	AREA* TO BE ACQUIRED	EXCESS	TOTAL	INST	RECORDING DATA DATE	O.R.
2	ALICE GRUBB et al				EASE	12-6-26	133-51
10	" "				EASE	9-12-33	393-208
11	S.P.R.R.				FEE	3-18-36	466-488
14	" "				EASE	3-6-34	393-347
400-1	A.G. WOOD	164.90 Ac.		8665.0 Ac	FEE	8-27-70	3711-576
47174-4	S.P.R.R.	6,109			EASE		
7JU3779	Southern California Gas				Agree	5-28-80	5660-793
47174-14	S.P.R.R.	9250			EASE	State has Pres Rt	
~~REL 866~~	~~County of Ventura~~				~~Rel~~	~~2-1-79~~	~~5311-733~~
18	State of Calif.				Aban	6-7-35	477-410

REVISION DATES			
REV. BY	DATE	REV. BY.	DATE
H.G.H.	2-15-68	DLM	7-8-71
V.P.	8-26-68	JGC	1-21-86
V.J.R.	10-21-68	MG	6-12-95
H.G.H.	3-11-69		
V.P.	4-23-69		
V.P.	10-1-69		
BM.	2-16-70		

STATE OF CALIFORNIA

TRANSPORTATION AGENCY — DEPARTMENT OF PUBLIC WORKS

DIVISION OF HIGHWAYS

07 - VEN - 101 - 33.18

R/W MAP

STA. 102 + 00 TO STA. 131 + 00

(OLD VEN-2)

SCALE 1" = 100'
DRAFT D.B.& H.G.H.
RWPE FAWCETT

FILE NO F2240-5
DATE 3-6-67
APPROVED NOAD

LEGEND: ..... ACCESS DENIAL LINE ..... TOP OF CUT _____ TOE OF FILL

* UNLESS OTHERWISE NOTED ALL AREAS ARE IN SQUARE FEET

IF MORE THAN ONE BEARING AND DISTANCE ARE SHOWN FOR A LINE, THE ONE IN PARENTHESES IS PREVIOUS RECORD

5 18835-6

D.P.A. REG. NO.	STATE	FEDERAL PROJECT NO.	EFFECTIVE DATE	SHEET NO.	TOTAL SHEETS
7	CALIF			7	7

THESE MAPS ARE PART OF A PERMIT AND NO CHANGES SHOULD BE MADE ON THEM

DISTRICT R/W ENGINEER — DATE 6/09/11

RYCHS K. YI
EXP. 12/31/12
No. 64628
REGISTERED PROFESSIONAL ENGINEER AND SURVEYOR
STATE OF CALIFORNIA

PACIFIC OCEAN

Meander of Ordinary Highwater Line per Ventura County Survey Nov. 1930

VEN-2-D VEN-2-DBE

EMMA K. WOOD STATE PARK

RTE. 1 HWY.

SOUTHERN PACIFIC RAILROAD O.R.18.197

N 32°48'44" W

N.32°48'44"W. 1,684.21'

R/W LINE

N30°12'33"W

Utility Eas. 400-24 2.77 Ac.

Δ=04°07'06" R=75.00' L=5.39'

PAR.2 7JU-3779

N.34°19'39"W. 116.94'

N 89°27'00"W 107.94'

N 89°27'00"W 102.10'

Δ=08°39'53" R=75.00' L=11.34'

N.89°27'00"W. 582.30'

S.57°11'16"W. 20.00'

23.95'

27.59'

Drain Eas. 400-6 2100 sq ft

Δ=10°10'48" R=75.00' L=13.33'

20.02' 20.02' 20.02' S.59°47'28"W.

60' 70' 20' UTILITY EAS.

N.32°48'44"W 268.22'

N.59°47'28"E.

268.21'

N42°59'32"W 438.81'

N30°12'32"W.

134+75

139+90

140

141+17.01 B.C.

Drain Eas. 400-7 400 sq ft

N.32°50'59"W. 30.09'

Δ=04°22'06" S.57°43'25"W. 20.01'

N.32°50'58"W. 30.12'

294,017.77 594,233.32

400-1

294,059.67 594,489.31

S.30°41'17"E. 1090.58'

293,228.89 595,123.44

130+80 130

Δ=04°22'06" R=11,549.17' L=20.05'

Drain Eas. 400-8 400 sq ft

2981+62.35 (REC.) 2981+61.4 B.C.T 1/2

Δ=01°04'30" L=30'

2981+92.35 (REC.) 2981+91.4 C.C. 0°30' LT

Grade Ease. 47174-15

Rescinded REL. 866 Por. 2

60' R/W O.R.133-51

Δ=00°05'58" R=11,529 L=20.01'

R=11,529.17' L=879.00'

R=11,549.17'

20.02' N.57°43'25"E.

Utility Eas. 400-25 0.54 Ac.

20.01' S.55°43'06"W.

Drain Eas. 400-9 400 sq ft

20' R/W O.R. 466-488

Grade Ease. 47174-16

Δ=11°39'53" R=11,459.17' L=2332.95'

Δ=00°05'58" R=11,529.17' L=20.01'

20.00' S.52°44'40"W.

20.01' N.35°43'06"E.

Δ=06°05'11" L=1224.72'

S.34°34'18"E. 276.37'

Δ=12°41'02" R=340.00' L=75.27'

Δ=04°48'24" R=260.00' L=21.81'

Δ=13°25'25" R=260.00' L=60.91'

Δ=00°06'14" R=11,509.17' L=20.87'

20.84'

S.32°06'44"E. 487.21'

Drain Eas. 400-10 2,096 sq ft

PAR.2 7JU-3779

Δ=20°13'59" R=12000' L=4237.60'

145+50

149+70

150

156+00

160

162+50

Drain Eas. 47174-17 417 sq ft

Retaining Sec Wall 43807 Ease

79919

R=11,289.17' L=1153.96'

Δ=5°56'24"

R=11,344.12' R=11,349.17'

Δ=5°21'08" L=1039.30'

R=11,349.17' Δ=0°30'17" L=99.97'

EMMA K. WOOD STATE PARK

L=1060.17'

SOUTHERN PACIFIC RAILROAD

N.E. LINE S.P.R.R. R/W O.R. 444-387

Δ=11°39'53" R=11,529.17' L=2347.20'

Δ=0°05'58" R=11,529.17' L=20.01'

Grad Eas. 47174-8

Utility Eas. 400-26 9.73 Ac.

Δ=0°06'13" R=11,529.17' L=20.85'

Δ=5°56'54" R=240.00' L=24.92'

S.37°59'43"E. 188.50'

Drain Eas. 400-11 3,812 sq ft

Δ=2°52'35" R=260.00' L=13.05'

20.09' S34°25'24"E

S.49°36'25"W. 189.55'

S.49°36'25"W. 192.24'

N.49°36'25"E.

SEE MAP NO. (18835-G) F2240-5

SEE MAP NO. (18819-G) F2241-1

S.30°41'17"E. 1090.58'

141+70 181'

N.32°27'36"E. 223.34'

130+80 130'

147+69 320.28'

10' 5'

258.51'

43.27'

S.42°45'23"W 800.12'

376.75'

393.25'

N.65°39'39"W

N.65°39'39"W

40.00' N.20°20'21"W

15400 ℄ 75348 Drainage Ease.

R/W LINE N.36°04'05"W. 729.84'

150+41.05 181.57'

157+60 183'

N.42°42'28"W. 634.62'

FREEWAY

RTE. 101

RANCHO CANADA DE SAN MIGUELITO

The Joint Use Agreement, Document No. 7JU-3779 Data is Recorded on Sheet F2240-5

PARCEL NO.	GRANTOR OR GRANTEE	AREA * ACQ.	EXCESS	TOTAL	INST.	RECORDING DATA DATE	O.R.
2	Alice Grubb et al				Ease	12-6-26	133-51
11	S.P.R.R.				Fee	3-18-36	466-488
400-1	A. G. Wood	164.90Ac		8665.0Ac	Fee	8-27-70	3711-576
43807	Dept. of Parks & Recreation				Agree		
47174-8	S.P.R.R.	31,703			Ease		
47174-13	S.P.R.R.	417			Ease	12-17-75	4510-607
47174-15	S.P.R.R.	55,620			Ease		
47174-16	S.P.R.R.	28,950			Ease		
75348	Cynthia Wood	15,400		257.8Ac	Ease		
79919	STATE OF CALIF.	161,336			Agree		

PARCEL NO.	GRANTOR OR GRANTEE	AREA * ACQ	EXCESS	TOTAL	INST.	RECORDING DATA DATE	O.R.

BOOK "A", PAGE 309 OF PATENTS

(Transcribed Records from Santa Barbara County)

STATE OF CALIFORNIA
STATE LANDS COMMISSION

This map is hereby approved and filed for record with the State Lands Commission pursuant to the provisions of Section 101.5 of the California Streets and Highways code. The sovereign lands under the jurisdiction of the State Lands Commission as they may lie within the ROW lines shown upon this map are hereby reserved for highway purposes.

APPROVED: Meeting 6/23/11 STATE LANDS COMMISSION BY _____ CHIEF, DIVISION OF LAND MANAGEMENT

CO-ORDINATES, BEARINGS, AND DISTANCES SHOWN ARE BASED ON THE CALIF. CO-ORDINATE SYSTEM NAD 27, ZONE 5, DISTANCES AND STATIONING ARE GRID DISTANCES, DIVIDE BY 0.9999499 TO OBTAIN GROUND DISTANCES. 1000000.00 SHOUD BE ADDED TO ALL EASTING VALUES.

REVISION DATES

REV. BY	DATE	REV. BY	DATE
H.G.H	2-15-68		
V.P.	4-5-68		
V.P.	8-26-68		
V.P.	9-26-68		
V.J.R.	10-21-68		
V.J.R.	10-31-68		
V.P.	4-8-69		
V.P.	11-3-69		
B.M.	2-16-70		
J.G.C.	1-22-74		
B.T.	3-11-96		
T.H	4-6-10		
T.H	11-24-10		

STATE OF CALIFORNIA
TRANSPORTATION AGENCY — DEPARTMENT OF PUBLIC WORKS

DIVISION OF HIGHWAYS
07 - VEN - 101 - 33.7

R/W MAP

STA. 131+00 TO STA. 162+00
(OLD VEN-2)

SCALE 1" = 100'
DRAFT V.J.R. & H.G.H.
RWPE FAWCETT

FILE NO. F2240-6A
DATE 3-3-67
APPROVED NOAD

LEGEND: ||||||||| ACCESS DENIAL LINE ..... TOP OF CUT ------ TOE OF FILL
* UNLESS OTHERWISE NOTED ALL AREAS ARE IN SQUARE FEET
IF MORE THAN ONE BEARING AND DISTANCE ARE SHOWN FOR A LINE, THE ONE IN PARENTHESES IS PREVIOUS RECORD

6 18818-G

Appendix C

Wave Runup Results on Analyzed Transects for Selected Storm Events

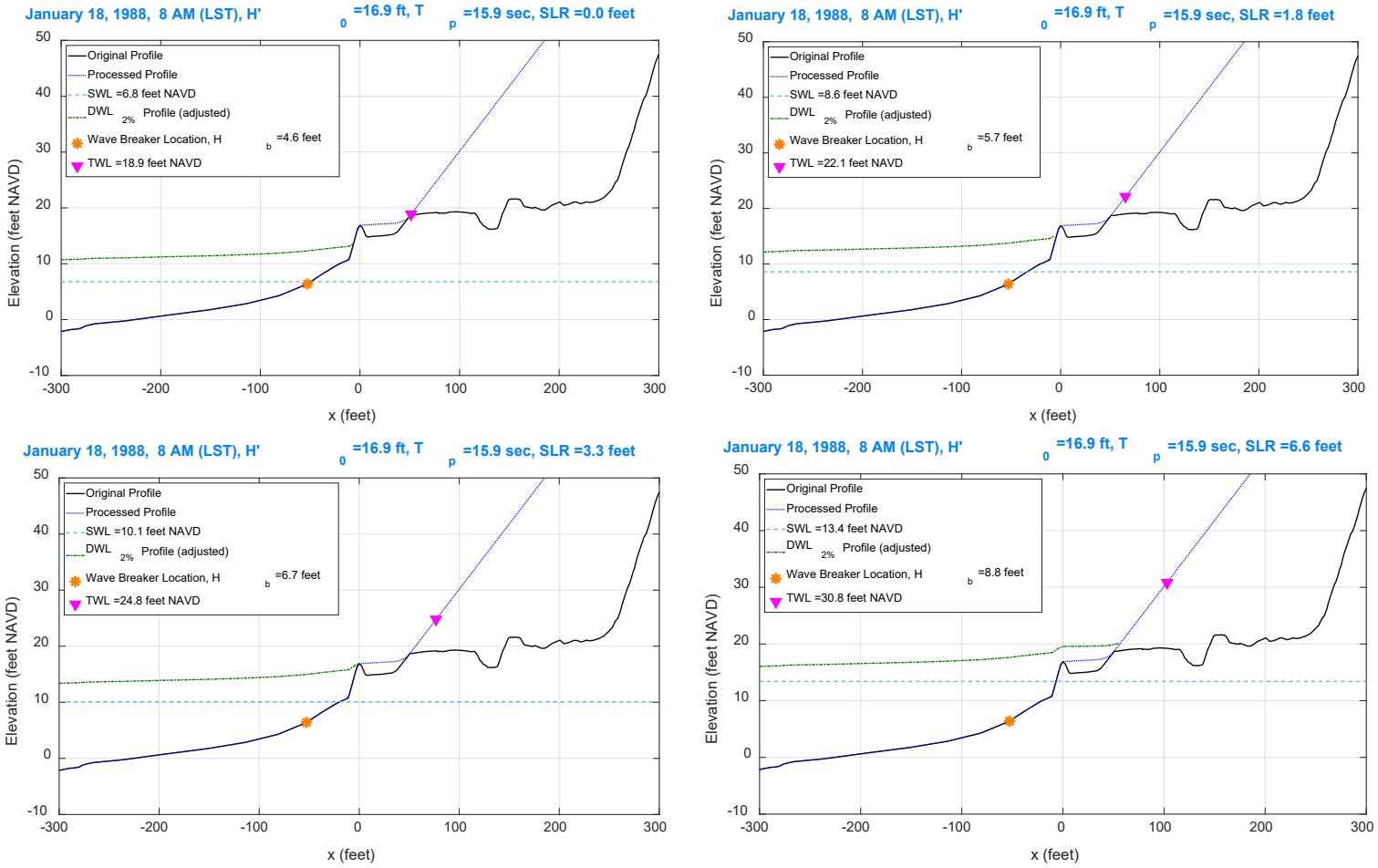
APPENDIX C

Wave Runup Results on Analyzed Transects for Selected Storm Events

The following figures present wave runup modeling output on each of the analyzed shore transects for all sea-level rise cases and for a selection of storm events. We selected the storm events that yield the top two greatest maximum potential total water level (TWL) results (i.e., January 18, 1988 and January 27, 1983) and a recent storm even that is known to have impacted the project site (December 11, 2015). The figures include the original and processed (i.e., modeled) profile, still water level (i.e., tide plus storm surge), estimated dynamic water level, maximum potential TWL on the projected slope of the processed profile, and the wave breaker location associated with the maximum potential TWL event. These results represent a selection of the simulations that were performed for the project. Table C-1 provides a summary of the figures included in this appendix, including the corresponding transect and storm event shown.

TABLE C-1
SUMMARY OF FIGURES

Figure Number	Transect	Storm Event
C-1	1	January 18, 1988
C-2	1	January 27, 1983
C-3	1	December 11, 2015
C-4	3	January 18, 1988
C-5	3	January 27, 1983
C-6	3	December 11, 2015
C-7	4	January 18, 1988
C-8	4	January 27, 1983
C-9	4	December 11, 2015

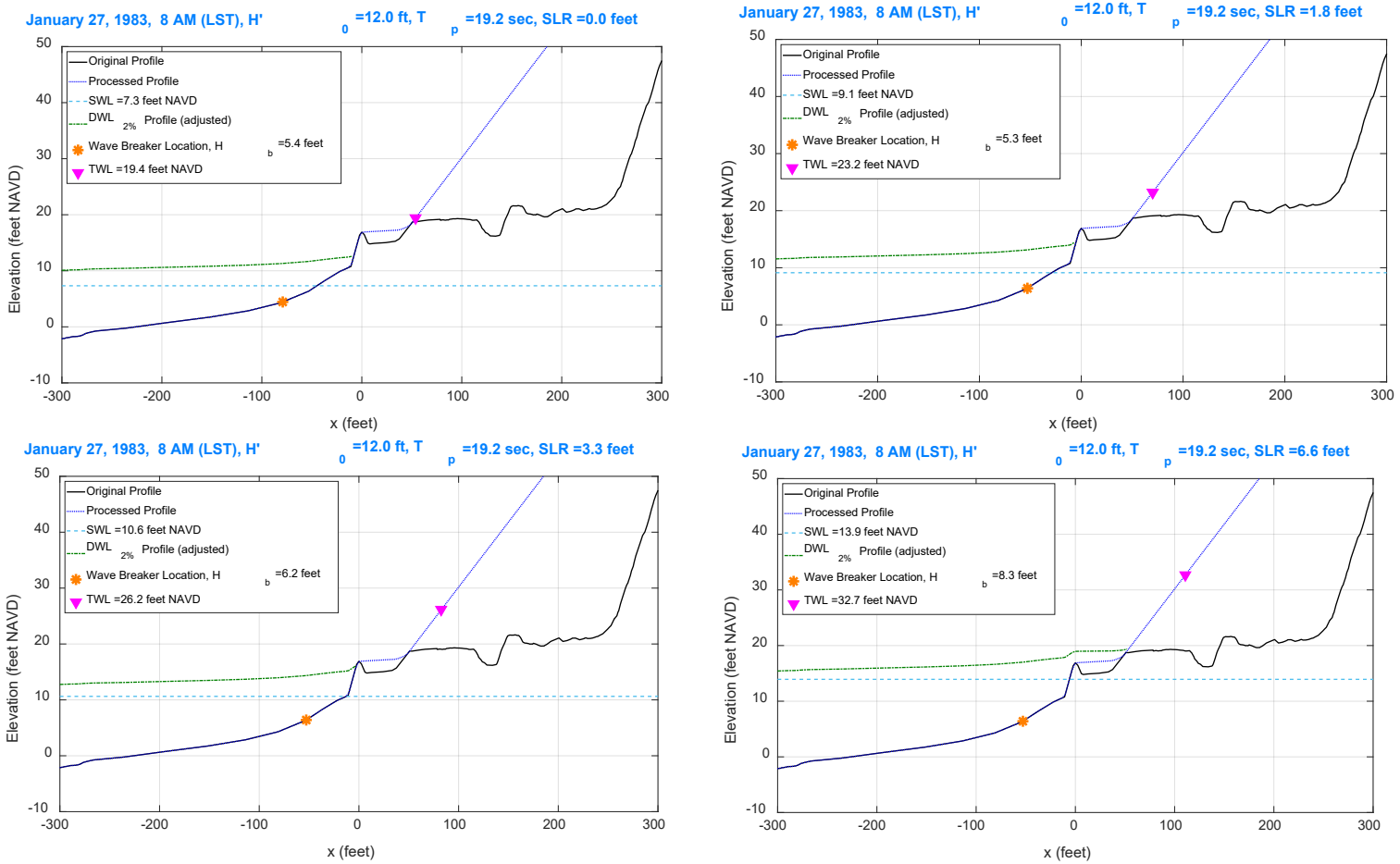


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-1

Profile View of Wave Runup Results at Transect 1 for all SLR cases and January 18, 1988 event

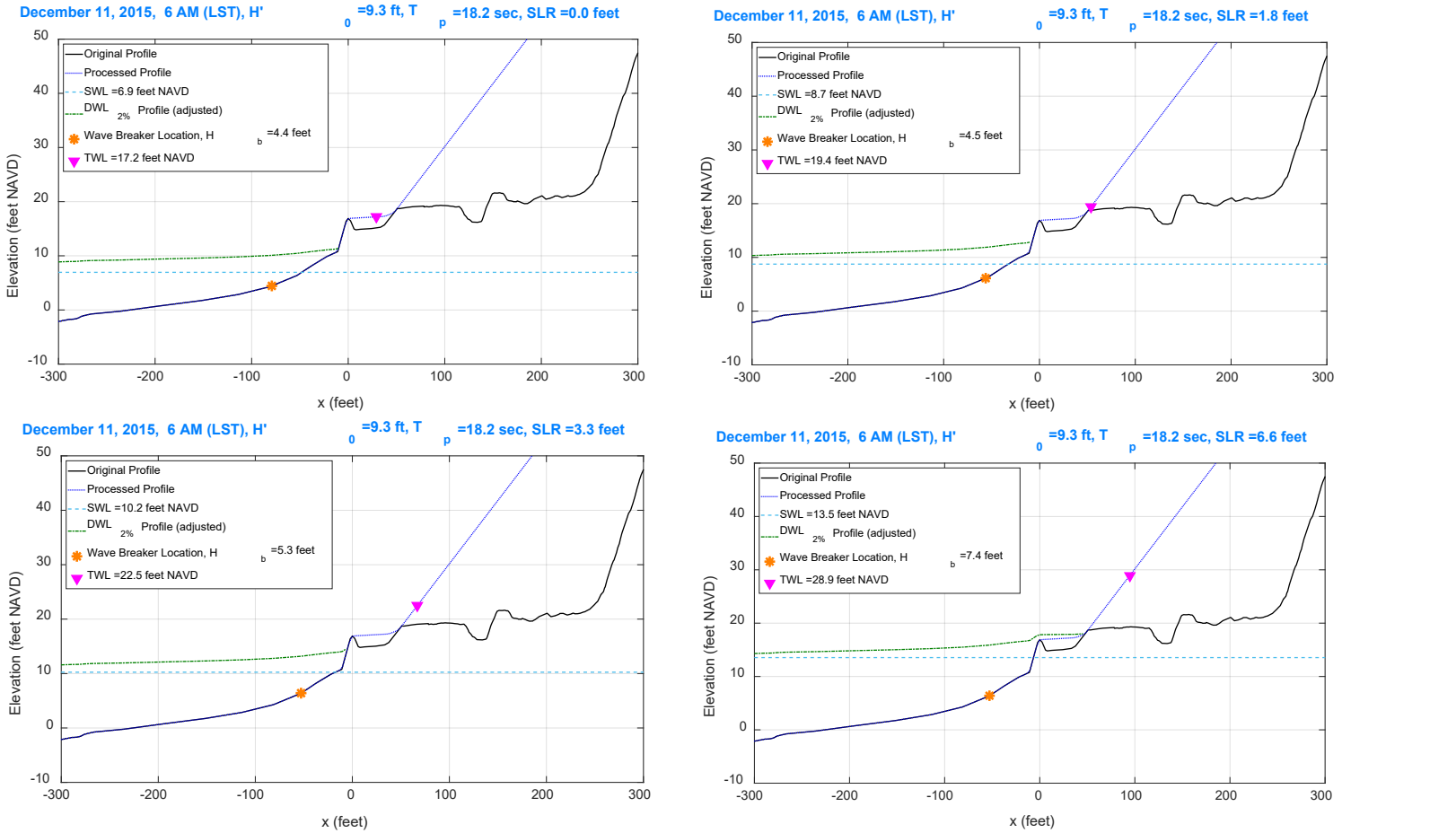


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-2

Profile View of Wave Runup Results at Transect 1 for all SLR cases and January 27, 1983 event

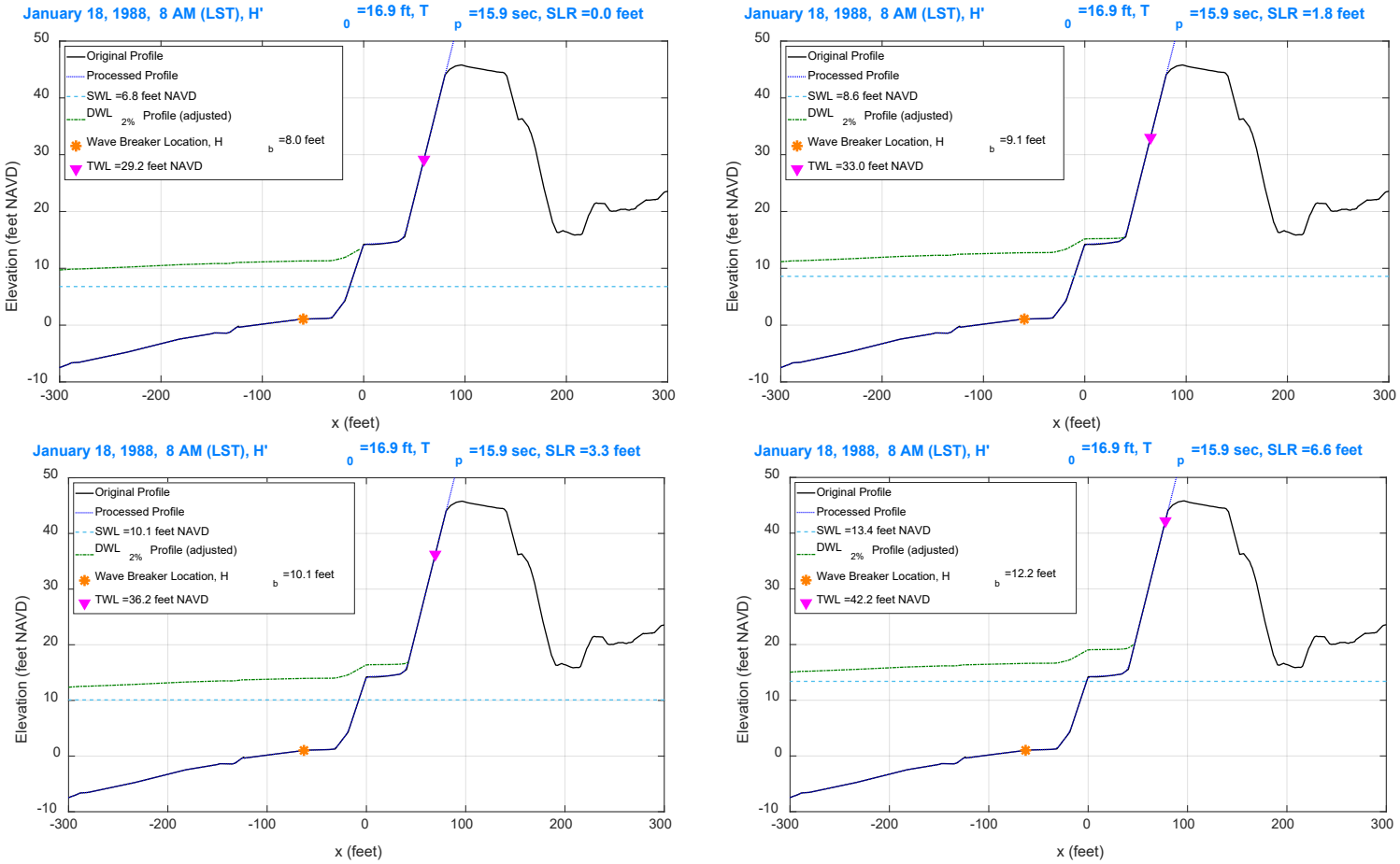


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-3

Profile View of Wave Runup Results at Transect 1 for all SLR cases and December 11, 2015 event

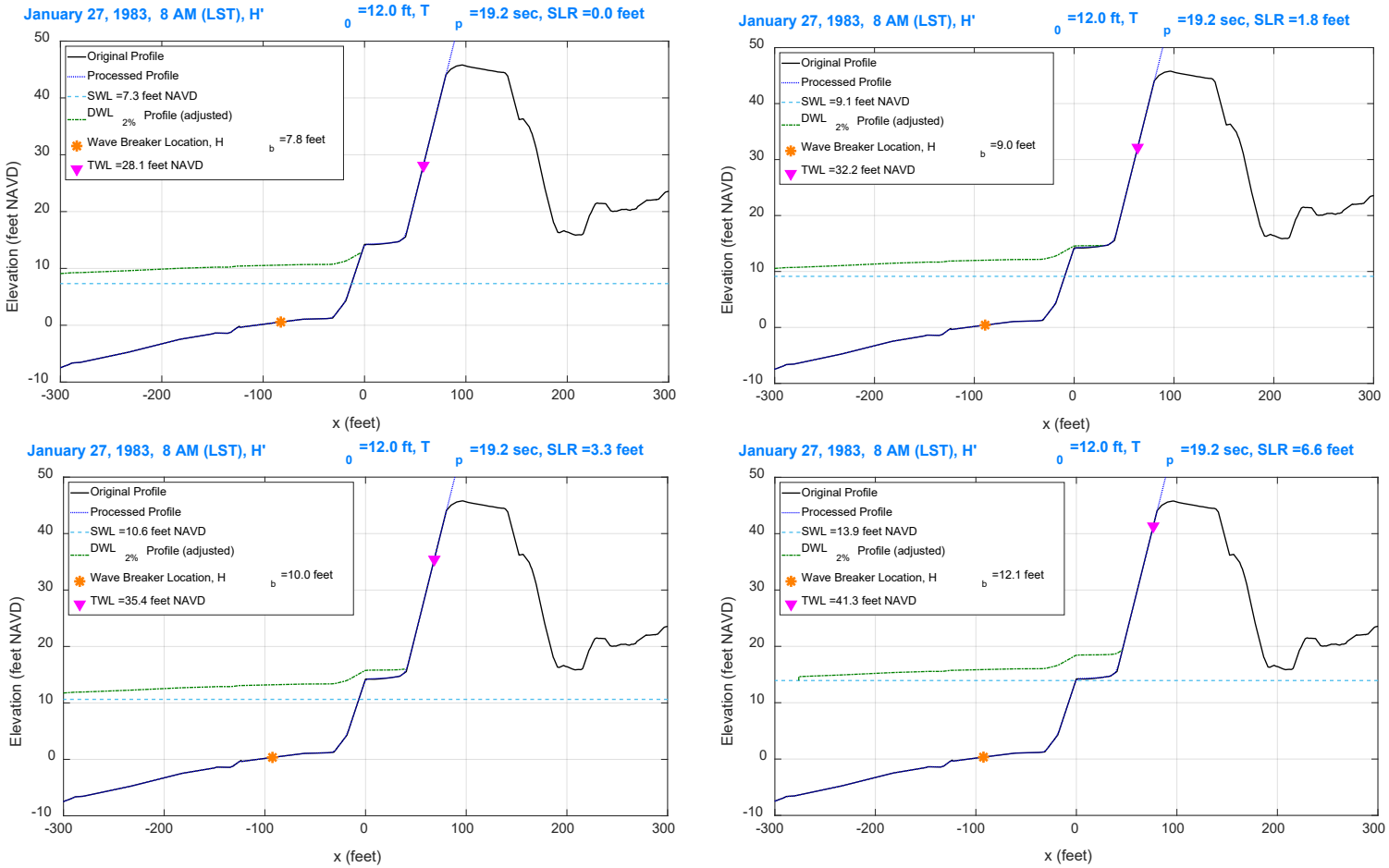


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-4

Profile View of Wave Runup Results at Transect 3 for all SLR cases and January 18, 1988 event

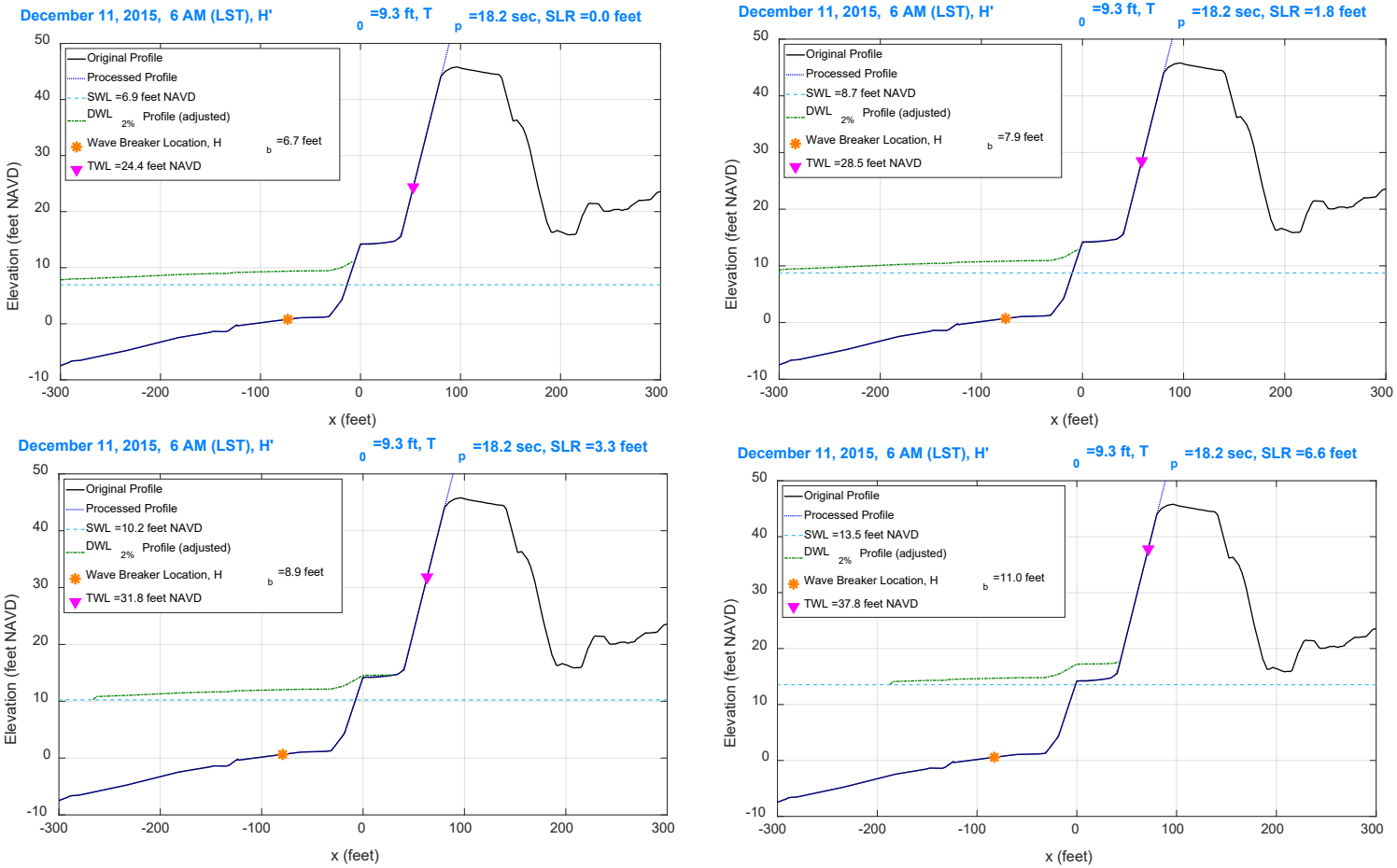


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-5

Profile View of Wave Runup Results at Transect 3 for all SLR cases and January 27, 1983 event

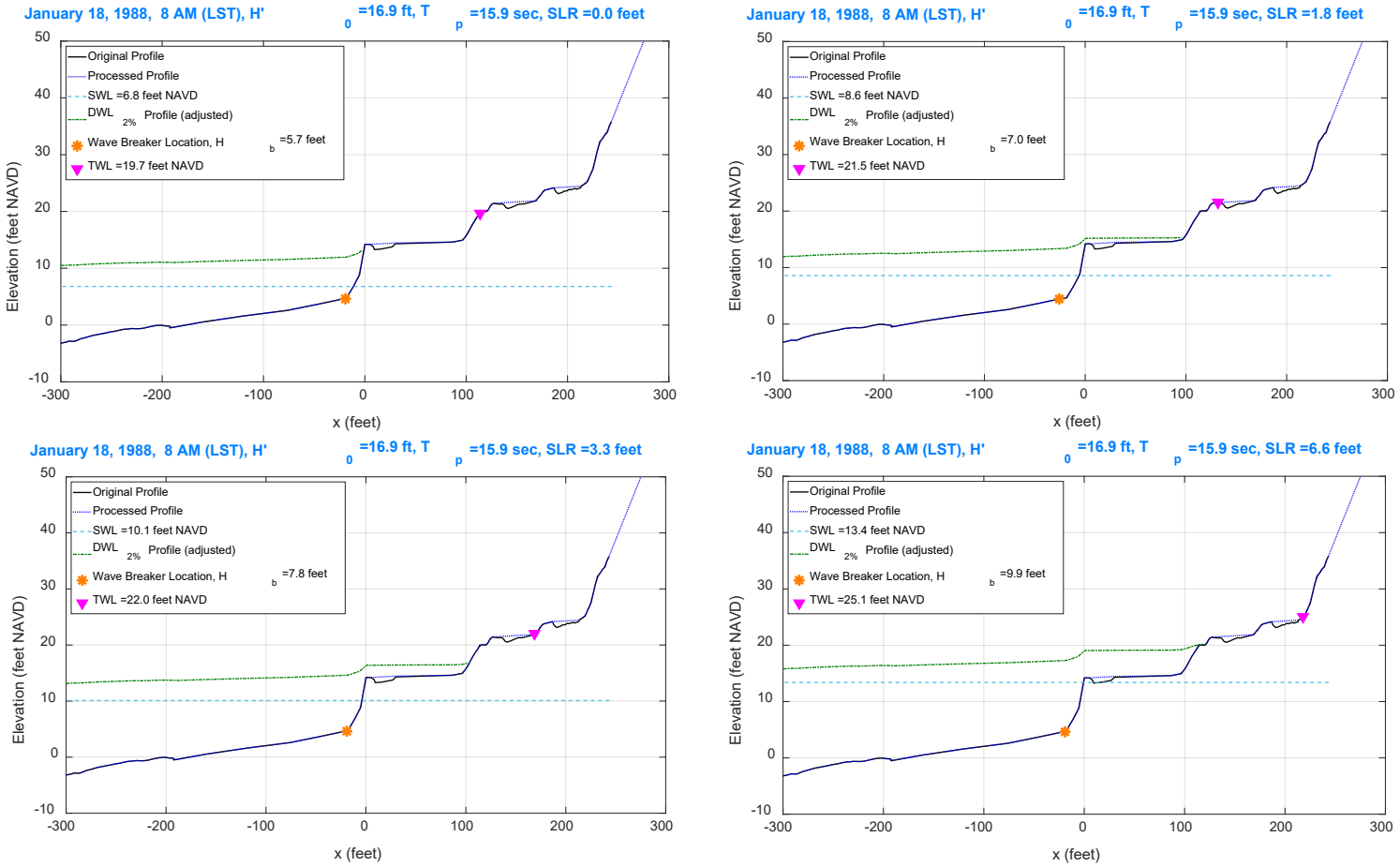


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-6

Profile View of Wave Runup Results at Transect 3 for all SLR cases and December 11, 2015 event

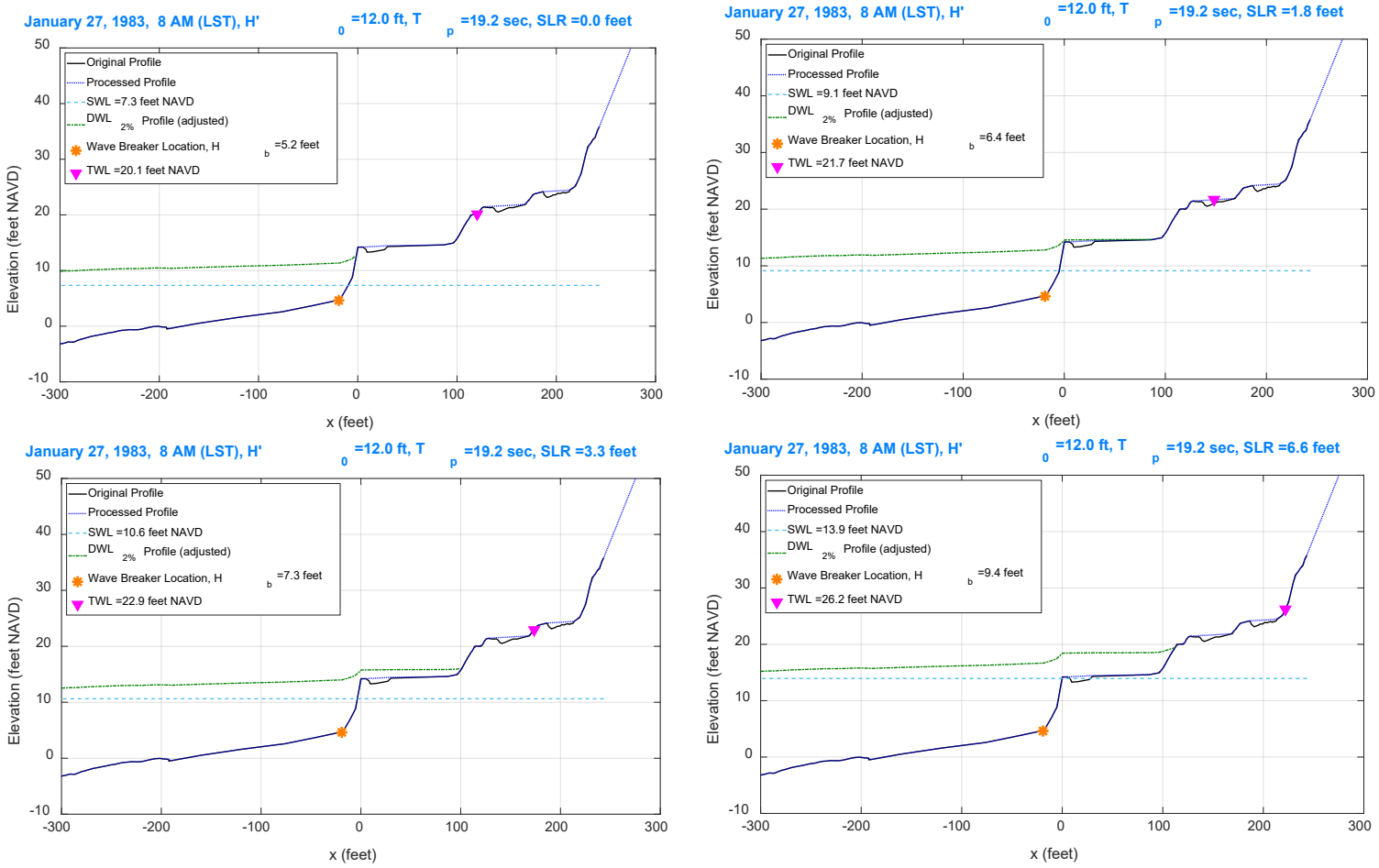


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-7

Profile View of Wave Runup Results at Transect 4 for all SLR cases and January 18, 1988 event

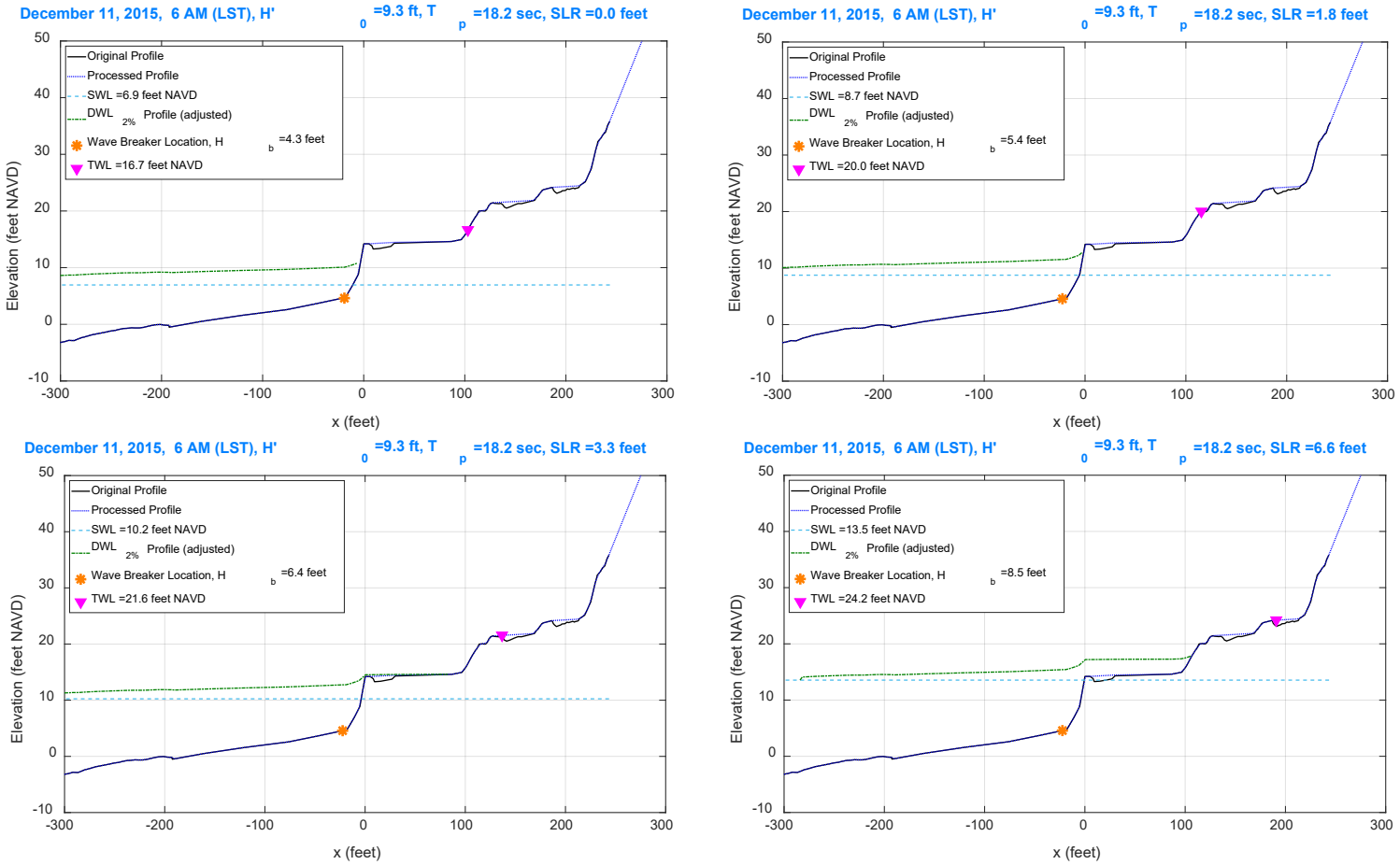


SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-8

Profile View of Wave Runup Results at Transect 4 for all SLR cases and January 27, 1983 event



SOURCE: ESA

Ventura Overhead Bridge Replacement Project

Figure C-9

Profile View of Wave Runup Results at Transect 4 for all SLR cases and December 11, 2015 event

Initial Study Biological Assessment: VEN-1 Bridge Replacement Project

Original ISBA report date: 6/16/2022

Revision report date(s): 12/19/2022, 04/25/2023, 7/31/2023

Case number (to be entered by Planning Div.)**:**

Permit type: Coastal Development Permit

Applicant: California Department of Transportation

Case Planner (to be entered by Planning Div.)**:**

Total parcel(s) size: 77.29 acres (Survey Area)

Assessor Parcel Number(s): 060-0-310-085, 060-0-310-095, 060-0-310-105, 060-0-310-115, 060-0-310-120, 060-0-320-245

Development proposal description:

Caltrans proposes to replace the existing State Route-1, Ventura Overhead Bridge (Bridge No. 52-0040) with a new bridge at post mile (PM) 21.3-21.9 in Ventura County. The new bridge will include upgraded bridge rails that meet the requirements of the Coastal Zone Management Act of 1972 and will also include new retaining walls on the north and south sides of the bridge. A Class 1 Bike Lane (measuring 8-10 feet in width with a barrier) will also be built on the southbound of the bridge facing the ocean from PM 21.3 to 21.9. A temporary bike bridge will be installed to allow cyclists to safely bypass the bridge construction zone. The State Beach Access Road will also be permanently widened.

Prepared for Ventura County Planning Division by:

As a Qualified Biologist, approved by the Ventura County Planning Division, I hereby certify that this Initial Study Biological Assessment was prepared according to the Planning Division's requirements and that the statements furnished in the report and associated maps are true and correct to the best of my knowledge.

Qualified Biologist (signature): Paul Caron			Date: 07/31/2023
Name (printed): Paul Caron	Title: Senior Biologist	Company: Caltrans	
Phone: (213) 326-0378	email: Paul.Caron@dot.ca.gov		
Other Biologist (signature):			Date: 07/31/2023
Name (printed): Patrick Thompson	Title: Associate Biologist	Company: Caltrans	
Phone: (213) 266-6973	email: Patrick.Thompson@dot.ca.gov		
Role: Field surveys, project coordination, inter agency coordination, project documentation, vegetation surveys, nesting bird surveys.			
Other Biologist (signature):			Date:
Name (printed):	Title:	Company:	
Phone:	email:		

County of Ventura
Planning Director Hearing
Case No. PL22-0114
Exhibit 7 - Initial Study
Biological Assessment

Role:

Initial Study Checklist

This Biological Assessment DID provide adequate information to make recommended CEQA findings regarding potentially significant impacts.

	Project Impact Degree of Effect				Cumulative Impact Degree of Effect			
	N	LS	PS-M*	PS	N	LS	PS-M*	PS
Biological Resources								
Species		LS				LS		
Ecological Communities		LS				LS		
Habitat Connectivity		LS				LS		

N: No impact
LS: Less than significant impact
PS-M: Potentially significant unless mitigation incorporated.
PS: Potentially significant
* DO NOT check this box unless the Biological Assessment provided information adequate enough to develop mitigation measures that reduce the level of impact to less than significant.

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Summary

The proposed project activities for the Caltrans Bridge Replacement Project at Ventura Overhead (Ven-1) and Class 1 bike lanes installation will have minimal impacts to the Pacific Ocean and surrounding natural communities. Vegetation removal will be required in areas of excavation which includes: 1) the abutments of the bridge to complete the retaining walls, 2) the footings of the pre-fabricated temporary bike bridge to facilitate bicycle detour during construction, and 3) the entrance of State Beach Access Rd to enhance safety of the road for public access. Some of these areas are potentially Environmentally Sensitive Habitat Areas (ESHA) as defined under Ventura County Coastal Zoning Ordinance. However, these uses are defined in Section 8178-2.5 and are permitted resource-dependent uses that enhance public recreational access-ways. Temporary and permanent impacts as a result of these uses will be documented and will be minimized and restored at ratios in accordance with the requirements set forth in the Coastal Zoning Ordinance. The appropriate avoidance and minimization measures are documented in the Initial Study Biological Assessment (ISBA) and will be implemented throughout the project to minimize and avoid impacts to biological resources.

Section 1: Construction Footprint Description

Construction Footprint Definition (per the Ventura County Planning Division): The construction footprint includes the proposed maximum limits of temporary or permanent direct land or vegetation disturbance for a project including such things as the building pad(s), roads/road improvements, grading, septic systems, wells, drainage improvements, fire hazard brush clearance area(s), tennis courts, pools/spas, landscaping, storage/stockpile areas, construction staging areas, fire department turnarounds, utility trenching and other grading areas. The construction footprint on some types of projects, such as mining, oil and gas exploration or agricultural operations, may be quite different than the above.

Development Proposal Description:

Caltrans proposes a bridge replacement project on State Route 1 from post-mile (PM) 21.3 to PM 21.9 in Ventura County. The proposed project will replace the entirety of Bridge #52-0040 on PM 21.54 and widen the cross-section of the bridge deck to incorporate a Class 1 bicycle and pedestrian shared-use path (on the ocean side of the bridge) adjacent to the southbound travel lanes separated by a concrete barrier between PM 21.3 (near the US-101 and SR-1 ramp interchange) to PM 21.9 (State Beach Access Rd intersection). The old bridge is 614 foot long and the new bridge will be the same length. The purpose of the proposal is to replace the bridge because many sections of the bridge have deteriorated and have since been falling from the bridge onto or near the railroad tracks. The bridge has met its life expectancy and the proposal is required to address the safety and rehabilitation of the bridge. In addition, the proposal will include a Class 1 shared-use path, which will effectively extend the existing First Adopted Bike Path at PM 21.3 an additional 0.6 miles to the intersection of State Beach Access Rd at PM 21.9, where bicyclists can continue their journey using existing bicycle lanes. A pedestrian hybrid beacon (PHB) signalized crossing will be incorporated at the entrance of State Beach Access Rd for bicyclists to safely transition to the next part of their journey at PM 21.9. Ample crosswalk signs will be posted to ensure drivers are aware of bicyclists and pedestrians crossing at this location. The aesthetics (fencing, barriers, etc.) of the Class 1 bicycle and pedestrian shared-use path will be comparable to the existing shared-use path between Mussel Shoals and the Ventura and Santa Barbara County Line (north of the project). The tall fences installed on the bridge are designed to prevent trespassing and ensure safety of the railroad facility from falling objects. The design of the new bridge will be clean and minimalistic with fewer columns in the substructure, which enhances and preserves the aesthetics of the scenic coastal beaches much more effectively than the current bridge. During construction of the bridge, bicyclists and pedestrians will be detoured to the shoulder of the US-101 southbound using a temporary pedestrian

and bicycle overcrossings. Bicyclists and pedestrians will be protected from vehicular traffic through k-rail separation. They will continue onto the SR-1 after passing construction of the bridge. Under the bridge, access to Emma Wood State Beach using State Beach Access Rd will be enhanced and moved toward inland by 10 to 19 feet. Soldier-pile and spread footing retaining walls will be used to retain the slope that was originally there. Utilities will also be relocated as a part of the project. Temporary construction and highway access easements from California State Parks and Union Pacific Railroad will be required for the project. Acquisition of parcels from Wood-Claeyssens Foundation will also be a component of this project. Parking capacity is not expected to be impacted following completion of the project. Parking capacity is expected to increase under the bridge as the new bridge requires fewer columns for structural support.

Construction Footprint Size

Construction of the proposed project would replace the old bridge with a new bridge, which is within a similar footprint. The retaining walls will be extended and reburied, which will not add any above ground permanent impacts. The temporary impacts associated with the project include staging and storing of equipment, excavation to remove the old bridge and install pre-fabricated bike-detour bridge, regrading of slope to widen State Beach Access Rd, and installation of new retaining walls.

Development Area Size

The Development Area Size is the same as the Construction Footprint Size since there are no driveway and fire brush clearance areas. As stated in the earlier section, the retaining walls will be extended and reburied, which will not add any above ground permanent impacts. The temporary impacts associated with the project include staging and storing of equipment, excavation to remove the old bridge and install pre-fabricated bike-detour bridge, regrading of slope to widen State Beach Access Rd, and installation of new retaining walls. Details for each feature and associated impacts are described in **Table 1** below.

Table 1. Development Area Size/Temporary and Permanent Impacts

Square Feet	Acres	Feature
83,512	1.92	**Temporary Impacts** – Staging Areas for bicycle detour bridge, construction of bridge, and bike Lanes
24,295	0.56	**Temporary Impacts** – Road widening for Shared-use path, Installation of Retaining Walls at Abutments (replace in-kind abutment dig-outs), Construction of New Bridge
11,000	0.25	**Permanent Impacts** –Widen State Beach Access Rd
118,807	2.73	**Total**

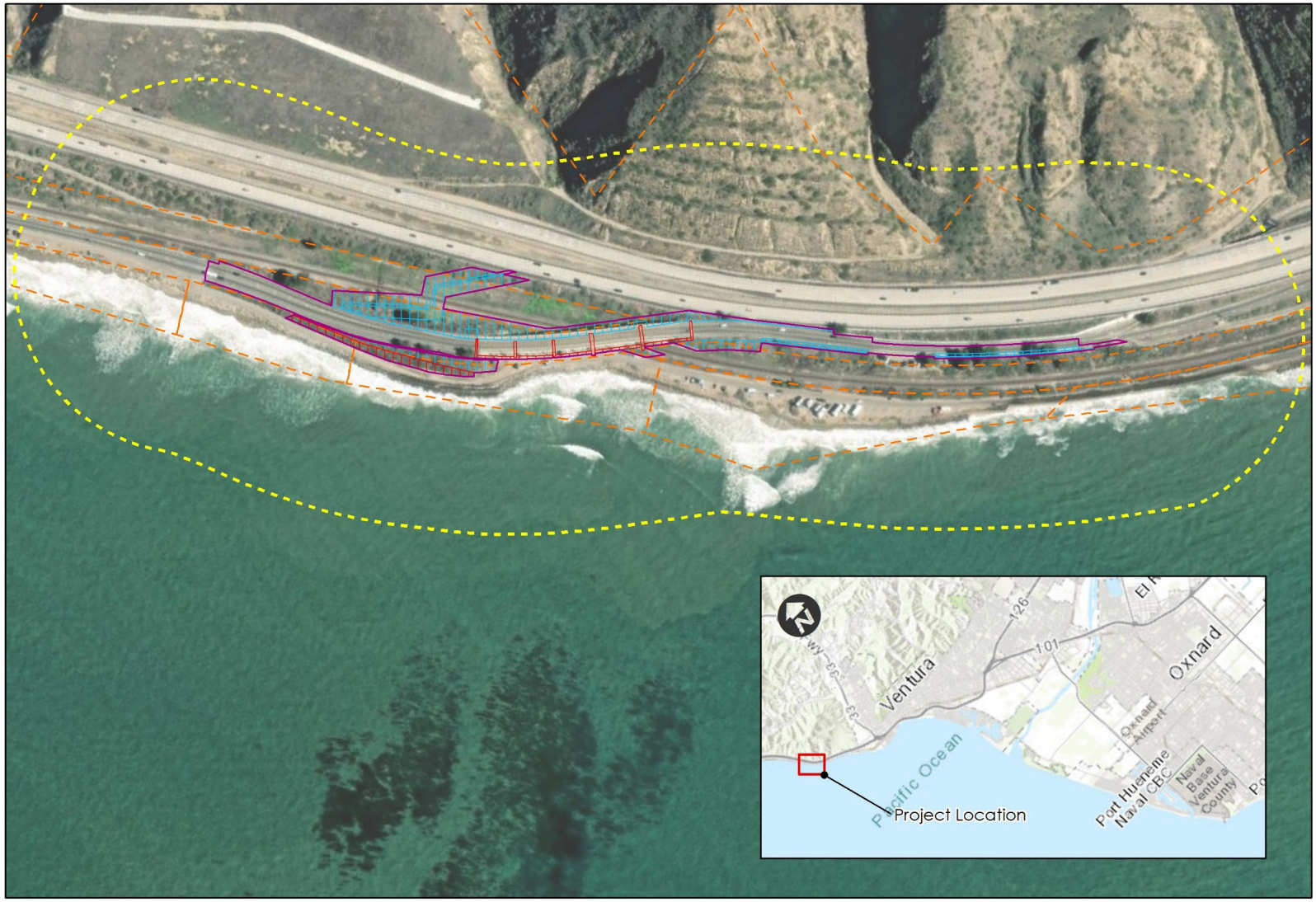
Project Design for Impact Avoidance or Minimization

Over the past couple of years, the project has been redesigned several times to enhance public recreational facilities on the coast, while minimizing biological resource impacts within the area. The proposed project started off as a minor bridge repair project that qualified under a Coastal Exemption. The bridge repair (span replacement) would extend the life of the bridge for a few more years, but it did not address overall condition of the bridge. Maintenance would be required more and more frequently since the bridge was past its design life. Caltrans decided to change the scope of work to a bridge replacement project to address the dire situation of the bridge. The first iteration of the bridge required removal of several trees, but after raising these concerns, removal of trees were not necessary. It was at this stage that Caltrans started consultation with Coastal Commission and Ventura County. To enhance coastal resources, Caltrans added a Class 1 protected shared-use path for bicyclists and pedestrians as a part of the bridge replacement project to connect Caltrans First Adopt a Bike Path in California (before the tunnel) to the State Beach Access Rd where users can safely transition to the recreational facility. The

High-Intensity Activated Crosswalk (HAWK) signals were added at the end of the project limits to allow users to safely transition to the other side of the road. The widening of the road to make room for a Class 1 shared-use path required removal of one tree, and access to the retaining wall abutments. Installation of new retaining walls required staging access and vegetation removal at the abutments of the bridge. In addition, Coastal Commission and Ventura County also raised their concerns regarding bicycle detours during construction. In response to this request, Caltrans decided to install a pre-fabricated bridge that would provide bicyclists/pedestrians a detour route leveraging the US-101. Most of the estimated temporary construction impacts from staging are from installing the detour bridge. However, the location of the prefabricated bridge was carefully designed to avoid impacts to waters and drainages. It was the most feasible option that resulted in the least biological impacts. Later on, State Parks conveyed to Caltrans the dire situation of the State Beach Access Rd. The road was crumbling due to the proximity to the ocean. They were required to close the road several times to ensure the safety of the travelling public. The recreation facilities were not accessible to the public when the road was closed. They had made small repairs here and there, but the road was still quickly receding (width of the road is reducing). They kindly requested Caltrans to widen the road as a part of construction, so that users can safely access the Emma Woods State Beach Campground. Caltrans evaluated the feasibility of adding this scope of work during construction. After considering State Parks concerns, coastal resources, and Caltrans limitations, Caltrans made a decision to widen State Beach Access Rd.

Caltrans standard avoidance and minimization measures will be implemented for the project throughout construction to minimize impacts to resources, as much as feasible.

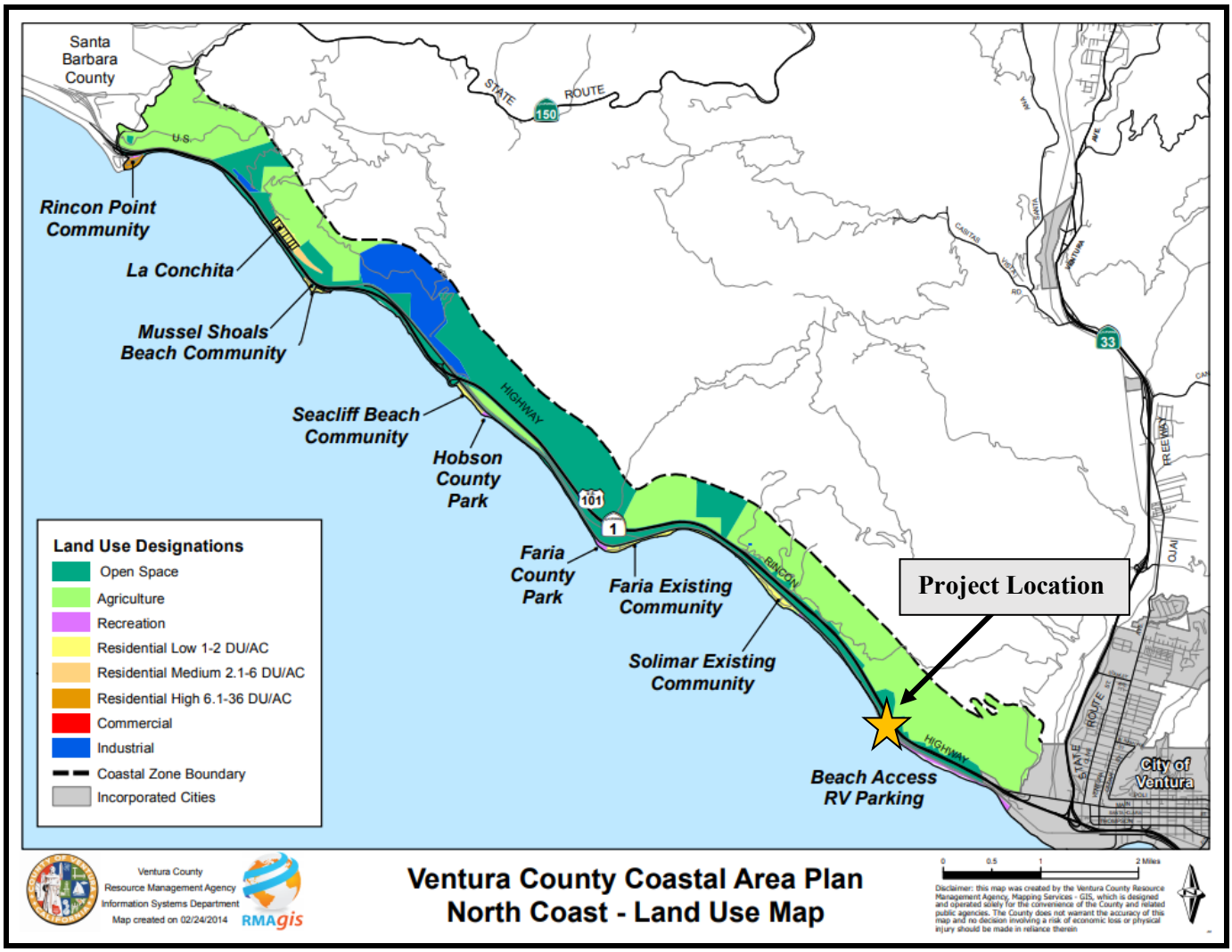
Figure 1. Project Location Map and Construction Footprint



Coastal Zone/Overlay Zones

The proposed project lies within land zoned by Ventura County's "My Zoning" website as Coastal Open Space (COS)[1]. According the Ventura County's municipal code, the purpose of COS zoning is to "provide for the preservation, maintenance, and enhancement of natural and recreational resources in the coastal areas of the County while allowing reasonable and compatible uses of the land."[2]

Figure 5: Coastal Zone Area Map



[1] https://maps.ventura.org/MyZoningGIS/

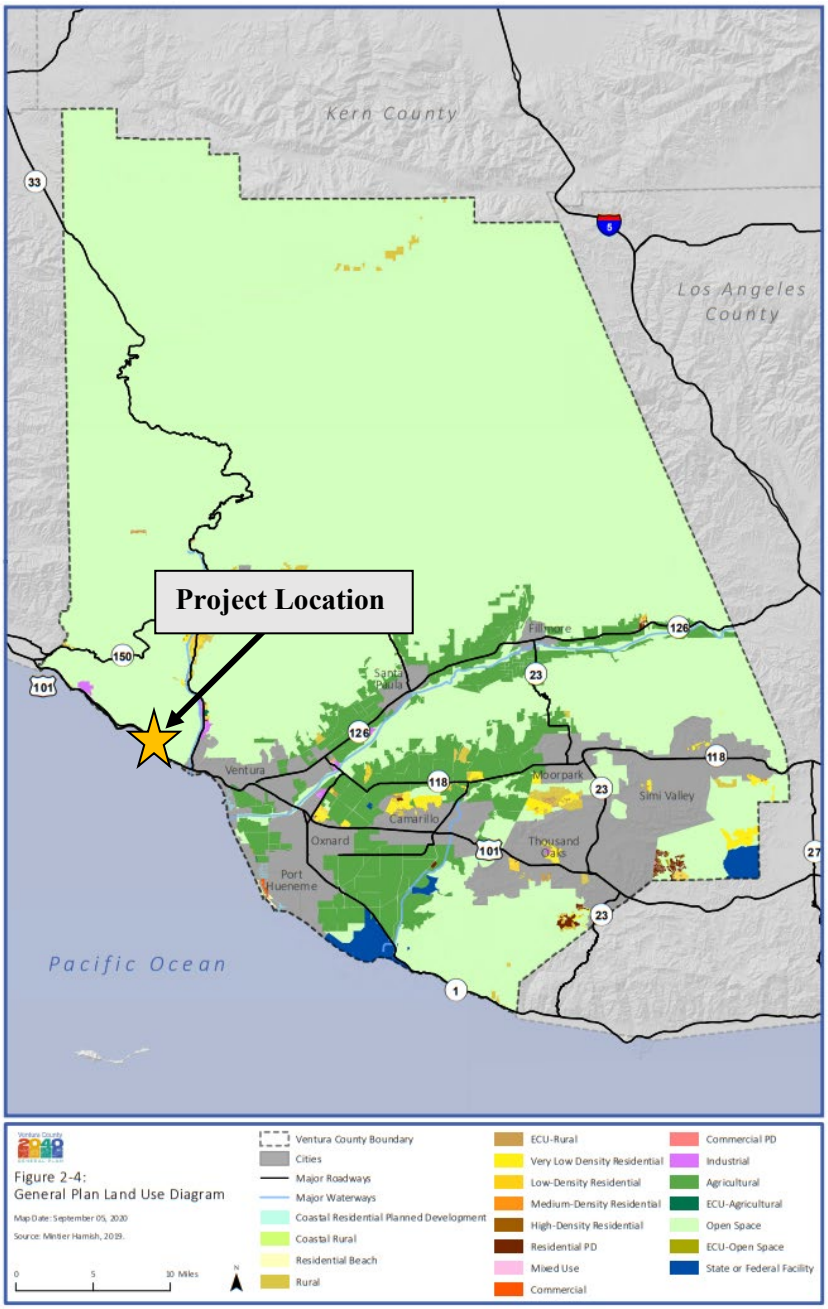
[2] https://library.municode.com/ca/ventura_county/codes/code_of_ordinances?nodeId=DIV8PLDE_CH1.1ZOCO_ART3PUZO_8173-1COOPSPCOZO

Zoning

In addition to the project's COS zoning designation, the project is also surrounded by land zoned as "Open Space" by the Ventura County Resource Management Agency (VCRMA). According to Ventura County's General Plan, the Open Space land use designation is defined as "any parcel or area of land or water which is essentially unimproved and devoted to an open-space use as defined in this section and which is designated on a local, regional or State open space plan as open space for the preservation of natural resources including, but not limited to, areas required for the preservation of plant and animal life, including habitat for fish and wildlife species; areas required for ecologic and other scientific study purposes; rivers, streams, bays and estuaries; and coastal beaches, lakeshores, banks of rivers and streams, and watershed lands."[3]

Figure 2: Ventura County General Plan Land Use Map

[3] https://docs.vcrma.org/images/pdf/planning/plans/Final_2040_General_Plan_docs/VCGPU_02_Land_Use_Element_2020_09_15_web.pdf



Elevation

The elevation of the project area ranges from roughly 15 feet above sea level to the highest point of the bridge, 31 feet above.

Other

The proposed project does not contain any other special features.

Section 2: Survey Information

2.1 Survey Purpose

Discretionary actions undertaken by public agencies are required to demonstrate compliance with the California Environmental Quality Act (CEQA). The purpose of this Initial Study Biological Assessment (ISBA) is to gather enough information about the biological resources associated with the proposed project, and their potential to be impacted by the project, to make a CEQA Initial Study significance finding for biological resources. In general, ISBA's are intended to:

- Provide an inventory of the biological resources on a project site and the values of those resources.
- Determine if a proposed project has the potential to impact any significant biological resources.
- Recommend project redesign to avoid, minimize or reduce impacts to significant biological resources.
- Recommend additional studies necessary to adequately assess potential impacts and/or to develop adequate mitigation measures.
- Develop mitigation measures, when necessary, in cases where adequate information is available.

2.2 Survey Area Description

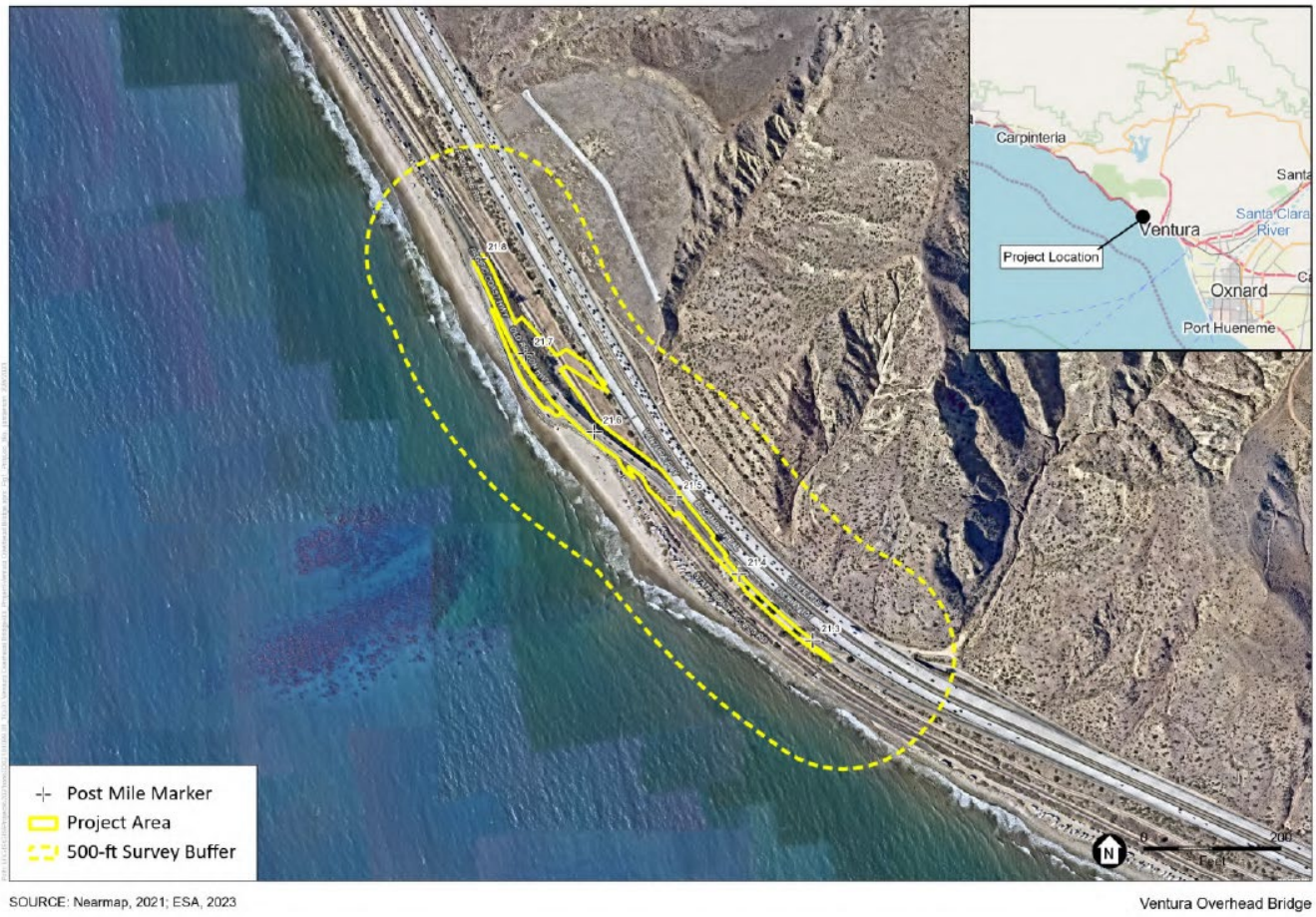
Survey Area Definition (per the Ventura County Planning Division): The physical area a biologist evaluates as part of a biological assessment. This includes all areas that could potentially be subject to direct or indirect impacts from the project, including, but not limited to: the construction footprint; areas that would be subject to noise, light, dust or runoff generated by the project; any required buffer areas (e.g., buffers surrounding wetland habitat). The construction footprint plus a 100 to 300-foot buffer—beyond the required fire hazard brush clearance boundary—(or 20-foot from the cut/fill boundary or road fire hazard brush clearance boundary – whichever is greater) is generally the size of a survey area. Required off-site improvements—such as roads or fire hazard brush clearance—are included in the survey area. Survey areas can extend off the project's parcel(s) because indirect impacts may cross property lines. The extent of the survey area shall be determined by the biologist in consultation with the lead agency.

Survey Area 1 (SA1)

Location

The proposed project is located on SR-1 from PM 21.3 – PM 21.9 in the Ventura quadrangle, Ventura County. The project's survey area (SA1) is bounded by the Pacific Ocean, which lies between 40'- 150' west of the site, SR-101, which lies 200' northwest and southeast of the Ventura Overhead bridge (Br.# 52-0040). Los Padres National Forest lies northeast of the project and is approximately 18 miles away. The project area is 65 miles northwest of downtown Los Angeles and 13 miles southeast of Carpinteria. The City of Ventura is about 2.8 miles away. See **Figure 3. Survey Area Map.** A 500-foot buffer was used around the project site as the survey area.

Figure 3. Survey Area Map



Survey Area Environmental Setting

The survey area is located in a designated open space/recreational land use area within the Ventura County Coastal Area Plan and includes the Emma Woods State Beach Campground and the immediate surrounding area. Developed portions of the campground include public parking areas/recreational vehicle camping sites, set below and adjacent to SR-1 and the Ventura Overhead Bridge. The campground is bound by the Pacific Ocean to the south and the Union Pacific Railroad and U.S. Route 101 to the north. The natural communities that occur in the survey area have been significantly altered as a result of development, and now primarily exist as isolated islands/strips of vegetation. Most of the survey area is heavily disturbed, with a mix of invasive vegetation along with small amounts of coastal scrub native vegetation along the slopes. Areas along the recreational facilities and railroad tracks are heavily disturbed and dominated by non-native vegetation. Rip-rap, to protect the campground access road, has been placed between the campground parking lot and the shoreline, in the southern portion of the survey area.

Surrounding Area Environmental Setting

The area surrounding the survey area is a rural, mountainous/coastal portion of Ventura County. According to the Ventura County Coastal Area Plan, the surrounding area is primarily designated as an open space land use area, characterized by sporadic beaches and rocky cliff faces on the south, and cliffs and hills to the north. There is moderate to sparse Coastal Sage Scrub ground cover throughout the area. Designated land use areas farther north of the surrounding area include agriculture and residential low land use areas (Solimar Beach Colony – 1.3 miles north, City of Ventura – 1 mile south).

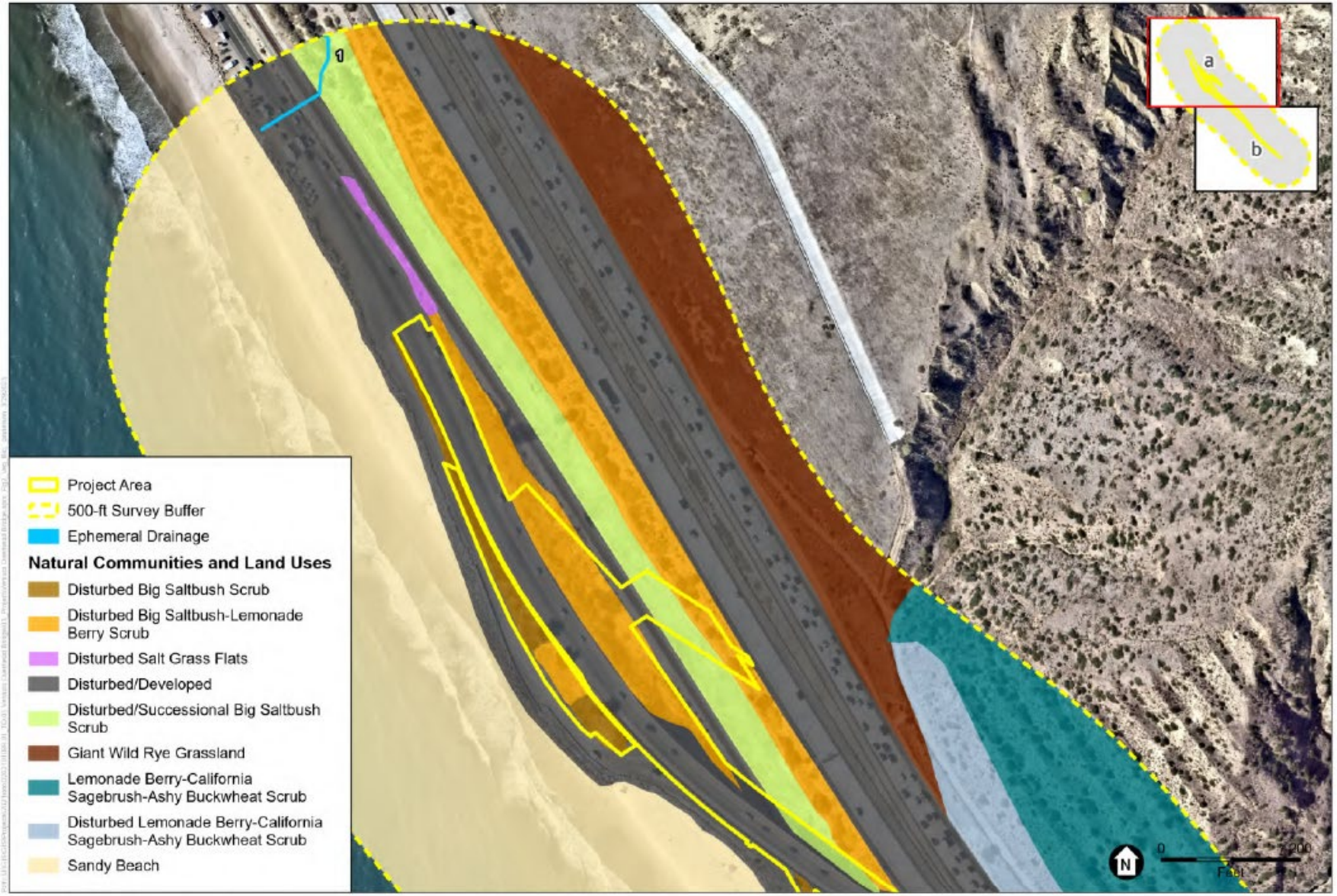
Cover

Table 2 provides an estimate of the cover of the survey area using natural communities and land cover types.

Table 2. Natural Communities and Land Cover Types

Natural Communities and Land Cover Types	Acres	Percentage of Natural Communities/Land Cover Survey Area (%)	Percentage of General Cover Survey Area (%)
California Brittlebush-Lemonade Berry Scrub	4.03	5.21	**16.06**
Lemonade Berry-California Sagebrush-Ashy Buckwheat Scrub	4.63	5.99	
Giant Wild Rye Grassland	3.76	4.86	
Native Vegetation			
Disturbed Lemonade Berry-California Sagebrush-Ashy Buckwheat Scrub	3.53	4.56	**14.6**
Disturbed Quailbrush Scrub-Lemonade Berry Scrub	3.84	4.97	
Disturbed Quailbrush Scrub	1.66	2.15	
Disturbed Successional Quailbrush Scrub	2.13	2.76	
Disturbed Salt Grass Flats	0.12	0.16	
Native Vegetation Intermixed With Non-Native Vegetation			
Myoporum Groves	0.05	0.06	**0.49**
Fountain Grass Swards	0.33	0.43	
Non-native Vegetation			
Ornamental/Naturalized Monterey Cypress Stands	0.22	0.28	**28.6**
Disturbed/Developed	21.89	28.32	
Bare Ground/Cleared/Graded			
Sandy Beach	30.95	40.04	**40.25**
Ephemeral Drainages	0.16	0.21	
Other			
Total	**77.29**	**100**	**100**

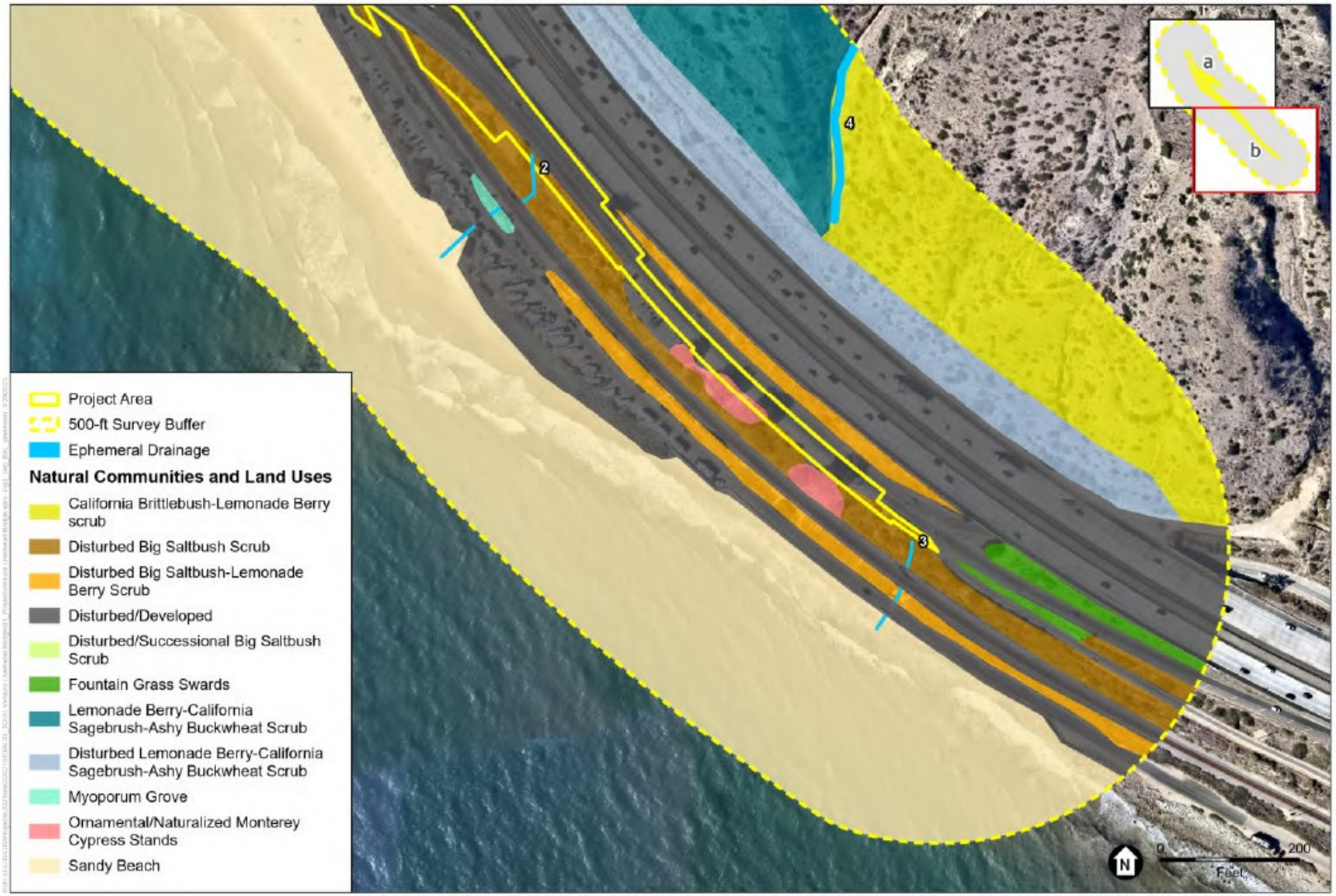
Figure 4. Natural Communities and Land Cover Types within 500-Foot Buffer (East)



SOURCE: Nearmap, 2021; ESA, 2023

Ventura Overhead Bridge

Figure 5. Natural Communities and Land Cover Types within 500-Foot Buffer (West)



SOURCE: Nearmap, 2021; ESA, 2023

Ventura Overhead Bridge

2.3 Methodology

References

The following documents and sources of information have been used to complete this assessment:

- Calflora: Information on wild California plants for conservation, education, and appreciation. Accessed throughout 2017-2021 from www.calflora.org.
- Vegetation Classification of the Santa Monica Mountains National Recreation Area and Environs in Ventura and Los Angeles Counties, California, January 2006
- Oak Woodland Conservation Management Planning in Southern CA https://www.fs.fed.us/psw/publications/documents/psw_gtr251/psw_gtr251_471.pdf
- Ventura County Resource Management Agency's website: https://vcrma.org/
- Ventura Overhead Bridge Replacement Natural Environment Study, June 2021
- California Department of Fish and Game. California Natural Diversity Database. Retrieved 2021. https://apps.wildlife.ca.gov/rarefind/view/RareFind.aspx#
- IPAC System. United States Fish and Wildlife Service. Retrieved 2021. https://ecos.fws.gov/ipac/location/index
- 3. Critical Habitat for Threatened and Endangered Species (USFWS). Retrieved 2021. https://fws.maps.arcgis.com/home/webmap/viewer.html?webmap=9d8de5e265ad4fe09893cf75b8dbfb77
- California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 10 May 2021].
- Los Padres Forest Watch. Retrieved 2021. https://lpfw.org/our-region/wildlife/crotchs-bumblebee/
- CaliforniaHerps.com. Retrieved 2021. http://www.californiaherps.com/lizards/pages/a.stebbinsi.html
- Independent Assessment of Coastal Act Environmentally Sensitive Habitat Areas (ESHA) conducted by Robbie Sweet, Environmental Science Associates (ESA). Retrieved January 25th, 2022
- Independent Assessment of Coastal Act Environmentally Sensitive Habitat Areas (ESHA) conducted by Robbie Sweet and Sonya Vargas, Environmental Science Associates (ESA). Retrieved March 30th, 2023

Survey Details

General habitat assessments began on October 22nd, 2018 by Patrick Thompson, Associate District Biologist, Sean Herron, Associate District Biologist, Rico Ramirez, District Biologist, Paul Caron, Senior Environmental Planner (Biologist), and Andrew Johnstone, Associate District Biologist. The Biological Study Area (BSA) buffer zone extended roughly 250 feet and included native coastal sagebrush and the adjacent Pacific Ocean coastal habitat. Additional Surveys were conducted between 2018 and 2023. Environmental Sciences Associates consultants (ESA) also conducted a focused survey to determine the presence/absence of Environmentally Sensitive Habitat Area (ESHA) and protected trees, as defined by the California Coastal Act and the Ventura County General Plan Coastal Area Plan (Coastal Area Plan).

An additional 300 feet was surveyed per CZO requirements on December 15, 2022. For the purposes of this analysis, the new survey area (500-foot buffer) will be used to represent SA1 for the rest of the assessment. Previous survey efforts (250-foot buffer) will be indicated below as SA for documentation purposes only. The assessment will be primarily based on SA1 (**Figure 3. Survey Area Map**). SA1 survey efforts also included determinations on whether suitable monarch butterfly overwintering habitat was present within 1000-foot radius. No suitable habitat was present for monarch butterfly. Monterey cypress trees within the project limits were observed closely to detect if monarchs were present, to which none where found. The surrounding habitat primarily consist of coastal scrub and lacks large eucalyptus trees and sycamore trees. The nearest suitable habitat was around the Ventura River, which is approximately 1.7 miles to the south. Photos showing the surveyed area are in **Section 5: Photos**.

Please reference the following table for survey dates:

Survey Date & Details							
Survey Key (1)	Survey Date (2)	Survey Area Map Key(s) (3)	Survey Type (4)	Time Period (5)	Methods/Constraints (6)	GPS	Surveyors
SD1	10/22/2018	SA	NES	8:00 am – 12:30 pm	Walked BSA. The entire site was accessible.	N/A	Patrick Thompson, Sean Herron
SD2	09/02/2020	SA	NES	10:00 am –1:45 pm	Walked BSA. The entire site was accessible.	N/A	Patrick Thompson, Rico Ramirez
SD3	02/04/2021	SA	NES	1:00 pm – 1:30 pm	Walked BSA. The entire site was accessible.	N/A	Patrick Thompson, Paul Caron
SD4	05/13/2021	SA	NES	10:00 am –12:30 pm	Walked BSA. The entire site was accessible.	N/A	Patrick Thompson, Andrew Johnstone
SD5	08/19/2021	SA	NES	9:30 am - 12:00 pm	Walked BSA. The entire site was accessible.	N/A	Patrick Thompson
SD6	09/16/2021	SA	ISBA	11:00 am – 2:30 pm	Walked BSA. Collected UAS Data. The entire site was accessible.	34.293257, -119.339311	Patrick Thompson, Joshua Miller,
SD7	01/05/2022	SA	ISBA (ESHA Survey Report)	7:00 am – 3:00 pm	Survey to determine the presence/absence of Environmentally Sensitive Habitat Area (ESHA) and protected trees within 250-foot buffer zone.	Various	Ryan Gilmore, Robbie Sweet (Environmental Science Associates)
SD8	05/11/2022	SA	ISBA	9:30 am – 12:00 pm	Walked proposed temporary bike path. The entire site was accessible	N/A	Patrick Thompson
SD9	12/15/2022	SA1	ISBA (ESHA)	9:00 am – 1:00 pm	Walked entire 500-foot ESA buffer to photo document and survey per CZO requirement	N/A	Patrick Thompson

SD10	03/20/2023	SA1	ISBA (ESHA Survey Report)	8:30 am – 1:00 pm	Survey to determine the presence/absence of ESHA and protected trees within 500-foot buffer zone.	N/A	Ryan Gilmore, Sonya Vargas (Environmental Science Associates)

ISBA..... Initial Study Biological Assessment
NES..... Natural Environment Study
ISBA..... Environmentally Sensitive Habitat Areas

Section 3: The Biological Inventory

See Appendix One for an overview of the types of biological resources that are protected in Ventura County.

3.1 Ecological Communities

Plant Communities

Locally important or rare plant communities were found within the survey area.

Major Plant Communities Summary within 500-Foot Buffer Zone

Most of the major plant communities on site fall under the plant alliance – *Rhus integrifolia* shrubland and *Atriplex lentiformis* shrubland. Other plant alliance communities noted within the survey area are: *Distichlis spicata* Herbaceous Alliance, *Pennisetum setaceum* Herbaceous Alliance, *Elymus condensatus* Herbaceous Alliance, *Myoporum laetum Forest and Woodland* Semi–Natural Alliance and *Hesperocyparis macrocarpa* Stands within the surveyed area. However, most of the native shrubland habitats are primarily disturbed with a mix of invasive vegetation and ornamental trees. The types of plant alliances surveyed within the 500-foot buffer zone of the project site are described below in **Table 3** and are mapped on **Figure 4** and **Figure 5**:

California Brittlebush-Lemonade Berry scrub - *Encelia californica-Rhus integrifolia* Association

The California brittlebush-lemonade berry scrub was mapped north of the U.S. Route 101 on southwest facing slopes. This community was primarily composed of California brittlebush (*Encelia californica*), lemonade berry (*Rhus integrifolia*), and scattered California sagebrush (*Artemisia californica*). The understory consisted primarily of herbaceous plants including non-native grasses such as red brome (*Bromus rubens*). Approximately four acres occur within the 500-foot survey buffer area.

Lemonade Berry-California Sagebrush-Ashy Buckwheat Scrub - *Rhus integrifolia - Artemisia californica - Eriogonum cinereum* Association

The lemonade berry-California sagebrush-ashy buckwheat scrub was mapped north of the U.S. Route 101 on southwest facing slopes. This community was dominated by lemonade berry, California sagebrush, and ashy buckwheat (Eriogonum cinereum) with an herbaceous understory including red brome. Approximately 4.6 acres occur within the 500-foot survey buffer area.

Disturbed Lemonade Berry-California Sagebrush-Ashy Buckwheat Scrub - *Rhus integrifolia-Artemisia Californica-Eriogonum cinereum* Association

The disturbed lemonade berry-California sagebrush-ashy buckwheat scrub was mapped directly adjacent to and north of the U.S. Route 101 on southwest facing slopes. This community contained scattered lemonade berry, California sagebrush, and scattered ashy buckwheat with a higher cover of herbaceous understory non-native species including red brome and large patches of fountain grass (*Pennisetum setaceum*), as a result of past disturbances. This community is considered disturbed; but is still considered sensitive due to the presence of lemonade berry. Approximately 3.5 acres occur within the 500-foot buffer survey area.

Disturbed Quailbush–Lemonade Berry Scrub–*Atriplex lentiformis–Rhus integrifolia* Shrubland Alliance

The disturbed quailbush–lemonade berry scrub was mapped within isolated islands and strips of vegetation throughout the survey area. This community is very similar in character to the disturbed quailbush scrub; however, this form is characterized by the co–dominant species lemonade berry in the

shrub layer. Quailbush comprises less than 50% of the vegetative cover and the lemonade berry scrub component is considered more sensitive. There are nearly five acres of this community within the study area.

Disturbed Quailbush Scrub–*Atriplex lentiformis* Shrubland Alliance

Disturbed quailbush scrub was mapped within isolated islands and strips of vegetation, south of California State Route 1. This community is characterized by a dense shrub layer with quailbush (*Atriplex lentiformis*) as the dominant species, interspersed throughout with few other shrub species, such as California sagebrush (Artemisia californica), California brittlebush and laurel sumac (*Malosma laurina*). The dense shrub cover precludes the existence of an established herbaceous understory; however, non–native grass and forb species observed along the margins include black mustard (*Brassica nigra*), shortpod mustard (*Hirschfeldia incana*) and cheeseweed mallow (*Malva parviflora*). There are approximately 1.4 acres of this community within the study area.

Disturbed/Successional Quailbush Scrub–*Atriplex lentiformis* Shrubland Alliance

The disturbed/successional quailbush scrub was mapped in the strip of vegetation between the Union Pacific Railroad and U.S. Route 101, in the western portion of the survey area. This community is characterized by a sparse shrub layer quailbush as the dominant species, with a prominence of coyote brush (*Baccharis pilularis*) and California sagebrush, among others. The dense herbaceous layer is comprised of various native and non–native grasses and forbs, such as black mustard, cheeseweed mallow, jimson weed (*Datura wrightii*), giant ryegrass (*Elymus condensatus*), fennel (*Foeniculum vulgare*) and shortpod mustard; however, it is predominantly non-native species in the herbaceous layer. There are approximately 2.4 acres of this community within the study area.

Disturbed Salt Grass Flats– *Distichlis spicata* Herbaceous Alliance

The disturbed salt grass flats were mapped in the strip of vegetation between California State Route 1 and the Union Pacific Railroad, in the northwestern portion of the survey area. This community is characterized by a dense herbaceous layer that consists almost exclusively of salt grass (*Distichlis spicata*), with one other species, castor bean (*Ricinus communis*), observed along the margins. There is a small area of 0.12 acre occurring only within the 500-foot survey area.

Fountain Grass Swards–*Pennisetum setaceum* Herbaceous Alliance (Invasive)

Fountain grass swards were mapped within two isolated strips of vegetation, south of U.S. Route 101, within the eastern portion of the survey area. This community is characterized by a dense herbaceous layer of the invasive fountain grass, which is dominant, and periodically interspersed with successional California brittlebush. There is a small area of about 0.3 acre occurring only within the 500-foot buffer survey area.

Giant Wild Rye Grassland - *Elymus condensatus* Herbaceous Alliance

The giant wild rye grassland community was mapped north of the U.S. Route 101 on southwest facing slopes. This grassland contained several grass species including red brome, but also had a high prevalence of giant wild rye. Approximately 3.8 acres occur only within the 500-foot buffer survey area.

Myoporum Groves–*Myoporum laetum Forest and Woodland* Semi–Natural Alliance

Myoporum groves were mapped in one location, south of California State Route 1, in the central portion of the survey area. This community is characterized by a tree overstory that consists exclusively of myoporum (*Myoporum laetum*) like the fountain grass swards contains an invasive species as dominant. There is a small area of less than 0.1 acre occurring only within the 500-foot buffer survey area. Myoporum laetum is a non-native species.

Ornamental/Relic Monterey Cypress Stands–*Hesperocyparis macrocarpa* Stands

Ornamental/Relic Monterey cypress stands were mapped in two locations, both south of California State Route 1, in the eastern portion of the survey area. This community is characterized by a tree overstory that consists entirely of ornamentally planted Monterey cypress (*Hesperocyparis macrocarpa*). A total of

nine mature Monterey cypress were counted within the mapped stands. This species is primarily ornamental within the project survey limits. There is approximately 0.25 acre of this community within the study area. Please note that this location is in historical range for this species.

Sandy Beach

Sandy beach occurs along the southern boundary of the survey area and is bound to the north by rip–rap that protects the campground and associated infrastructure from wave erosion. This community appears to be influenced by regular wave action and is almost entirely devoid of vegetation, with the exception of a few individual plants that persist within the rip–rap (e.g., sea fig [*Carpobrotus edulis*]). Approximately 31 acres occur only within the 500-foot buffer survey area.

Disturbed/Developed

The disturbed/developed land uses mapped throughout the survey area include the public parking areas/recreational vehicle camping sites within the Emma Wood State Beach Campground, including the buffer survey area surrounding Ventura Overhead Bridge, Union Pacific Railroad and various roadways. These areas are generally devoid of vegetation, with the exception of weedy species such as fountain grass and cheeseweed mallow; and ornamental Monterey cypress that occurs in otherwise unvegetated areas. There are a little more than 25 acres of this community within the study area.

Table 3. Plant Communities

Plant Communities								
Map Key (1)	Plant Alliance	Plant Association	Misc. (2)	Status (3)	Condition (4)	Acres Total	Acres Impacted	Comments (5)
PC1	California brittle bush – Ashy buckwheat Scrub shrubland *(Encelia californica)*	Encelia californica – Rhus integrifolia		ESHA, G3S3	Intact	4.03	None	This community was primarily composed of California brittlebush (*Encelia californica*), lemonade berry (*Rhus integrifolia*), and scattered California sagebrush (*Artemisia californica*). The understory consisted primarily of herbaceous plants including non-native grasses such as red brome (*Bromus rubens*).
PC2	Lemonade berry scrub shrubland *(Rhus integrifolia)*	Rhus integrifolia – Artemisia californica – Eriogonum cinereum		ESHA, G3S3	Intact	4.63	None	This community was dominated by lemonade berry, California sagebrush, and ashy buckwheat (*Eriogonum cinereum*) with an herbaceous understory including red brome.
PC3	Lemonade berry scrub shrubland *(Rhus integrifolia)*	Rhus integrifolia – Artemisia californica – Eriogonum cinereum		ESHA, G3S3	Disturbed	3.53	None	This community contained scattered lemonade berry, California sagebrush, and scattered ashy buckwheat with a higher cover of herbaceous understory non-native species including red brome and large patches of fountain grass (*Pennisetum setaceum*), as a result of past disturbances.
PC4	Quailbrush-Lemonade Berry scrub shrubland (*Atriplex lentiformis*)	Atriplex lentiformis – Rhus integrifolia		ESHA, G3S4	Disturbed	3.84	1.08	This community is very similar in character to the disturbed quailbush scrub; however, this form is characterized by the co–dominant species lemonade berry in the shrub layer.
PC5	Quailbrush scrub shrubland (*Atriplex lentiformis*)	Atriplex lentiformis			Disturbed	1.66	0.72	This community is characterized by a dense shrub layer with quailbush (*Atriplex lentiformis*) as the dominant species, interspersed throughout with few other shrub species, such as California sagebrush (*Artemisia californica*), California brittlebush and laurel sumac (*Malosma laurina*). The dense shrub cover precludes the existence of an established herbaceous understory; however, non–native grass and forb species observed along the margins include black mustard (*Brassica nigra*), shortpod mustard (*Hirschfeldia incana*) and cheeseweed mallow (*Malva parviflora*).
PC6	Quailbrush scrub shrubland (*Atriplex lentiformis*)	Atriplex lentiformis			Highly disturbed	2.13	0.3	This community is characterized by a sparse shrub layer quailbush as the dominant species, with a prominence of coyote brush (*Baccharis pilularis*) and California sagebrush, among others. The dense herbaceous layer is comprised of various native and non–native grasses and forbs, such as black mustard, cheeseweed mallow, jimson weed (*Datura wrightii*), giant ryegrass (*Elymus condensatus*), fennel (*Foeniculum vulgare*) and shortpod mustard; however, it is predominantly non-native species in the herbaceous layer.

Plant Communities								
PC7	Saltgrass flats grassland (*Distichlis spicata*)	Distichlis spicata			Disturbed	0.12	None	This community is characterized by a dense herbaceous layer that consists almost exclusively of salt grass (*Distichlis spicata*), with one other species, castor bean (*Ricinus communis*), observed along the margins.
PC8	Fountain grass swards grassland (*Pennisteum setaceum*)	Pennisteum setaceum				0.33	None	This community is characterized by a dense herbaceous layer of the invasive fountain grass, which is dominant, and periodically interspersed with successional California brittlebush.
PC9	Giant wild rye grassland (*Leymus condensatus*)	Leymus condensatus		ESHA, G3S3		3.76	None	This grassland contained several grass species including red brome, but also had a high prevalence of giant wild rye.
PC10	Myoporum groves woodland semi-natural (*Myoporum laetum*)	*Myoporum laetum*				0.05	None	This community is characterized by a tree overstory that consists exclusively of myoporum (*Myoporum laetum*). It contains an invasive species as dominant.
PC11	Monterey cypress woodland stands (*Hesperocyparis macrocarpa*)	Hesperocyparis macrocarpa Ruderal				0.22	0.03	This community is characterized by a tree overstory that consists entirely of ornamentally planted Monterey cypress (*Hesperocyparis macrocarpa*). A total of nine mature Monterey cypress were counted within the mapped stands.
					Totals	24.3	2.13	

LIC ..... Locally Important Plant Community
ESHA ..... Environmentally Sensitive Habitat Areas (Coastal Zone)
CDFG Rare:
G1 or S1 ..... Critically Imperiled Globally or Subnationally (state)
G2 or S2 ..... Imperiled Globally or Subnationally (state)
G3 or S3 ..... Vulnerable to extirpation or extinction Globally or Subnationally (state)
Cal OWA ..... Protected by the California Oak Woodlands Act

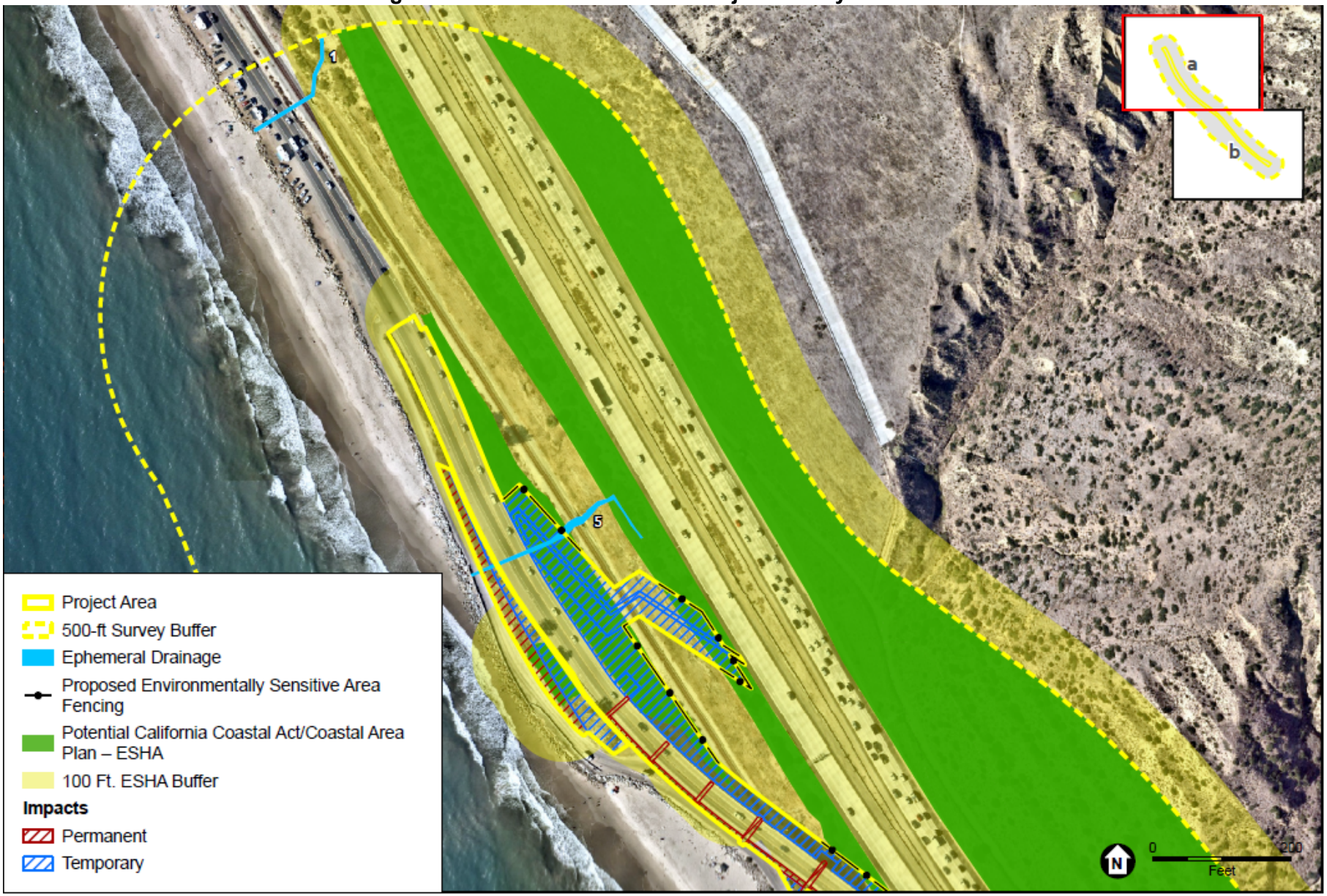
Environmentally Sensitive Habitat Areas (ESHA)

ESHA is "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Public Resources Code § 30107.5). ESHA includes coastal dunes, beaches, tidepools, wetlands, creek corridors, and certain upland habitats in the Santa Monica Mountains (Ventura County Coastal Area Plan).

Habitats that meet the definition of ESHA were found within the survey area(s).

Within the 500-foot buffer survey area of the proposed project, there is potentially 1.04 acres (45,302 ft^2) of temporary impacts and 0.04 acres (1,742 ft^2) of permanent impacts to Disturbed Quailbush–Lemonade Berry Scrub, which qualifies as ESHA under the California Coastal Act. Although the habitat has, to some degree, diminished in value as habitat for plants and wildlife due to the reduced connectivity to adjacent contiguous habitat, the Disturbed Quailbush–Lemonade Scrub Berry is still considered a potential ESHA due its identification as a CDFW sensitive natural community (state rarity rank of S3) and its potential to be easily disturbed or degraded by human activities and developments. Other natural communities within the project impact area, which includes Disturbed Quailbush Scrub, Disturbed Salt Grass Flats, and Disturbed/Successional Quailbrush Scrub, are considered secure according to CDFW sensitive natural community rankings (S4), and do not exhibit characteristics necessary to be considered "rare or especially valuable" as defined in Section 30107.5 of the California Coastal Act and therefore, do not qualify as ESHA. These communities are also not identified as any of the landforms and habitat types that constitute ESHA under Section 8178 of the Ventura County Coastal Zoning Ordinance. The potential ESHA areas within the project survey area are mapped in **Figure 6** and **Figure 7**. Please note that figure 7 also includes coastal marine ESHA, which is separate from Disturbed Quailbush–Lemonade Berry Scrub.

Figure 6. Potential ESHA within Project Survey Area



SOURCE: Nearmap, 2021; ESA, 2023

Ventura Overhead Bridge

Potential California Coastal Act/Coastal Area Plan – ESHA

Figure 7. Potential ESHA within Project Survey Area

SOURCE: Nearmap, 2021; ESA, 2023

Ventura Overhead Bridge

Potential California Coastal Act/Coastal Area Plan – ESHA

Physical Features

There are no physical features of ecological significance in the project's survey area.

The project impacts will not impact the adjacent coastline. The SA1 coastline has been surveyed numerous times and concluded that this stretch of beach coastline is sandy beach with rock riprap as an erosion barrier for Ven-1 and State Beach Access Rd. No tidepools were detected. Marine species observed along the riprap rocks are common and included California mussel *(Mytilus californianus*), common acorn barnacle (*Balanus glandula*), gooseneck barnacle (*Pollicipes polymerus*), and feather boa kelp (*Egregia menziesii*). The sandy coastline at this location is small, and close to Ven-1 and State Beach Access Rd. The sand and rocks are affected daily by tidal waters (intertidal) and the riprap has provided suitable habitat for above mentioned species. However, the rocks do not create "pools" and are not tidepools. Beyond the intertidal zone, there have been numerous observations of California brown pelican (*Pelecanus occidentalis*), western gull (*Larus occidentalis*), common dolphin (*Delphinus delphis), and harbor seals (Phoca vitulina).* The species mentioned above will not be impacted since construction activities will not occur along the coastline. Proper BMP's will be put forth to protect all drain inlets.

Waters and Wetlands

See Appendix One for an overview of the local, state and federal regulations protecting waters, wetlands and riparian habitats. Wetlands are complex systems; delineating their specific boundaries, functions and values generally takes a level of effort beyond the scope of an Initial Study Biological Assessment (ISBA). The goal of the ISBA with regard to waters and wetlands is simply to identify whether they may exist or not and to determine the potential for impacts to them from the proposed project. This much information can be adequate for designing projects to avoid impacts to waters and wetlands. Additional studies are generally warranted to delineate specific wetland boundaries and to develop recommendations for impact minimization or impact mitigation measures.

Waters and/or wetlands were found within the survey area(s).

Waters and Wetlands Summary

There are five ephemeral streams within the survey area. The first exists on the northern portion of the survey area, the second in the central portion of the survey area, and the third on the southern end of the survey area, and the fourth northeast of the U.S. Route 101 between the mountain ridges (**Figure 6** and **Figure 7**). Drainages 2 and 3 originate on the shoulder of SR-1, and appear to convey surficial storm flows from the roadway to the Pacific Ocean. Drainages 1 and 4 appear to originate from hillside slopes north of the U.S. 101, and these drainages also appear to carry surface water flow from storm events that run off the slopes. One arroyo willow (*Salix lasiolepis*) was observed within these stream systems as well as mulefat (*Baccharis salicifolia*), and canyon prince rye grass (*Leymus condensatus*). The streams and their adjacent vegetation will not be impacted by the project activities as all drains are at a lower elevation than where project impacts will occur. Proper BMP's will be put forth to prevent fill and construction material from entering drains. The temporary bike path will go over parts of this ephemeral stream but will not impact the bed, bank, channel, or riparian vegetation as the temporary footings for the bike path will be placed strategically to avoid impacts. Overall, there will be no impacts to any of the ephemeral streams as the project development areas do not overlap with bed, bank, and channel of the drainages. **Table 4** illustrates the streams/drainages surveyed within the 500-foot buffer.

The proposed project will not result in impacts to wetlands or jurisdictional waters (Waters of the State, Waters of the U.S.); Therefore, no effect to waters or wetlands shall occur. As part of standard Caltrans

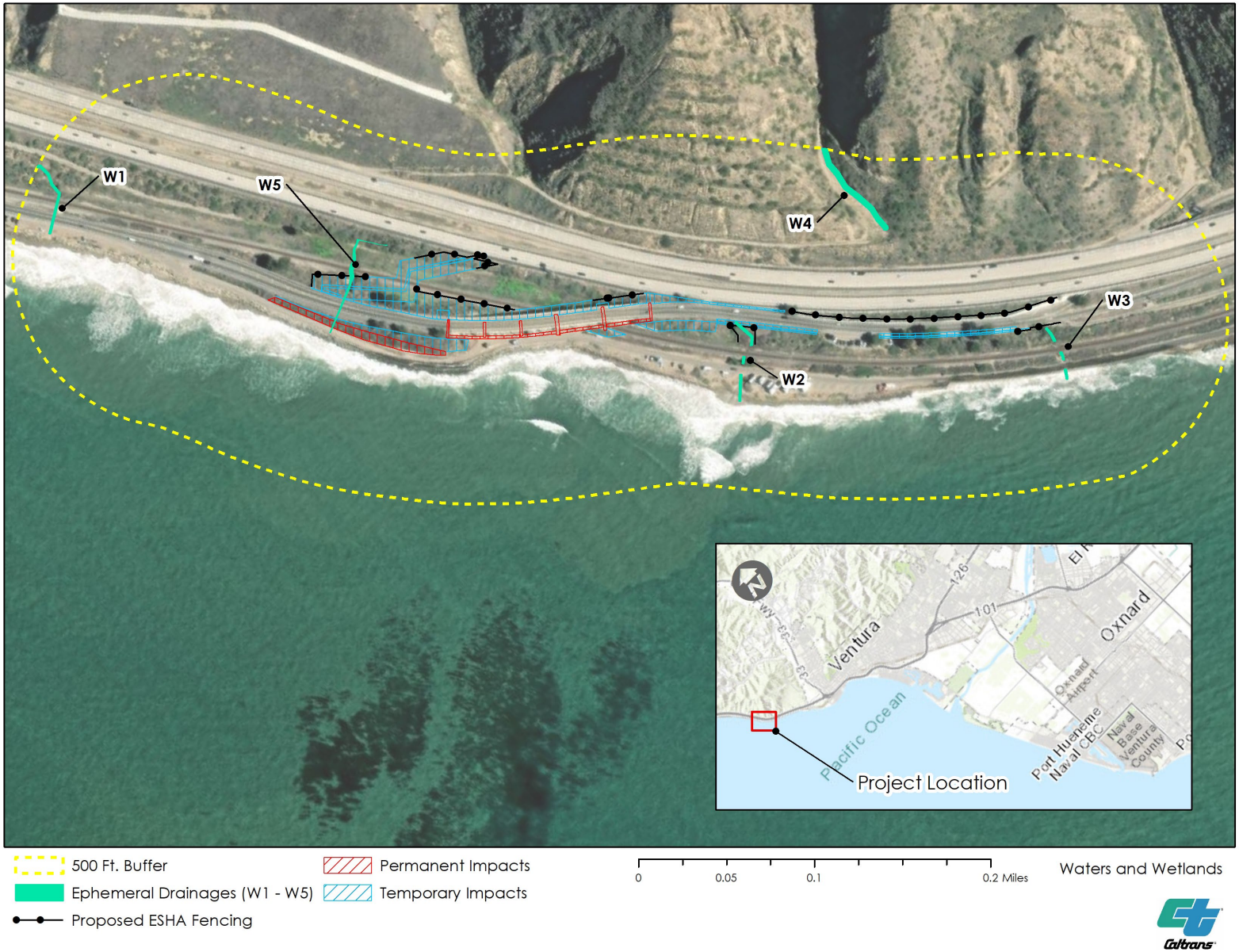
procedures, proper Best Management Practices (BMPs) shall be put forth to protect water quality to maximum extent. These are documented in section **4.2 Impacts and Mitigation**.

Table 4. Waters and Wetlands

Waters and Wetlands									
Map Key (1)	Wetland Type (2)	Wetland Name (if any)	Wetland Status (3) (if known)	Wetland Size (4)	Hydrologic Status (5)	Primary Water Source (6)	County Wetland Significance (7)	Wetland Distance from Project (8)	Comments (9)
W1	Stream/Drainage	Unnamed	USACE, CDFG	Unknown	Dry	Precipitation/ FWY runoff	Unknown	412 ft	
W2	Stream/Drainage	Unnamed	USACE, CDFG	Unknown	Dry	Precipitation/ FWY runoff	Unknown	Adjacent to project	
W3	Stream/Drainage	Unnamed	USACE, CDFG	Unknown	Dry	Precipitation/ FWY runoff	Unknown	Adjacent to project	
W4	Stream/Drainage	Unnamed	USACE, CDFG	Unknown	Dry	Precipitation/ FWY runoff	Unknown	262 ft	
W5	Stream/Drainage	Unnamed	USACE, CDFG	Unknown	Dry	Precipitation/ FHW runoff	Unknown	Adjacent to project	
USACE ..... U.S. Army Corps of Engineers regulated CDFG ..... California Department of Fish & Game regulated County ..... County General Plan protected wetland WPD ..... Co. Watershed Protection District (red-line stream)									

Water/Wetland Buffers		
Map Key (1)	Recommended Buffer (2)	Comments
W2B1	5’	The waterway is directly below the limits of construction. ESA fencing will be placed 5 feet around the drainage to avoid impacts to the waterway.
W3B1	Northern upstream edge of the drainage, directly adjacent to limits of construction	ESA fencing will be placed at the northern upstream edge of the drainage.

Figure 8. Waters and Wetlands Maps



3.2 Species

Observed Species

Plant species observed during the survey include poison oak (*Toxicodendron diversilobum*) coyote brush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), Jimson weed (*Datura wrightii*), California Brittlebush (*Encelia californica*), ashyleaf buckwheat (*Eriogonum cinereum*), Menzies' golden bush (*Isocoma menziesii*), prickly pear (*Opuntia oricola*), lemonade berry (*Rhus integrifolia*), Monterey cypress tree (*Cupressus macrocarpa*), and coastal saltbush (*Atriplex lentiformis*), Russian thistle (*Salsola spp.),* tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), sweet fennel (*Foeniculum vulgare*), common mallow (*Malva neglecta*), fountain grass (*Pennisetum setaceum*), New Zealand spinach (*Tetragonia tetragonioides*), and ice plant (*Carpobrotus edulis*). A large portion of the species observed were non-native vegetation.

Wildlife species observed include black phoebe (*Sayornis nigricans*), brown pelican (*Pelecanus occidentalis*), western gull (*Larus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), and raven (*Corvus corax*).

Marine species include California mussel (*Mytilus californianus*), common acorn barnacle (*Balanus glandula*), gooseneck barnacle (*Pollicipes polymerus*), and feather boa kelp (*Egregia menziesii*).

No special-status species were observed during the survey. No Ventura County locally important plant or wildlife species were found during surveys. Please see **Observed Species Table** in **Appendix 2** for species observed within the survey area (SA1).

Protected Trees

There are no protected trees within the project survey limits. The Monterey cypress trees (*Cupressus macrocarpa*) and myoporum trees (*Myoporum laetum*) observed do not qualify as a protected tree under the Ventura County Coastal Zoning Ordinance.

Special Status Species and Nests

Special status species were not found and are not expected to occur within the survey area(s).

Special Status Species Summary

No special status species were observed during the field surveys. However, there are a total of 21 special status plant species, 28 special status animal species, and 22 special status marine species identified within the Ventura 7.5-minute Quadrangle from the CNDDB, IPAC, USFWS, NOAA and CNPS list. Potential special status species recorded in the CNDBB that have a potential to occur within or adjacent to the survey area are described in **Table 5**.

Observed Species

There were no special status species observed within the survey area.

Potential Species

According to CNDDB, three special status plant species (*Atriplex pacifica, Atriplex coulteri,* and *Aphanisma blitoides)* are potentially occurring within the project limits. The listed *Atriplex* species were last observed in 1963 and 1972. *Atriplex coulteri* and *Atriplex pacifica* was found near a coastal bluff approximately 1.5 miles west of the Ventura River. The terrain was described as dry mudflat, dry sandy-calcareous slope of coastal bluff. This type of ecological terrain will not be impacted at the project site

(coastal salt marshes, freshwater marshes, coastal dunes, and wetland-riparian habitats). The habitat is, at most, marginally suitable for these species. In addition, these species were not found within or adjacent to the project site during focused surveys. *Aphanisma* was observed near Ventura about 1.5 miles west of the Ventura River at the base of bulldozed coastal bluff of Taylor ranch in a survey conducted in 1963. The exact location unknown. The location was described as a sand and gravel detritus dump at the base of a bulldozed coastal bluff. Numerous surveys for these three species have been conducted with no observations. Impacts to these species are not anticipated from the proposed project.

A total of three (3) special status animal species were determined to have the potential to occur within the survey area based on habitat requirements and field observations. It was determined that the California legless lizard (*Anniella stebbinsi*), coastal California gnatcatcher (*Polioptila californica californica*), and crotch bumble bee (*Bombus crotchii*) have the potential to occur within the survey area and are discussed further in this document.

No bats or signs of bats (guano, urine staining, audible bat calls, etc.) were observed at structures where bats could potentially roost (Ventura Overhead Bridge #52-0040 at PM 21.52). The existing bridge has few joints, cracks, and crevices for bats to roost. The bridge also has steel girders underneath. Steel girders are not ideal for bats because of the cool temperature they give off. The lack of bat signs, suitable roosting, and steel girders do not make this bridge a desirable bat habitat. Although the potential for bats to use the subject bridge is low, Caltrans will conduct a preconstruction survey to be sure no bats are within the project footprint. The small railroad bridges over the drainages of SA1 offer potential for bat roosting, but these bridges will not be impacted.

Monarch butterfly overwintering habitat is not present within 1,000 feet of the project footprint. A potential avenue for mitigation would be to plant more Monterey cypress thus creating suitable roosting habitat for monarch butterfly.

No marine species were determined to have the potential to occur within the project construction limits. The components of this project will not take place within the Pacific Ocean nor on its shoreline. The Appropriate BMP's that address Pacific Ocean impacts are discussed in **4.2 Impacts and Mitigation** of this document.

Potentially occurring special status species are documented in **Table 5** and observed species are noted in **Appendix Two**.

Table 5: Special Status Species

Observed and Potentially Occurring Special Status Species							
Survey/ Source	Scientific Name	Common Name	Species' Status	Potential to Occur	Habitat Requirements	Adequate Habitat Onsite	Comments
CNDDB	*Anniella stebbinsi*	California Legless Lizard	SSC, G3G4	Low	Sandy/loose soil, Coastal dune, valley-foothill, chaparral, coastal sage scrub	Marginally suitable	Caltrans has determined that the activities associated with the project will have less than significant on California legless lizard (*Anniella stebbinsi*). Surveys for California legless lizards have been performed since October 2018 by Caltrans biologist staff. The ground of the proposed project limits was scanned by biologist. The biologist was watching for any quick movements' underneath shrubs or near burrows. No lizards were detected.
CNDDB	*Polioptila californica*	Coastal California Gnatcatcher	FT, G4G5T3Q	Low	Coastal sage scrub, chaparral	Marginally suitable	the project location is fragmented by highways and railroads
CNDDB	*Bombus crotchii*	Crotch Bumble Bee	State Candidate, G3G4	Low	Sandy/loose soil, chaparral, coastal scrub	Marginally suitable	the area is a mix of native vegetation and ruderal vegetation. The favorable pollinating plants are few.
CNPS	*Atriplex pacifica*	Davidson's Saltbush	CNPS 1B.2	Low	Coastal bluff scrub, coastal dunes, playas, coastal scrub	Marginally suitable	these plants prefer upland, sea bluff habitats
CNPS	*Atriplex coulteri*	Coulter's Saltbush	LIS, CNPS 1B.2	Low	Coastal strand, valley grassland, coastal sage scrub	Marginally suitable	This species prefer sea bluffs and alkaline soils
CNPS	*Aphanisma blitoides.*	Aphanisma	LIS, CNPS 1B.2	Low	Coastal sage scrub	Marginally suitable	This species prefer sea bluffs and alkaline soils

Observed and Potentially Occurring Special Status Species

FE .....Federal Endangered
FT .....Federal Threatened
FC.....Federal Candidate Species
FSC .....Federal Species of Concern
SFP.....California Fully Protected Species
SE.....California Endangered
ST.....California Threatened
SR.....California Rare
SSC .....California Species of Special Concern
CDFG/NatureServe Rank
G1 or S1 - Critically Imperiled Globally or Subnationally (state)
G2 or S2 - Imperiled Globally or Subnationally (state)
G3 or S3 - Vulnerable to extirpation or extinction Globally or Subnationally (state)
California Rare Plant Rank (RPR)
RPR 1A - California Native Plant Society/CDFG listed as presumed to be extinct
RPR 1B - California Native Plant Society/CDFG listed as rare or endangered in California and elsewhere
RPR 2 - California Native Plant Society/CDFG listed as rare or endangered in California but more common elsewhere
RPR 3 - California Native Plant Society/CDFG listed as in need of more information.
RPR 4 - California Native Plant Society/CDFG listed as of limited distribution or infrequent throughout a broader area in California.
LIS Locally Important Species

Further review was conducted for California legless lizard (*Anniella stebbinsi*), coastal California gnatcatcher (*Polioptila californica californica*), and crotch bumble bee (*Bombus crotchii)* because these species have potential to occur within the BSA. The determinations are as follows.

Determination for California legless lizard (*Anniella stebbinsi*)

Caltrans has determined that the activities associated with the project will have less than significant impacts on California legless lizard (*Anniella stebbinsi*). Surveys for California legless lizards have been performed since October 2018 by Caltrans biologist staff. The ground of the proposed project limits was scanned by a biologist. The biologist was watching for any quick movements' underneath shrubs or near burrows. No lizards were detected.

Cumulative effects are not expected for this species after successful implementation of the Biological Provisions proposed in this document. Please see chapter **4.2 Impacts and Mitigation** for a list of avoidance and minimization measures.

Determination Coastal California Gnatcatcher (*Polioptila californica*)

The proposed project will have less than significant impact on coastal California gnatcatcher (*Polioptila californica*).

Surveys for California coastal gnatcatcher have been performed since October 2018 by Caltrans biologist staff. No gnatcatchers have been detected. The coastal sagebrush scrub has been degraded over the years. The land has been fragmented with a high level of nearby human disturbance making it negligible of quality. The bridge replacement impacts are in very close proximity to Ven-1 and Ven-101. Additionally, there is a railroad line (UPRR) that is used frequently by passenger and freight trains.

Cumulative effects are not expected for this species after successful implementation of the Biological Provisions proposed in this document. Please see chapter **4.2 Impacts and Mitigation** for a list of avoidance and minimization measures.

Determination Crotch Bumble Bee (*Bombus crotchii*)

The proposed project will have less than significant impacts on Crotch's bumble bee (*Bombus crotchii*).

Crotch bumblebee is listed as a CESA candidate and is currently listed as a Species of Special Concern. Surveys for crotch bumblebees have been performed since October 2018 by Caltrans biologist staff. No bumblebees have been detected. Because there are numerous native coastal scrub plants that host flowers that could cater to crotch bumblebees, preconstruction surveys will be done to ensure no crotch bumblebees would be impacted. Suitable habitat was not detected where project impacts would take place.

Cumulative effects are not expected for this species after successful implementation of the Biological Provisions proposed in this document. Please see chapter **4.2 Impacts and Mitigation** for a list of avoidance and minimization measures.

Nesting Bird Summary

Habitat suitable for nests of birds protected under the Migratory Bird Treaty Act does exist within the survey area.

The project has the potential to impact breeding/nesting birds protected by the Migratory Bird Treaty Act of 1918 (MBTA). The proposed project involves tree/vegetation removal. These activities have the potential to impact nesting birds within the project area. The proposed project will include all necessary avoidance and minimization measures to avoid impacts to nesting birds and their habitat. Please see Chapter **4.2 Impacts and Mitigation** for a list of avoidance and minimization measures related to the MBTA.

No nesting birds were found within coastal sage scrub and Monterey cypress trees during surveys. In addition, no inactive nests were observed that could possibly cater to colonial nesting waterbirds. There are no marshlands to support nesting communities. The shoreline consists of mostly sand and rock riprap which is affected daily by tidal influx and limiting nesting opportunities.

3.3 Wildlife Movement and Connectivity

Wildlife movement or connectivity features, or evidence thereof, were not found within the survey area(s).

Connectivity Features

According to Ventura County's Regional Wildlife Corridors map, there are no documented corridors or linkages that lie within the survey area or in the immediate vicinity.

The project's biological study area is highly disturbed due to heavy automobile use because a state park parking facility is directly underneath the bridge where construction will take place. There is also heavy noise pollution from the functioning Union Pacific Railroad train line. No documented wildlife corridors were detected within the project limits due to proximity to the ocean, a highway, and a railway. Local movement will be temporarily impacted, but is less than significant given the small scale of this impact.

Section 4: Recommended Impact Assessment & Mitigation

4.1 Sufficiency of Biological Data

Additional biology-related permits needed prior to issuance of land use permit:

Based on analysis of the project scope of work, permits from the California Department of Fish and Wildlife (CDFW / 1602 Lake & Streambed Agreement), Regional Water Quality Control Board (RWQCB / 401 certification), and U.S. Army Corps of Engineers (ACOE / 404 permit) are not required. Impacts to Waters of the U.S. and Waters of the State and their adjacent biological resources will be avoided and are not part of the project scope. In addition, Section 7 consultation and consultation regarding California Endangered Species Act (CESA) will not be conducted as there are no suitable or designated critical habitat for any state or federally-listed species within the project area. No state threatened or endangered species were detected during the biological surveys. Appropriate avoidance and minimization measures will be implemented to ensure impacts to CESA species are avoided.

4.2 Impacts and Mitigation

Impacts

A. Species Project: LS; Cumulative: LS

Impacts

No special-status species that were listed in the CNDDB or U.S. Fish and Wildlife Service were detected within the project limits during previous surveys. It is anticipated that special-status species will not be present during project construction. Provisions, listed below, will be implemented during construction to avoid any potential impacts to special-status species.

Significance Finding – Project Impacts: Less than Significant

Significance Finding – Cumulative Impacts: Less Than Significant

Avoidance and Minimization Measures

- Caltrans will conduct pre-construction surveys to monitor evidence of California legless lizard presence. If California legless lizard is found adjacent to construction, consultation with CDFW would be initiated. Surveys shall be conducted at most two weeks prior to the clearing and grubbing of vegetation.

- Caltrans will conduct pre-construction surveys to monitor evidence of and coastal California gnatcatcher presence. If coastal California gnatcatcher is found adjacent to construction, consultation with USFWS would be initiated.

- Caltrans will conduct pre-construction surveys within the spring (May to June) prior to construction, to confirm the presence/absence of crotch bumble beehives. If a crotch bumblebee hive is found, consulktation with CDFW will occur.

- If a Crotch bumble beehive is identified in the BSA, efforts would be taken to avoid the hive, and an appropriate buffer would be installed as determined by a qualified biologist. Surveys shall be conducted at most two weeks prior to the clearing and grubbing of vegetation.

- Prior to project construction, a Caltrans biologist shall conduct bat surveys within and immediately adjacent to the project impact areas to identify the presence of bats and/or bat pups. If bat pups are confirmed, work shall be delayed until the bat pups are able to fly and forage.

- The removal and/or disturbance of trees or suitable roosting shrubbery would be minimized to the greatest extent possible.

- Wherever possible, vegetation would be trimmed and/or removed outside of core nesting period (February 1st - September 1st).

- If avoidance of these activities during this period is not possible, preconstruction surveys by a qualified biologist would be conducted to identify any existing nests or breeding birds within the area scheduled for construction. The survey should be completed no more than 48 hours prior to the start of project activities. Additional surveys would be conducted if more than 72 hours pass between preconstruction nesting bird surveys and the start of construction.

- If breeding/nesting birds are located within 150 ft. of the limits of disturbance, a buffer shall be flagged around the nest and ESA signs posted. Any work within 150 ft. of the flagged area would require a biologist to monitor the birds and ensure that the construction activities do not negatively impact the birds.

- If the biologist identifies signs of stress, the biologist will inform the Engineer that activities within the immediate area cannot resume until the birds resume their normal behavior or until the nest has been determined to be no longer active.

- Should breeding/nesting of raptors be located within the area scheduled for construction, the buffer shall be extended to 500 ft. as raptors are more sensitive to disturbance.

B. Ecological Communities Project: LS; Cumulative: LS

Sensitive Plant Communities

Impacts

There are five habitats and natural communities of special concern identified near the project area (CNDDB, 2021) within the Ventura quadrangle. They are southern coast live oak riparian forest, California walnut woodland, southern sycamore alder riparian habitat, southern California steelhead stream, and southern California coastal lagoon. Additionally, Groundfish Essential Fish Habitat, Coastal Pelagic Essential Fish Habitat, and Highly Migratory Species Essential Fish Habitat were also studied. The components of the project will not impact these sensitive habitats as they are absent within the project limits.

The proposed project will remove one Monterey cypress tree as a part of project construction. The Monterey cypress tree is native further north, indigenous to the Monterey Peninsula, on the Central Coast of California, and based on the known range of the species, it is assumed that these trees were planted within the survey area for ornamental purposes. However, Monterey cypress trees have historically grown in this part of Ventura County and have provided beneficial habitat to numerous wildlife species. This is not debatable. Monterey cypress tree are currently present and continue to thrive and reseed in the area.

The myoporum groves and ornamental/naturalized Monterey cypress do not appear expansive enough to reduce internal wind speeds (less than 2 meters/second), sufficient to support overwintering monarch butterflies (*Danaus plexippus*). The population of these trees at the project location is low and therefore, the wintering habitat is not suitable due to exposure to the weather elements. No roosting butterflies

have been detected during surveys. In addition, raptor nests and/or colonial shorebird roosts, were not identified in any of the individual trees with the groves/stands. Avoidance and minimization measures as a component of the project design will be implemented to ensure all potential impacts are minimized, as much as feasible. The proposed project will have less than significant impacts and cumulative impacts to ecological communities.

Significance Finding – Project Impacts: Less than Significant

Significance Finding – Cumulative Impacts: Less than Significant

Avoidance and Minimization Measures

- Impacts to Monterey cypress trees shall be avoided as feasible. ESA fencing will be placed around trees that are outside of the impact area so that further impacts do not occur. Monterey cypress trees that are impacted shall be replaced at a 2-1 ratio onsite.
- Should there be a need to remove Monterey cypress trees, then Caltrans shall replace any trees that are impacted at a 2-1 ratio onsite.
- During construction, the contractor shall inspect and clean construction equipment at the beginning and end of each day and prior to transporting equipment from one project location to another.
- During construction, the contractor shall ensure that all active portions of the construction site are watered a minimum of twice daily or more often when needed due to dry or windy conditions to prevent excessive amounts of dust.
- During construction, the contractor shall ensure that all material stockpiled is sufficiently watered or covered to prevent excessive amounts of dust.
- During construction, soil/gravel/rock will be obtained from weed-free sources.
- Only certified weed-free straw, mulch, and/or fiber rolls will be used for erosion control.
- After construction, all revegetated areas will avoid the use of species listed on Cal-IPC's California Invasive Plant Inventory.
- Eradication procedures (e.g., spraying and/or hand weeding) will be outlined should an infestation occur; the use of herbicides will be prohibited within and adjacent to native vegetation, except as specifically authorized and monitored by the District Biologist and Landscape Architect.

<u>Water and Wetlands</u>

Impacts

The proposed project will have less than significant impacts on wetlands or jurisdictional waters (Waters of the State, Waters of the U.S.). As a safety measure, proper BMP's shall be put forth to protect water quality, especially as this project is located adjacent to the Pacific Ocean. There is less than significant impacts and cumulative impacts to Waters and Wetlands.

Significance Finding – Project Impacts: Less than Significant

Significance Finding – Cumulative Impacts: Less than Significant

Avoidance and Minimization Measures

- All applicable Construction Best Management Practices for water quality shall be implemented to minimize project affects to jurisdictional drainages. All Federal and State litter laws shall be followed by the contractors.
- All applicable construction Best Management Practices (BMPs) for water quality shall be implemented to minimize affects to the Pacific Ocean.
- No work shall occur in flowing water.
- The contractor must follow Caltrans and CDFW manuals for deployment of sediment control devices. Typical sediment control devices include siltation curtains, sandbags, hay bales, filter fabrics, and fiber rolls.
- Any heavy equipment used in the project area will be removed at the end of each workday. All heavy equipment will be checked for oil leaks, gas, hydraulic fluid and any other pollutant which could impact water quality and instream habitat each workday prior to being deployed into the project area. Drip pans should be installed on all equipment working in the project area to control leaks and for the purpose of avoiding water quality impacts to surface waters.
- Typical sediment control devices include siltation curtains, sandbags, hay bales, filter fabrics, and fiber rolls. Caltrans and CDFW manuals provide instruction and appropriate methodologies for deployment of sediment control devices.
- Buffer zones, or Environmentally Sensitive Areas fencing (ESA) will be placed strategically to protect the ephemeral streams. The ESA area will include the beds, banks, and channels of the streams. These streams have very little riparian vegetation as most of the vegetation is upland, coastal sage scrub.
- Vehicle equipment and construction equipment shall be staged in existing disturbed lots and not on sensitive coastal habitat.

Environmentally Sensitive Habitat Areas

Impacts

The project will result in 1.04 acres of temporary impacts and 0.04 acres of permanent impacts to potential Environmentally Sensitive Habitat Areas (ESHA). Temporary impacts to potential ESHA are anticipated due to work related construction activities such as staging of equipment, installation of retaining wall abutments, excavation to replace bridge, and grading to widen State Beach Access Rd. Most of the temporary impacts are due to installation of a pre-fabricated bicycle-detour bridge that transitions users from the SR-1 to US-101 during project construction when access to the bridge is closed. Permanent impacts are due to the widening of State Beach Access Rd, which will widen and increase safety of the dilapidated road for users of the Emma Woods State Beach North Campground. These uses are defined in Section 8178-2.5 as permitted resource-dependent uses that enhance public recreational access-ways. The proposed project is consistent with the Goals and Policies of the Coastal Area Plan by providing a Class 1 shared-use path that provides connections between Coastal Trails that currently exist. The proposed project enhances public access to the County's coastal resources. In addition, it will be designed to be consistent with the corridor and will maximize scenic coastal vistas. As a result, there is less than significant impacts and cumulative impacts to potential ESHA. With the avoidance and minimization measures below, the disturbed and degraded ESHA will be restored and enhanced to conditions much more valuable for an ecosystem. These measures will be implemented as a part of the project design to minimize impacts to resources, as much as feasible.

Significance Finding – Project Impacts: Less than Significant

Significance Finding – Cumulative Impacts: Less than Significant

Avoidance and Minimization Measures

Avoidance and Minimization Measures

- After construction, affected areas adjacent to native vegetation will be re-vegetated with plant species approved by the Landscape Architect and the District Biologist that are native to the vicinity.
- The entire slope adjacent to Emma Wood State Beach Road will be replanted (hydroseed) with species presently occurring. Species in the planting mix will include Menzies' golden bush (*Isocoma menziesii*), California Brittlebush (*Encelia californica*), ashyleaf buckwheat (*Eriogonum cinereum*), and coastal saltbush (*Atriplex lentiformis*). Lemonade berry (*Rhus integrifolia*) will be strategically planted using container plants, and installed at 1 every 100 feet to allow optimal grow space.
- Erosion control and re-vegetation sites will be monitored after construction to ensure native species have become established and to detect and control the introduction/invasion of nonnative species.
- The project shall include an environmentally sensitive area (ESA), consisting of an area within and near the limits of construction where access is prohibited or limited for the preservation of archaeological sites, existing vegetation, or protection of biological habitat as shown on the plans.
- Boulders removed from digging and grubbing shall be strategically placed along the top of slope to help with soil stabilization.
- All permanent impacts to ESHA (0.04 Acres) will be replaced at a 2-1 ratio.
- All temporary impacts to ESHA (1.04 Acres) will be replaced at a 1-1 ratio. All other temporary impacts to Disturbed Big Saltbrush scrub/Successional Big Saltbush Scrub (not ESHA 0.72 Acres) within ESHA buffers will be replaced at a 1-1 ratio.
- Off-site mitigation for permanent impacts (0.04 acres) will be explored through the Ventura County In-Lieu Fee Program. Temporary impacts for 1.04 acres will be restored on-site. The total amount of impacts to ESHA within ESHA is 1.08 acres.
- If required by the County, an ESHA Mitigation Plan will be prepared pursuant to CZO for review and approval by the Ventura County, which will compensate for the permanent and temporary impacts to ESHA and ESHA buffers. Caltrans will replace ESHA habitat that is temporarily impacted with suitable coastal sage scrub plant species. In addition, a potential avenue for habitat restoration would be to plant more Monterey cypress thus creating suitable roosting habitat for monarch butterfly. Ultimately, the Department, as environmental stewards, plans to plant this tree in a grove to enhance monarch habitat, and reclaim some of its historic range. The Monterey cypress trees that are currently present are healthy and there are numerous seedlings and saplings at this location.
- Fiber rolls and/or terraced slopes will be installed to prevent erosion due to the temporary loss of vegetation at the State Beach Access Road widening location limits.
- Litter and pollution laws shall be adhered to by all personnel working within the project limits.

C. Habitat Connectivity (migration corridors) Project: N; Cumulative: N

Impacts

No suitable wildlife movement or connectivity features were identified within the survey area during this study. The project's study area is highly disturbed due to heavy automobile use as the SR-1 and US-101 freeway bisects the vegetative areas and does not provide contiguous habitat throughout the range. The recreational facility also generates heavy traffic within the area throughout most of the year. In addition, the Union Pacific Railroad passes through the survey area and generates frequent noise pollution. No riparian corridors were found within the project limits.

There are three under crossings for the railroad tracks and State Beach Access Road in the survey area. These were built to convey the flow regarding the ephemeral streams. These crossings allow local wildlife to pass safely beneath the railroad tracks and State Beach Access Road. These crossings will not be impacted by the project activities. The project will have less than significant impacts to habitat connectivity.

Section 5: Photos

The following photos were collected during various site visits between October 22, 2018 – Present.

Photos	
Location	
SA1	
Map Key	
N/A	
View Direction	
Southeast	
Description	
Existing Ven-1 Bridge	

Photos

Location
SA1
Map Key
N/A
View Direction
Southeast
Description
Existing bridge slope where abutment is.

Location
SA1
Map Key
N/A
View Direction
Northwest
Description
Looking at Ventura Overhead Bridge from ground level.

Photos

Location
SA1
Map Key
N/A
View Direction
Northwest
Description
Existing Ventura Overhead Bridge Looking Westbound.

Location
SA1
Map Key
N/A
View Direction
Northwest
Description
Looking at Ventura Overhead Bridge from Ground Level

Photos	
Location SA1 **Map Key** N/A **View Direction** Southeast **Description** Monterey cypress grove.	
Location SA1 **Map Key** N/A **View Direction** Southeast **Description** Looking southeast from ground level with Union Pacific Railroad.	

Photos	
Location	
SA1	
Map Key	
N/A	
View Direction	
North	
Description	
Existing coastal scrub habitat (ESHA).	

Photos	
Location	
SA1	
Map Key	
N/A	
View Direction	
Northwest	
Description	
Numerous acorn barnacle on high intertidal rock.	

Location	
SA1	
Map Key	
N/A	
View Direction	
Southeast	
Description	
Looking down numerous gooseneck barnacles within high intertidal zone.	

Photos	
Location	
SA1	
Map Key	
N/A	
View Direction	
North	
Description	
Looking northwest at a California mussel colony within high intertidal zone.	

Photos

Location
SA1
Map Key
N/A
View Direction
Northwest
Description
Looking northwest at proposed temporary bike path.

Photos

Location
SA1
Map Key
N/A
View Direction
East
Description
Looking east at proposed temporary bike path.

Photos

Location
SA1
Map Key
N/A
View Direction
Southeast
Description
Looking southeast at Ven-1 bridge.

Photos

Location
SA1
Map Key
N/A
View Direction
Northwest
Description
Looking northwest towards tidally influenced beach and Ven-1 bridge.

Photos	
Location	
SA1	
Map Key	
N/A	
View Direction	
Northwest	
Description	
Looking northwest at slope adjacent to Ven-1	

Photos	
Location	
SA1	
Map Key	
N/A	
View Direction	
Southeast	
Description	
Facing south east and looking down into ephemeral stream next temporary bike path.	

Appendix One

Summary of Biological Resource Regulations

The Ventura County Planning Division, as “lead agency” under CEQA for issuing discretionary land use permits, uses the relationship of a potential environmental effect from a proposed project to an established regulatory standard to determine the significance of the potential environmental effect. This Appendix summarizes important biological resource regulations which are used by the Division’s biologists (consultants and staff) in making CEQA findings of significance:

Sensitive Status Species Regulations
Nesting Bird Regulations
Plant Community Regulations
Tree Regulations
Waters and Wetlands Regulations
Coastal Habitat Regulations
Wildlife Migration Regulations
Locally Important Species/Communities Regulations

Sensitive Status Species Regulations

Federally Protected Species

Ventura County is home to 29 federally listed endangered and threatened plant and wildlife species. The U.S. Fish and Wildlife Service (USFWS) regulates the protection of federally listed endangered and threatened plant and wildlife species.

FE (Federally Endangered): A species that is in danger of extinction throughout all or a significant portion of its range.

FT (Federally Threatened): A species that is likely to become endangered in the foreseeable future.

FC (Federal Candidate): A species for which USFWS has sufficient information on its biological status and threats to propose it as endangered or threatened under the Endangered Species Act (ESA), but for which development of a proposed listing regulation is precluded by other higher priority listing activities.

FSC (Federal Species of Concern): A species under consideration for listing, for which there is insufficient information to support listing at this time. These species may or may not be listed in the future, and many of these species were formerly recognized as "Category-2 Candidate” species.

The USFWS requires permits for the “take” of any federally listed endangered or threatened species. “Take” is defined by the USFWS as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct; may include significant habitat modification or degradation if it kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering.”

The Endangered Species Act (ESA) does not provide statutory protection for candidate species or species of concern, but USFWS encourages conservation efforts to protect these species. USFWS can set up voluntary Candidate Conservation Agreements and Assurances, which provide non-Federal landowners (public and private) with the assurance that if they implement various conservation activities to protect a given candidate species, they will not be subject to additional restrictions if the species becomes listed under the ESA.

State Protected Species

The California Department of Fish and Game (CDFG) regulates the protection of endangered, threatened, and fully protected species listed under the California Endangered Species Act. Some species may be jointly listed under the State and Federal Endangered Species Acts.

SE (California Endangered): A native species or subspecies which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

ST (California Threatened): A native species or subspecies that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as "rare" on or before January 1, 1985, is a "threatened species."

SFP (California Fully Protected Species): This designation originated from the State's initial effort in the 1960's to identify and provide additional protection to those animals that were rare or faced possible extinction. Lists were created for fish, mammals, amphibians, reptiles, and birds. Most fully protected species have also been listed as threatened or endangered species under the more recent endangered species laws and regulations.

SR (California Rare): A species, subspecies, or variety of plant is rare under the Native Plant Protection Act when, although not presently threatened with extinction, it is in such small numbers throughout its range that it may become endangered if its present environment worsens. Animals are no longer listed as rare; all animals listed as rare before 1985 have been listed as threatened.

SSC (California Species of Special Concern): Animals that are not listed under the California Endangered Species Act, but which nonetheless 1) are declining at a rate that could result in listing, or 2) historically occurred in low numbers and known threats to their persistence currently exist.

The CDFG requires permits for the “take” of any State-listed endangered or threatened species. Section 2080 of the Fish and Game Code prohibits "take" of any species that the California Fish and Game Commission determines to be endangered or threatened. “Take” is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

The California Native Plant Protection Act protects endangered and rare plants of California. Section 1908, which regulates plants listed under this act, states: “no person shall import into this state, or take, possess, or sell within this state, except as incident to the possession or sale of the real property on which the plant is growing, any native plant, or any part or product thereof, that the commission determines to be an endangered native plant or rare native plant, except as otherwise provided in this chapter.”

Unlike endangered, threatened, and rare species, for which a take permit may be issued, California Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

The California Endangered Species Act does not provide statutory protection for California species of special concern, but they should be considered during the environmental review process.

California Rare Plant Ranks (RPR)

Plants with 1A, 1B, 2 or 4 should always be addressed in CEQA documents. Plants with a RPR 3 do not need to be addressed in CEQA documents unless there is sufficient information to demonstrate that a RPR 3 plant meets the criteria to be listed as a RPR 1, 2, or 4.

RPR 1A: Plants presumed to be extinct because they have not been seen or collected in the wild in California for many years. This list includes plants that are both presumed extinct in California, as well as those plants which are presumed extirpated in California. A plant is extinct in California if it no longer occurs in or outside of California. A plant that is extirpated from California has been eliminated from California but may still occur elsewhere in its range.

RPR 1B: Plants that are rare throughout their range with the majority of them endemic to California. Most of the plants of List 1B have declined significantly over the last century.

RPR 2: Plants that are rare throughout their range in California but are more common beyond the boundaries of California. List 2 recognizes the importance of protecting the geographic range of widespread species.

Plants identified as RPR 1A, 1B, and 2 meet the definitions of Sec. 1901, Chapter 10 (Native Plant Protection Act) or Secs. 2062 and 2067 (California Endangered Species Act) of the California Department of Fish and Game Code and are eligible for state listing.

RPR 3: A review list for plants for which there is inadequate information to assign them to one of the other lists or to reject them.

RPR 4: A watch list for plants that are of limited distribution in California.

Global and Subnational Rankings

Though not associated directly with legal protections, species have been given a conservation status rank by NatureServe, an international non-profit conservation organization that is the leading source for information about rare and endangered species and threatened ecosystems. The Ventura County Planning Division considers the following ranks as sensitive for the purposes of CEQA impact assessment (G = Global, S = Subnational or State):

G1 or S1 - Critically Imperiled
G2 or S2 – Imperiled
G3 or S3 - Vulnerable to extirpation or extinction

Locally Important Species

Locally important species' protections are addressed below under "Locally Important Species/Communities Regulations."

For lists of some of the species in Ventura County that are protected by the above regulations, go to http://www.ventura.org/rma/planning/ceqa/bio_resource_review.html.

Migratory Bird Regulations

The Federal Migratory Bird Treaty Act (MBTA) and the California Department of Fish and Game (CDFG) Code (3503, 3503.5, 3511, 3513 and 3800) protect most native birds. In addition, the federal and state endangered species acts protect some bird species listed as threatened or endangered. Project-related impacts to birds protected by these regulations would normally occur during the breeding season, because unlike adult birds, eggs and chicks are unable to escape impacts.

The MBTA implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and Russia for the protection of migratory birds, which occur in two of these countries over the course of one year. The Act maintains that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not. Bird species protected under the provisions of the MBTA are identified by the List of Migratory Birds (Title 50 of the Code of Federal Regulations, Section 10.13 as updated by the 1983 American Ornithologists' Union (AOU) Checklist and published supplements through 1995 by the USFWS).

CDFG Code 3513 upholds the MBTA by prohibiting any take or possession of birds that are designated by the MBTA as migratory nongame birds except as allowed by federal rules and regulations promulgated pursuant to the MBTA. In addition, there are CDFG Codes (3503, 3503.5, 3511, and 3800) which further protect nesting birds and their parts, including passerine birds, raptors, and state "fully protected" birds.

NOTE: These regulations protect almost all *native nesting birds*, not just sensitive status birds.

Plant Community Regulations

Plant communities are provided legal protection when they provide habitat for protected species or when the community is in the coastal zone and qualifies as environmentally sensitive habitat area (ESHA).

Global and Subnational Rankings

Though not associated directly with legal protections, plant communities have been given a conservation status rank by NatureServe, an international non-profit conservation organization that is the leading source for information about rare and endangered species and threatened ecosystems. The Ventura County Planning Division considers the following ranks as sensitive for the purposes of CEQA impact assessment (G = Global, S = Subnational or State):

G1 or S1 - Critically Imperiled
G2 or S2 - Imperiled
G3 or S3 - Vulnerable to extirpation or extinction

CDFG Rare

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. Though the Native Plant Protection Act and the California

Endangered Species Act provide no legal protection to plant communities, CDFG considers plant communities that are ranked G1-G3 or S1-S3 (as defined above) to be rare or sensitive, and therefore these plant communities should be addressed during CEQA review.

Environmentally Sensitive Habitat Areas

The Coastal Act specifically calls for protection of "environmentally sensitive habitat areas" or ESHA, which it defines as: "Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5).

ESHA has been specifically defined in the Santa Monica Mountains. For ESHA identification in this location, the Coastal Commission, the agency charged with administering the Coastal Act, has described the habitats that are considered ESHA. A memo from a Coastal Commission biologist that describes ESHA in the Santa Monica Mountains can be found at: http://www.ventura.org/rma/planning/ceqa/bio_resource_review.html.

Locally Important Communities

The Ventura County Initial Study Assessment Guidelines defines a locally important community as one that is considered by qualified biologists to be a quality example characteristic of or unique to the County or region, with this determination being made on a case-by-case basis. The County has not developed a list of locally important communities but has deemed oak woodlands to be a locally important community through the County's *Oak Woodland Management Plan*.

Tree Regulations

Selected trees are protected by the Ventura County Tree Protection Ordinance, found in Section 8107-25 of the Ventura County Non-Coastal Zoning Ordinance. This ordinance, which applies in the unincorporated areas of the County outside the coastal zone, regulates—through a tree permit program—the removal, trimming of branches or roots, or grading or excavating within the root zone of a "protected tree." Individual trees are the focus of the ordinance, while oak woodlands are additionally protected as "locally important communities."

The ordinance allows removal of five protected trees (only three of which can be oaks or sycamores; none of which can be heritage or historical trees) through a ministerial permit process. Removal of more/other than this may trigger a discretionary tree permit.

If a proposed project cannot avoid impacts to protected trees, mitigation of these impacts (such as replacement of lost trees) is addressed through the tree permit process—**unless the impacts may affect biological resources beyond the tree itself**, such as to sensitive status species that may be using the tree, nesting birds, the tree's role as part of a larger habitat, etc. These secondary impacts have not been addressed through the tree permit program and must be addressed by the biologist in the biological assessment in accordance with the California Environmental Quality Act (CEQA).

A tree permit does not, however, substitute as mitigation for impacts to oak woodlands. The Public Resources Code requires that when a county is determining the applicability of CEQA to a project, it must determine whether that project "may result in a conversion of oak woodlands that will have a significant effect on the environment." If such effects (either individual impacts or cumulative) are identified, the law requires that they be mitigated. Acceptable mitigation measures include, but are not limited to, conservation of other oak woodlands through the use of conservation easements and planting replacement trees, which must be maintained for seven years. In addition, only 50% of the mitigation required for significant impacts to oak woodlands may be fulfilled by replanting oak trees.

The following trees are protected in the specified zones. Girth is measured at 4.5 feet from the midpoint between the uphill and downhill side of the root crown.

PROTECTED TREES			
Common Name/Botanical Name (Genus species)	Girth Standard (Circumference)	Applicable Zones	
		All Base Zones	SRP1
Alder (*Alnus* all species)	9.5 in.		X

Ash (*Fraxinus* all species)	9.5 in.		X
Bay (*Umbellularia californica)*	9.5 in.		X
Cottonwood (*Populus* all species)	9.5 in.		X
Elderberry (*Sambucus* all species)	9.5 in.		X
Big Cone Douglas Fir (*Pseudotsuga macrocarpa)*	9.5 in.		X
White Fir (*Abies concolor)*	9.5 in.		X
Juniper (*Juniperus californica)*	9.5 in.		X
Maple (*Acer macrophyllum)*	9.5 in.		X
Oak (Single) (*Quercus* all species)	9.5 in.	X	X
Oak (Multi) (*Quercus* all species)	6.25 in.	X	X
Pine (*Pinus* all species)	9.5 in.		X
Sycamore (*Platanus* all species)	9.5 in.	X	X
Walnut (*Juglans* all species)	9.5 in.		X
Historical Tree[3] (any species)	(any size)	X	X
Heritage Tree[4] (any species)	90.0 in.	X	X

X Indicates the zones in which the subject trees are considered protected trees.

1. SRP - Scenic Resource Protection Overlay Zone

2. SHP - Scenic Highway Protection Overlay Zone

3. Any tree or group of trees identified by the County or a city as a landmark, or identified on the Federal or California Historic Resources Inventory to be of historical or cultural significance, or identified as contributing to a site or structure of historical or cultural significance.

4. Any species of tree with a single trunk of 90 or more inches in girth or with multiple trunks, two of which collectively measure 72 inches in girth or more. Species with naturally thin trunks when full grown or naturally large trunks at an early age, or trees with unnaturally enlarged trunks due to injury or disease must be at least 60 feet tall or 75 years old.

Waters and Wetlands Regulations

Numerous agencies control what can and cannot be done in or around streams and wetlands. If a project affects an area where water flows, ponds or is present even part of the year, it is likely to be regulated by one or more agencies. Many wetland or stream projects will require three main permits or approvals (in addition to CEQA compliance). These are:

- 404 Permit (U.S. Army Corps of Engineers)
- 401 Certification (California Regional Water Quality Control Board)
- Streambed Alteration Agreement (California Department of Fish and Game)

For a more thorough explanation of wetland permitting, see the Ventura County's "Wetland Project Permitting Guide" at http://www.ventura.org/rma/planning/ceqa/bio_resource_review.html.

404 Permit (U.S. Army Corps of Engineers)

Most projects that involve streams or wetlands will require a 404 Permit from the U.S. Army Corps of Engineers (USACE). Section 404 of the federal Clean Water Act is the primary federal program regulating activities in wetlands. The Act regulates areas defined as "waters of the United States." This includes streams, wetlands in or next to streams, areas influenced by tides, navigable waters, lakes, reservoirs and other impoundments. For nontidal waters, USACE jurisdiction extends up to what is referred to as the "ordinary high water mark" as well as to the landward limits of adjacent Corps-defined wetlands, if present. The ordinary high water mark is an identifiable natural line visible on the bank of a stream or water body that shows the upper limit of typical stream flow or water level. The mark is made from the action of water on the streambank over the course of years.

Permit Triggers: A USACE 404 Permit is triggered by moving (discharging) or placing materials—such as dirt, rock, geotextiles, concrete or culverts—into or within USACE jurisdictional areas. This type of activity is also referred to as a "discharge of dredged or fill material."

401 Certification (Regional Water Quality Control Board)

If your project requires a USACE 404 Permit, then you will also need a Regional Water Quality Control Board (RWQCB) 401 Certification. The federal Clean Water Act, in Section 401, specifies that states must certify that any activity subject to a permit issued by a federal agency, such as the USACE, meets all state water quality standards. In California, the state and regional water boards are responsible for certification of activities subject to USACE Section 404 Permits.

Permit Trigger: A RWQCB 401 Certification is triggered whenever a USACE 404 Permit is required, or whenever an activity could cause a discharge of dredged or fill material into waters of the U.S. or wetlands.

Streambed Alteration Agreement (California Department of Fish and Game)

If your project includes alteration of the bed, banks or channel of a stream, or the adjacent riparian vegetation, then you may need a Streambed Alteration Agreement from the California Department of Fish and Game (CDFG). The California Fish and Game Code, Sections 1600-1616, regulates activities that would alter the flow, bed, banks, channel or associated riparian areas of a river, stream or lake. The law requires any person, state or local governmental agency or public utility to notify CDFG before beginning an activity that will substantially modify a river, stream or lake.

Permit Triggers: A Streambed Alteration Agreement (SAA) is triggered when a project involves altering a stream or disturbing riparian vegetation, including any of the following activities:

- Substantially obstructing or diverting the natural flow of a river, stream or lake
- Using any material from these areas
- Disposing of waste where it can move into these areas

Some projects that involve routine maintenance may qualify for long-term maintenance agreements from CDFG. Discuss this option with CDFG staff.

Ventura County General Plan

The Ventura County General Plan contains policies which also strongly protect wetland habitats.

Biological Resources Policy 1.5.2-3 states**:**

> Discretionary development that is proposed to be located within 300 feet of a marsh, small wash, intermittent lake, intermittent stream, spring, or perennial stream (as identified on the latest USGS 7½ minute quad map), shall be evaluated by a County approved biologist for potential impacts on wetland habitats. Discretionary development that would have a significant impact on significant wetland habitats shall be prohibited, unless mitigation measures are adopted that would reduce the impact to a less than significant level; or for lands designated "Urban" or "Existing Community", a statement of overriding considerations is adopted by the decision-making body.

Biological Resources Policy 1.5.2-4 states:

> Discretionary development shall be sited a minimum of 100 feet from significant wetland habitats to mitigate the potential impacts on said habitats. Buffer areas may be increased or decreased upon evaluation and recommendation by a qualified biologist and approval by the decision-making body. Factors to be used in determining adjustment of the 100 foot buffer include soil type, slope stability, drainage patterns, presence or absence of endangered, threatened or rare plants or animals, and compatibility of the proposed development with the wildlife use of the wetland habitat area. The requirement of a buffer (setback) shall not preclude the use of replacement as a mitigation when there is no other feasible alternative to allowing a permitted use, and if the replacement results in no net loss of wetland habitat. Such replacement shall be "in kind" (i.e. same type and acreage), and provide wetland habitat of comparable biological value. On-site replacement shall be preferred wherever possible. The replacement plan shall be developed in consultation with California Department of Fish and Game.

Coastal Habitat Regulations

Ventura County's Coastal Area Plan and the Coastal Zoning Ordinance, which constitute the "Local Coastal Program" (LCP) for the unincorporated portions of Ventura County's coastal zone, ensure that the County's land use plans, zoning ordinances, zoning maps, and implemented actions meet the requirements of, and implement the provisions and polices of California's 1976 Coastal Act at the local level.

Environmentally Sensitive Habitats

The Coastal Act specifically calls for protection of "environmentally sensitive habitat areas" or ESHA, which it defines as: "Any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Section 30107.5).

Section 30240 of the Coastal Act states:

(a) "Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas."

(b) "Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas."

There are three important elements to the definition of ESHA. First, a geographic area can be designated ESHA either because of the presence of individual species of plants or animals or because of the presence of a particular habitat. Second, in order for an area to be designated as ESHA, the species or habitat must be either rare or it must be especially valuable. Finally, the area must be easily disturbed or degraded by human activities.

Protection of ESHA is of particular concern in the southeastern part of Ventura County, where the coastal zone extends inland (~5 miles) to include an extensive area of the Santa Monica Mountains. For ESHA identification in this location, the Coastal Commission, the agency charged with administering the Coastal Act, has described the habitats that are considered ESHA. A memo from a Coastal Commission biologist that describes ESHA in the Santa Monica Mountains can be found at: http://www.ventura.org/rma/planning/ceqa/bio_resource_review.html.

The County's Local Coastal Program outlines other specific protections to environmentally sensitive habitats in the Coastal Zone, such as to wetlands, riparian habitats, dunes, and upland habitats within the Santa Monica Mountains (M Overlay Zone). Protections in some cases are different for different segments of the coastal zone.

Copies of the Coastal Area Plan and the Coastal Zoning Ordinance can be found at: http://www.ventura.org/rma/planning/Programs/local.html.

Wildlife Migration Regulations

The Ventura County General Plan specifically includes wildlife migration corridors as an element of the region's significant biological resources. In addition, protecting habitat connectivity is critical to the success of special status species and other biological resource protections. Potential project impacts to wildlife migration are analyzed by biologists on a case-by-case basis. The issue involves both a macro-scale analysis—where routes used by large carnivores connecting very large core habitat areas may be impacted—as well as a micro-scale analysis—where a road or stream crossing may impact localized movement by many different animals.

Locally Important Species/Communities Regulations

Locally important species/communities are considered to be significant biological resources in the Ventura County General Plan.

Locally Important Species

The Ventura County General Plan defines a Locally Important Species as a plant or animal species that is not an endangered, threatened, or rare species, but is considered by qualified biologists to be a quality example or unique species within the County and region. The following criteria further define what local qualified biologists have determined to be Locally Important Species:

Locally Important Animal Species Criteria

Taxa for which habitat in Ventura County is crucial for their existence either globally or in Ventura County. This includes:

- Taxa for which the population(s) in Ventura County represents 10 percent or more of the known extant global distribution; or
- Taxa for which there are five or fewer *element occurrences*, or less than 1,000 individuals, or less than 2,000 acres of habitat that sustains populations in Ventura County; or,
- Native taxa that are generally declining throughout their range or are in danger of extirpation in Ventura County.

Locally Important Plant Species Criteria

- Taxa that are declining throughout the extent of their range AND have five (5) or fewer element occurrences in Ventura County.

The County maintains a list of locally important species, which can be found on the Planning Division website at: http://www.ventura.org/rma/planning/ceqa/bio_resource_review.html. *This list should not be considered comprehensive.* Any species that meets the criteria qualifies as locally important, whether or not it is included on this list.

Locally Important Communities

The Ventura County Initial Study Assessment Guidelines defines a locally important community as one that is considered by qualified biologists to be a quality example characteristic of or unique to the County or region, with this determination being made on a case-by-case basis. The County has not developed a list of locally important communities. Oak woodlands have however been deemed by the Ventura County Board of Supervisors to be a locally important community.

The state passed legislation in 2001, the Oak Woodland Conservation Act, to emphasize that oak woodlands are a vital and threatened statewide resource. In response, the County of Ventura prepared and adopted an Oak Woodland Management Plan that recommended, among other things, amending the County's Initial Study Assessment Guidelines to include an explicit reference to oak woodlands as part of its definition of locally important communities. The Board of Supervisors approved this management plan and its recommendations.

Appendix Two

Observed Species Tables

Species Observed			
Scientific Name (Species or Genus)	Common Name	Native (X)	Notes (2)
PLANTS			
Artemisia californica	California sagebrush	X	
Baccharis pilularis	Coyote brush	X	
Elymus condensatus	Rye grass	X	
Datura wrightii	Jimson weed	X	
Encelia californica	California brittlebush	X	
Eriogonum cinereum	Ashyleaf buckwheat	X	
Isocoma menziesii	Menzies' golden bush	X	
Opuntia oricola	Prickly pear	X	
Rhus integrifolia	Lemonade berry	X	
Cupressus macrocarpa	Monterey cypress tree	X	
Toxicodendron diversilobum	Poison oak	X	
Atriplex lentiformis	Coastal saltbush	X	
Salsola spp.	Russian thistle		
Nicotiana glauca	Tree tobacco		
Ricinus communis	Castor bean		
Conium maculatum	Poison hemlock		
Foeniculum vulgare	Common mallow		
Pennisetum setaceum	Fountain grass		
Tetragonia tetragonioides	New Zealand spinach		
Carpobrotus edulis	Ice plant		
ANIMALS			
Reptiles			
Western fence lizard	Sceloporus occidentalis	X	
Birds			
Sayornis nigricans	Black phoebe	X	
Pelecanus occidentalis	Brown pelican	X	
Larus occidentalis	Western gull	X	
Buteo jamaicensis	Red tailed hawk	X	

Cathartes aura	Turkey vulture	X	
Corvus corax	Raven	X	
Marine Life			
Mytilus californianus	California mussel	X	
Balanus glandula	Common acorn barnacle	X	
Pollicipes polymerus	Gooseneck barnacle	X	
Egregia menziesii	Feather boa kelp	X	
Delphinus delphis	Common dolphin	X	
Phoca vitulina	Harbor Seal	X	

Attachments

1. CNDDB Species List for Ventura Quadrangle

2. CNDDB Species Occurrences Within Ventura Quadrangle

3. Monarch Overwintering Habitat within Ventura Quadrangle

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Ventura (3411933))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Agelaius tricolor tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S2	SSC
Anniella spp. California legless lizard	ARACC01070	None	None	G3G4	S3S4	SSC
Antrozous pallidus pallid bat	AMACC10010	None	None	G4	S3	SSC
Aphanisma blitoides aphanisma	PDCHE02010	None	None	G3G4	S2	1B.2
Astragalus didymocarpus var. milesianus Miles' milk-vetch	PDFAB0F2X3	None	None	G5T2	S2	1B.2
Astragalus pycnostachyus var. lanosissimus Ventura Marsh milk-vetch	PDFAB0F7B1	Endangered	Endangered	G2T1	S1	1B.1
Athene cunicularia burrowing owl	ABNSB10010	None	None	G4	S3	SSC
Atriplex coulteri Coulter's saltbush	PDCHE040E0	None	None	G3	S1S2	1B.2
Atriplex pacifica south coast saltscale	PDCHE041C0	None	None	G4	S2	1B.2
Bombus crotchii Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G2	S2	
California Walnut Woodland California Walnut Woodland	CTT71210CA	None	None	G2	S2.1	
Calochortus fimbriatus late-flowered mariposa-lily	PMLIL0D1J2	None	None	G3	S3	1B.3
Chaenactis glabriuscula var. orcuttiana Orcutt's pincushion	PDAST20095	None	None	G5T1T2	S1	1B.1
Chaetodipus californicus femoralis Dulzura pocket mouse	AMAFD05021	None	None	G5T3	S3	SSC
Charadrius nivosus nivosus western snowy plover	ABNNB03031	Threatened	None	G3T3	S3	SSC
Choeronycteris mexicana Mexican long-tongued bat	AMACB02010	None	None	G3G4	S1	SSC
Coelus globosus globose dune beetle	IICOL4A010	None	None	G1G2	S1S2	
Danaus plexippus plexippus pop. 1 monarch - California overwintering population	IILEPP2012	Candidate	None	G4T1T2Q	S2	
Emys marmorata western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
Eucyclogobius newberryi tidewater goby	AFCQN04010	Endangered	None	G3	S3	

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Eumops perotis californicus western mastiff bat	AMACD02011	None	None	G4G5T4	S3S4	SSC
Lasthenia glabrata ssp. coulteri Coulter's goldfields	PDAST5L0A1	None	None	G4T2	S2	1B.1
Monardella hypoleuca ssp. hypoleuca white-veined monardella	PDLAM180A5	None	None	G4T3	S3	1B.3
Navarretia ojaiensis Ojai navarretia	PDPLM0C130	None	None	G2	S2	1B.1
Oncorhynchus mykiss irideus pop. 10 steelhead - southern California DPS	AFCHA0209J	Endangered	Candidate Endangered	G5T1Q	S1	
Polioptila californica californica coastal California gnatcatcher	ABPBJ08081	Threatened	None	G4G5T3Q	S2	SSC
Rana boylii pop. 6 foothill yellow-legged frog - south coast DPS	AAABH01056	Proposed Endangered	Endangered	G3T1	S1	
Rana draytonii California red-legged frog	AAABH01022	Threatened	None	G2G3	S2S3	SSC
Setophaga petechia yellow warbler	ABPBX03010	None	None	G5	S3S4	SSC
Southern California Coastal Lagoon Southern California Coastal Lagoon	CALE1220CA	None	None	GNR	SNR	
Southern California Steelhead Stream Southern California Steelhead Stream	CARE2310CA	None	None	GNR	SNR	
Southern Coast Live Oak Riparian Forest Southern Coast Live Oak Riparian Forest	CTT61310CA	None	None	G4	S4	
Southern Sycamore Alder Riparian Woodland Southern Sycamore Alder Riparian Woodland	CTT62400CA	None	None	G4	S4	
Taxidea taxus American badger	AMAJF04010	None	None	G5	S3	SSC
Thamnophis hammondii two-striped gartersnake	ARADB36160	None	None	G4	S3S4	SSC
Vireo bellii pusillus least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S3	

Record Count: 36

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Quad IS (Ventura (3411933))

Map Index Number:	A7336	**EO Index:**	109104
Key Quad:	Ventura (3411933)	**Element Code:**	AAABH01022
Occurrence Number:	1504	**Occurrence Last Updated:**	2019-12-16

Scientific Name: *Rana draytonii* **Common Name:** California red-legged frog

Listing Status: **Federal:** Threatened

State: None

Rare Plant Rank:

Other Lists: CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G2G3

State: S2S3

General Habitat:

LOWLANDS AND FOOTHILLS IN OR NEAR PERMANENT SOURCES OF DEEP WATER WITH DENSE, SHRUBBY OR EMERGENT RIPARIAN VEGETATION.

Micro Habitat:

REQUIRES 11-20 WEEKS OF PERMANENT WATER FOR LARVAL DEVELOPMENT. MUST HAVE ACCESS TO ESTIVATION HABITAT.

Last Date Observed:	2017-09-12	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2017-09-12	**Occurrence Rank:**	Good
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

VENTURA RIVER, FROM ABOUT 0.1 MI W TO1.5 MI N OF HWY 33 AT CASITAS VISTA RD, CASITAS SPRINGS.

Detailed Location:

MAPPED ACCORDING TO THE PROVIDED COORDINATES.

Ecological:

MAIN AND SIDE CHANNELS OF VENTURA RIVER, INCLUDING POOLS AND UNDERCUT BANKS WITH ARROYO WILLOW, ARUNDO AND MULEFAT. SURROUNDING LAND USES INCLUDED PARKLAND, AGRICULTURE AND RESIDENTIAL.

Threats:

BANK STABILIZATION, INVASIVE PREDATORS (2010). DISTURBANCE FROM TEMPORARY DIVERSION AND EXCAVATION ACTIVITIES (2017).

General:

1 OBSERVED 25 MAY 1940. MATING PAIR, 1 EGG MASS, & 5 ADULTS OBS FEB-JUL 2010. 1 DEAD ADULT OBS 27 NOV 2011. 3 JUVENILES OBS, AUG 2012. 1 EGG MASS OBS 28 MAR, 1 TADPOLE 13 JUN 2013. 3 JUVS CAUGHT & RELOCATED DURING CONSTRUCTION, 12 SEP 2017.

PLSS:	T03N, R23W, Sec. 5, SE (S)	**Accuracy:**	specific area	**Area (acres):**	49
UTM:	Zone-11 N3804957 E287479	**Latitude/Longitude:**	34.36418 / -119.31099	**Elevation (feet):**	258

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

ALL10D0001	ALLEN, M. (THOMAS R. PAYNE & ASSOCIATES) - EXCEL TABLE WITH 2010 FROG AND TURTLE OBSERVATIONS IN THE VENTURA/MATILIJA BASIN 2010-11-01
BAC12D0001	BACKLIN, A. (U.S. GEOLOGICAL SURVEY-WESTERN ECOLOGICAL RESEARCH CENTER) - MULTIPLE SPECIES EXCEL DATABASE FOR USGS SURVEYS IN SOUTHERN CALIFORNIA, 2001-2012 2012-XX-XX
BAU11R0001	BAUMBERGER, K. ET AL. (U.S. GEOLOGICAL SURVEY-WESTERN ECOLOGICAL RESEARCH CENTER) - 2010 ANNUAL PERMIT REPORT FOR U.S. GEOLOGICAL SURVEY RECOVERY PERMIT TE-045994-11 2011-XX-XX
CAN10D0001	CANFIELD, M. (U.S. GEOLOGICAL SURVEY-WESTERN ECOLOGICAL RESEARCH CENTER) - EXCEL FILE WITH ANIMAL DATA FOR VENTURA AND SANTA BARBARA COUNTIES, SPRING 2010 2010-06-03
FIS11D0001	FISHER, R. & S. SCHUSTER (U.S. GEOLOGICAL SURVEY-WESTERN ECOLOGICAL RESEARCH CENTER) - TABULAR SPECIAL STATUS SPECIES DETECTIONS BY R. FISHER'S LABORATORY FROM MAR 2010 - OCT 2011 2011-10-26
GIL10F0001	GILLILAND, K. (PADRE ASSOCIATES, INC.) - FIELD SURVEY FORM FOR RANA DRAYTONII 2010-03-16
GIL11U0001	GILLILAND, K. - SCIENTIFIC COLLECTING REPORT OF SPECIMENS CAPTURED OR SALVAGED [SC-009081] 2011-04-19
ING10F0001	INGAMELLS, M. (PADRE ASSOCIATES, INC.) - FIELD SURVEY FORM FOR RANA DRAYTONII 2010-02-18
ING12F0001	INGAMELLS, M. (PADRE ASSOCIATES, INC.) - FIELD SURVEY FORM FOR RANA DRAYTONII 2012-08-02
ING12F0002	INGAMELLS, M. (PADRE ASSOCIATES, INC.) - FIELD SURVEY FORM FOR RANA DRAYTONII 2012-08-16
ING12F0003	INGAMELLS, M. (PADRE ASSOCIATES, INC.) - FIELD SURVEY FORM FOR RANA DRAYTONII 2012-08-31
JAC17F0003	JACINTO, M. - FIELD SURVEY FORM FOR RANA DRAYTONII 2017-09-12
LEW11F0002	LEWIS, S. (CASITAS MUNICIPAL WATER DISTRICT) - FIELD SURVEY FORM FOR RANA DRAYTONII 2011-01-27
LIM13D0003	LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX
USFNDD0002	U.S. FOREST SERVICE-REGION 5 - NATURAL RESOURCE INFORMATION SYSTEM (NRIS) ANIMAL RECORDS FROM CALIFORNIA NATIONAL FORESTS XXXX-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A9790
Key Quad: Ventura (3411933)
Occurrence Number: 60
EO Index: 111645
Element Code: AAABH01056
Occurrence Last Updated: 2018-06-27

Scientific Name: *Rana boylii pop. 6*
Common Name: foothill yellow-legged frog - south coast DPS

Listing Status: **Federal:** Proposed Endangered
State: Endangered
CNDDB Element Ranks: **Global:** G3T1
State: S1
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
USFS_S-Sensitive

General Habitat:

SOUTHERN COAST RANGES FROM MONTEREY BAY SOUTH THROUGH SAN GABRIEL MOUNTAINS; WEST OF THE SALINAS RIVER IN MONTEREY CO, SOUTH THROUGH TRANSVERSE RANGES, AND EAST THROUGH SAN GABRIEL MOUNTAINS. HISTORICALLY MAY HAVE RANGED TO BAJA CALIFORNIA.

Micro Habitat:

PARTLY SHADED SHALLOW STREAMS AND RIFFLES WITH A ROCKY SUBSTRATE IN A VARIETY OF HABITATS. NEEDS AT LEAST SOME COBBLE-SIZED SUBSTRATE FOR EGG-LAYING AND AT LEAST 15 WEEKS TO ATTAIN METAMORPHOSIS.

Last Date Observed: 1940-07-23
Last Survey Date: 2014-XX-XX
Owner/Manager: UNKNOWN
Presence: Extirpated
Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Decreasing

Location:

VICINITY OF CANADA DE ALISO AT CANADA LARGA, ABOUT 6.4 MILES N AND E OF VENTURA.

Detailed Location:

DRAINAGE NOT STATED; ONLY STATED AS 6.4 MI NE OF VENTURA. INTERPRETED THIS AS N THEN E. MAPPED NON-SPECIFICALLY 6.4 MI N THEN E AT CANADA LARGA AND CANADA DE ALISO. ALTERNATIVELY, MAY HAVE BEEN FROM UPPER LEON, HALL, OR SEXTON CANYONS.

Ecological:

EXPERT OPINION IS THAT THEY WERE EXTIRPATED FROM HERE AROUND 1975-1978.

Threats:

EXTREME FLOODING & SCOURING EVENTS IN 1968-69; DISEASE.

General:

ONE WAS COLLECTED HERE ON 23 JUL 1940. NOT FOUND BY INDEPENDENT RESEARCH CREWS IN SOUTHERN CALIFORNIA IN 1981-1993, 1988-1991, OR 2011-2014.

PLSS: T03N, R23W, Sec. 11 (S)
Accuracy: 1 mile
Area (acres): 1,987
UTM: Zone-11 N3803048 E292234
Latitude/Longitude: 34.34795 / -119.25885
Elevation (feet): 361

County Summary:	Quad Summary:
Ventura	Saticoy (3411932), Ventura (3411933)

Sources:

ADA17A0002	ADAMS, A. ET AL. - RAPID EXTIRPATION OF A N AM FROG COINCIDES WITH AN INCREASE IN FUNGAL PATHOGEN PREVALENCE: HISTORICAL ANALYSIS AND IMPLICATIONS FOR REINTRODUCTION. ECOLOGY & EVOLUTION 2017:1-17 2017-XX-XX
JEN94R0001	JENNINGS, M. & M. HAYES - AMPHIBIAN AND REPTILE SPECIES OF SPECIAL CONCERN IN CALIFORNIA. FINAL REPORT SUBMITTED TO DFG, INLAND FISHERIES DIVISION, RANCHO CORDOVA. 255 PP. 1994-11-01
MIL40S0049	MILLER, R. & R. MILLER - UMMZ #89800 COLLECTED 6.4 MI NE OF VENTURA 1940-07-23
SWE83U0001	SWEET, S. (UNIVERSITY OF CALIFORNIA, SANTA BARBARA) - MECHANICS OF A NATURAL EXTINCTION EVENT: RANA BOYLII IN SOUTHERN CALIFORNIA (ABSTRACT). PROGRAM OF THE 26TH SSAR AND 31ST HL ANNUAL MEETING, UNIVERSITY OF UTAH, AUG 1983. 1983-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15571
EO Index: 25758
Key Quad: Ventura (3411933)
Element Code: ABNNB03031
Occurrence Number: 42
Occurrence Last Updated: 2005-06-02

Scientific Name: *Charadrius nivosus nivosus*
Common Name: western snowy plover

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern
NABCI_RWL-Red Watch List

CNDDB Element Ranks: **Global:** G3T3
State: S3

General Habitat:

SANDY BEACHES, SALT POND LEVEES AND SHORES OF LARGE ALKALI LAKES.

Micro Habitat:

NEEDS SANDY, GRAVELLY OR FRIABLE SOILS FOR NESTING.

Last Date Observed: 1948-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1978-XX-XX
Occurrence Rank: None
Owner/Manager: DPR-SAN BUENAVENTURA SB
Trend: Unknown
Presence: Possibly Extirpated

Location:

VENTURA BEACH.

Detailed Location:

MAPPED ALONG THE BEACH AREA AT VENTURA.

Ecological:

Threats:

SOME HABITAT SEVERELY DISTURBED BY HUMAN ACTIVITIES.

General:

6 MUSEUM EGG SETS COLLECTED BETWEEN 1915 AND 1948. ALTHOUGH SOME SUITABLE HABITAT STILL REMAINS, NO SNOWY PLOVERS WERE OBSERVED IN 1978.

PLSS: T02N, R23W, Sec. 10 (S)
Accuracy: non-specific area
Area (acres): 87
UTM: Zone-11 N3794279 E290146
Latitude/Longitude: 34.26851 / -119.27939
Elevation (feet): 8

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

PAG81R0001 PAGE, G. & L. STENZEL - THE BREEDING STATUS OF THE SNOWY PLOVER IN CALIFORNIA. WESTERN BIRDS, VOL. 12, NO. 1, PAGES 1-40. 1981-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A6290
Key Quad: Ventura (3411933)
Occurrence Number: 2009

EO Index: 108045
Element Code: ABNSB10010
Occurrence Last Updated: 2017-10-16

Scientific Name: *Athene cunicularia*
Common Name: burrowing owl

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFWS_BCC-Birds of Conservation Concern

General Habitat:

OPEN, DRY ANNUAL OR PERENNIAL GRASSLANDS, DESERTS, AND SCRUBLANDS CHARACTERIZED BY LOW-GROWING VEGETATION.

Micro Habitat:

SUBTERRANEAN NESTER, DEPENDENT UPON BURROWING MAMMALS, MOST NOTABLY, THE CALIFORNIA GROUND SQUIRREL.

Last Date Observed: 2017-02-10
Last Survey Date: 2017-02-10
Owner/Manager: VEN COUNTY
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location:

EAST SIDE OF THE VENTURA RIVER, ABOUT 0.2 MILES NNW OF HWY 33 AT MAIN STREET IN VENTURA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

BURROW IN RIPRAP AT SIDE OF SERVICE ROAD ADJACENT TO INDUSTRIAL AREA. AREA WEST OF SERVICE ROAD SUPPORTED GRASSLAND, ARUNDO, WILLOW AND MULEFAT.

Threats:

DISTURBANCE FROM NEARBY HOMELESS ENCAMPMENTS, COYOTES, AND FERAL CATS.

General:

OWL OBSERVED NEAR BURROW WITH WHITEWASHED ROCK ON MULTIPLE VISITS JAN-FEB 2017.

PLSS: T02N, R23W, Sec. 5, NE (S)
Accuracy: 80 meters
Area (acres): 5

UTM: Zone-11 N3796034 E287692
Latitude/Longitude: 34.28382 / -119.30648
Elevation (feet): 22

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

WOO17F0001 WOOLWINE, M. - FIELD SURVEY FORM FOR ATHENE CUNICULARIA 2017-02-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 66643
EO Index: 119145
Key Quad: Ventura (3411933)
Element Code: ABPBJ08081
Occurrence Number: 990
Occurrence Last Updated: 2020-08-28

Scientific Name: *Polioptila californica californica*
Common Name: coastal California gnatcatcher

Listing Status: **Federal:** Threatened
State: None
Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern
NABCI_YWL-Yellow Watch List

CNDDB Element Ranks: **Global:** G4G5T3Q
State: S2

General Habitat:

OBLIGATE, PERMANENT RESIDENT OF COASTAL SAGE SCRUB BELOW 2500 FT IN SOUTHERN CALIFORNIA.

Micro Habitat:

LOW, COASTAL SAGE SCRUB IN ARID WASHES, ON MESAS AND SLOPES. NOT ALL AREAS CLASSIFIED AS COASTAL SAGE SCRUB ARE OCCUPIED.

Last Date Observed: 1906-05-14
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1906-05-14
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:

VICINITY OF THE CITY OF VENTURA

Detailed Location:

GIVEN LOCATION WAS VENTURA; EXACT LOCATION UNKNOWN.

Ecological:

Threats:

General:

2 BIRDS COLLECTED ON 14 MAY 1906. EXPERT OPINION THAT THE SPECIES IS EXTINCT FROM THE AREA (COO17A0001).

PLSS: T02N, R23W, Sec. 03 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3795343 E290267
Latitude/Longitude: 34.27812 / -119.27834
Elevation (feet): 120

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

COO17A0001 COOPER, D. ET AL. - STATUS OF THE CALIFORNIA GNATCATCHER AT THE NORTHERN EDGE OF ITS RANGE. WESTERN BIRDS 48:124–140 2017-XX-XX

HOR06S0001 HORNUNG, J - MVZ #6901 & 6902 COLLECTED FROM VENTURA 1906-05-14

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15532
EO Index: 24962
Key Quad: Ventura (3411933)
Element Code: ABPBW01114
Occurrence Number: 128
Occurrence Last Updated: 2014-03-25

Scientific Name: *Vireo bellii pusillus*
Common Name: least Bell's vireo

Listing Status: **Federal:** Endangered
State: Endangered
Rare Plant Rank:
Other Lists: NABCI_YWL-Yellow Watch List

CNDDB Element Ranks: **Global:** G5T2
State: S3

General Habitat:

SUMMER RESIDENT OF SOUTHERN CALIFORNIA IN LOW RIPARIAN IN VICINITY OF WATER OR IN DRY RIVER BOTTOMS; BELOW 2000 FT.

Micro Habitat:

NESTS PLACED ALONG MARGINS OF BUSHES OR ON TWIGS PROJECTING INTO PATHWAYS, USUALLY WILLOW, BACCHARIS, MESQUITE.

Last Date Observed: 1919-05-08
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2010-05-03
Occurrence Rank: Excellent
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

FOSTER MEMORIAL PARK, ALONG VENTURA RIVER, JUST SOUTH OF CASITAS SPRINGS, 2.5 MILES NNW OF ORTONVILLE.

Detailed Location:

MAPPED TO PROVIDED COORDINATES AND LOCATION DESCRIPTIONS OF "FOSTER PARK, CASITAS SPRINGS" AND "FOSTER MEMORIAL PARK." MAPPED GENERALLY TO ENCOMPASS FOSTER PARK BOUNDARY.

Ecological:

WILLOW-MULEFAT RIPARIAN. 1919 NEST CONSTRUCTED ON "FORK OF DEAD WILLOW TWIG, TWO FEET ABOVE GROUND."

Threats:

General:

4 EGGS COLLECTED ON 8 MAY 1919 BY M. CANFIELD (WFVZ #65008); FEMALE OBSERVED INCUBATING. 1 ADULT HEARD SINGING BRIEFLY ON 3 MAY 2010 AND CONSIDERED A POSSIBLE TRANSIENT BY THE OBSERVER.

PLSS: T03N, R23W, Sec. 08 (S)
Accuracy: 3/5 mile
Area (acres): 0
UTM: Zone-11 N3803855 E287222
Latitude/Longitude: 34.35420 / -119.31350
Elevation (feet): 200

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

CAN19S0001 CANFIELD, M. (WESTERN FOUNDATION OF VERTEBRATE ZOOLOGY) - WFVZ EGG COLLECTION #65008 1919-05-08

RYA10F0022 RYAN, T. - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2010-05-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	75710	**EO Index:**	76745
Key Quad:	Ventura (3411933)	**Element Code:**	ABPBW01114
Occurrence Number:	314	**Occurrence Last Updated:**	2014-05-01

Scientific Name: *Vireo bellii pusillus* **Common Name:** least Bell's vireo

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: Endangered **Other Lists:** NABCI_YWL-Yellow Watch List

CNDDB Element Ranks: **Global:** G5T2

State: S3

General Habitat:

SUMMER RESIDENT OF SOUTHERN CALIFORNIA IN LOW RIPARIAN IN VICINITY OF WATER OR IN DRY RIVER BOTTOMS; BELOW 2000 FT.

Micro Habitat:

NESTS PLACED ALONG MARGINS OF BUSHES OR ON TWIGS PROJECTING INTO PATHWAYS, USUALLY WILLOW, BACCHARIS, MESQUITE.

Last Date Observed:	2013-06-25	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-06-25	**Occurrence Rank:**	Good
Owner/Manager:	VEN COUNTY	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

LOWER VENTURA RIVER, JUST NORTH & SOUTH OF THE MAIN STREET BRIDGE, ABOUT 0.5 MILE N OF RIVER MOUTH, VENTURA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES. LOCATION DESCRIBED AS BEING "UPSTREAM AND DOWNSTRAM OF MAIN ST BRIDGE." NEST NEAR "SAN BUENAVENTURA" IN 1872. ACTIVE COWBIRD TRAPPING IN 2013 ATTRIBUTED WITH NESTING SUCCESS, TRAPPING PROPOSED FOR 2014.

Ecological:

RIPARIAN HABITAT WITH OLDER WILLOWS IN OVERSTORY AND THICKER UNDERSTORY OF YOUNG WILLOWS INTERMIXED WITH OTHER NATIVE SPECIES INCLUDING POISON OAK, MULEFAT, AND NON-NATIVES SUCH AS ARUNDO, POISON HEMLOCK, CASTOR BEAN, AND MUSTARD.

Threats:

BROWN-HEADED COWBIRDS, HOMELESS ACTIVITY, TRASH THROUGHOUT CORRIDOR, AND NON-NATIVE INVASIVE PLANTS (ARUNDO SSP.).

General:

2 ADULTS HEARD SINGING ON 18 MAY 2009; PRESUMED BREEDING. 2 ADULTS HEARD SINGING ON 1 JUN 2011; PRESUMED BREEDING. 1 PAIR AND 2 FLEDGLINGS OBSERVED BETWEEN 18 MAY-25 JUN 2013; NEST INITIALLY HAD 3 DAMAGED EGGS & 1 COWBIRD CHICK (REMOVED).

PLSS:	T02N, R23W, Sec. 05 (S)	**Accuracy:**	non-specific area	**Area (acres):**	34
UTM:	Zone-11 N3795821 E287521	**Latitude/Longitude:**	34.28187 / -119.30826	**Elevation (feet):**	20

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

BEL90B0001	BELDING, L. (CALIFORNIA ACADEMY OF SCIENCES) - LAND BIRDS OF THE PACIFIC DISTRICT. OCCASIONAL PAPERS OF THE CALIFORNIA ACADEMY OF SCIENCES VOL II, 1890. 274 PP. 1890-09-XX
BEN09F0003	BENSON, T. (PADRE ASSOCIATES, INC.) - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2009-05-18
GRI13F0005	GRIFFITH WILDLIFE BIOLOGY - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2013-06-25
HUB11F0001	HUBER, A. - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2011-06-01
PAD09F0008	PADRE ASSOCIATES, INC. - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2009-05-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	91932	**EO Index:**	93005
Key Quad:	Ventura (3411933)	**Element Code:**	ABPBW01114
Occurrence Number:	546	**Occurrence Last Updated:**	2014-03-25

Scientific Name: *Vireo bellii pusillus* **Common Name:** least Bell's vireo

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: Endangered **Other Lists:** NABCI_YWL-Yellow Watch List

CNDDB Element Ranks: **Global:** G5T2

State: S3

General Habitat:

SUMMER RESIDENT OF SOUTHERN CALIFORNIA IN LOW RIPARIAN IN VICINITY OF WATER OR IN DRY RIVER BOTTOMS; BELOW 2000 FT.

Micro Habitat:

NESTS PLACED ALONG MARGINS OF BUSHES OR ON TWIGS PROJECTING INTO PATHWAYS, USUALLY WILLOW, BACCHARIS, MESQUITE.

Last Date Observed:	2010-08-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2010-08-10	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

VENTURA RIVER, ABOUT 0.5 MILE W OF VENTURA AVE & SENECA ST INTERSECTION, 2.2 MILES N FROM RIVER MOUTH, NW OF VENTURA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES. 2009 & 2010 COORDINATES WERE IDENTICAL AND WERE CONSIDERED GENERAL DETECTION LOCATIONS RATHER THAN SPECIFIC POINTS.

Ecological:

OVERSTORY OF LARGER ARROYO WILLOW AND RED WILLOW INTERMIXED WITH YOUNGER WILLOWS, COTTONWOOD, AND VARIOUS NATIVE AND NON-NATIVE UNDERSTORY PLANTS INCLUDING ARUNDO, POISON OAK, AND MUGWORT.

Threats:

NON-NATIVE INVASIVE PLANTS, PRIMARILY ARUNDO SPP.

General:

4 TERRITORIES DETECTED BTWN 24 APR-8 AUG 2009; AT LEAST 5 ADULTS HEARD DURING SURVEYS. 4-5 TERRITORIES DETECTED ON 18 JUN, 1 ADULT & 3 JUVENILED HEARD 10 AUG 2010; AT LEAST 5 ADULTS HEARD DURING SURVEYS. BREEDING WAS LIKELY, NO NESTS FOUND.

PLSS:	T03N, R23W, Sec. 28, W (S)	**Accuracy:**	non-specific area	**Area (acres):**	100
UTM:	Zone-11 N3798490 E288199	**Latitude/Longitude:**	34.30606 / -119.30156	**Elevation (feet):**	70

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

SUL09F0001	SULZMAN, C. (WILDSCAPE RESTORATION, INC.) - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2009-04-24
SUL09F0002	SULZMAN, C. (WILDSCAPE RESTORATION, INC.) - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2009-05-18
SUL10F0001	SULZMAN, C. (WILDSCAPE RESTORATION, INC.) - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2010-06-18
SUL10F0002	SULZMAN, C. (WILDSCAPE RESTORATION, INC.) - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2010-06-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	91933	**EO Index:**	93006
Key Quad:	Ventura (3411933)	**Element Code:**	ABPBW01114
Occurrence Number:	547	**Occurrence Last Updated:**	2014-03-25

Scientific Name: *Vireo bellii pusillus* **Common Name:** least Bell's vireo

Listing Status: **Federal:** Endangered **Rare Plant Rank:**

State: Endangered **Other Lists:** NABCI_YWL-Yellow Watch List

CNDDB Element Ranks: **Global:** G5T2

State: S3

General Habitat:

SUMMER RESIDENT OF SOUTHERN CALIFORNIA IN LOW RIPARIAN IN VICINITY OF WATER OR IN DRY RIVER BOTTOMS; BELOW 2000 FT.

Micro Habitat:

NESTS PLACED ALONG MARGINS OF BUSHES OR ON TWIGS PROJECTING INTO PATHWAYS, USUALLY WILLOW, BACCHARIS, MESQUITE.

Last Date Observed:	2011-06-15	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2011-06-15	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

LOWER VENTURA RIVER, JUST WEST OF WESTERN END OF RAMONA ST, ABOUT 0.6 MILE N OF MAIN ST BRIDGE, NW OF VENTURA.

Detailed Location:

MAPPED TO PROVIDED COORDINATES AND MAP. PROVIDED LOCATION DESCRIPTION WAS "LOWER VENTURA RIVER NORTH OF MAIN STREET BRIDGE."

Ecological:

RIPARIAN HABITAT WITH OLDER WILLOWS IN OVERSTORY AND THICKER UNDERSTORY OF YOUNG WILLOWS INTERMIXED WITH OTHER NATIVE SPECIES INCLUDING POISON OAK, MULEFAT, AND NON-NATIVES SUCH AS ARUNDO, POISON HEMLOCK, CASTOR BEAN, AND MUSTARD.

Threats:

NON-NATIVE INVASIVE PLANTS (ARUNDO SPP.) AND HOMELESS POPULATION.

General:

1 ADULT HEARD SINGING ON 15 JUN 2011; PRESUMED BREEDING.

PLSS:	T03N, R23W, Sec. 32, SE (S)	**Accuracy:**	80 meters	**Area (acres):**	0
UTM:	Zone-11 N3796814 E287576	**Latitude/Longitude:**	34.29082 / -119.30791	**Elevation (feet):**	30

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

HUB11F0002 HUBER, A. - FIELD SURVEY FORM FOR VIREO BELLII PUSILLUS 2011-06-15

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A4300
Key Quad: Ventura (3411933)
Occurrence Number: 113

EO Index: 105982
Element Code: ABPBX03010
Occurrence Last Updated: 2017-04-19

Scientific Name: *Setophaga petechia*
Common Name: yellow warbler

Listing Status: **Federal:** None
State: None

Rare Plant Rank:

Other Lists: CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3S4

General Habitat:

RIPARIAN PLANT ASSOCIATIONS IN CLOSE PROXIMITY TO WATER. ALSO NESTS IN MONTANE SHRUBBERY IN OPEN CONIFER FORESTS IN CASCADES AND SIERRA NEVADA.

Micro Habitat:

FREQUENTLY FOUND NESTING AND FORAGING IN WILLOW SHRUBS AND THICKETS, AND IN OTHER RIPARIAN PLANTS INCLUDING COTTONWOODS, SYCAMORES, ASH, AND ALDERS.

Last Date Observed: 2016-04-18
Last Survey Date: 2016-04-18
Owner/Manager: PVT
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Excellent
Trend: Unknown

Location:

VENTURA RIVER, 0.2 MI SSE OF HWY 33 AT CASITAS VISTA RD & 0.9 MI NW OF N VENTURA AVE AT CANADA LARGA RD, NW OF VENTURA.

Detailed Location:

MAPPED TO INCLUDE PROVIDED COORDINATES. ON FOSTER PARK PRESERVE, MANAGED BY THE VENTURA HILLSIDES CONSERVANCY.

Ecological:

ARROYO WILLOW-SYCAMORE-BLACK COTTONWOOD RIPARIAN WOODLAND, BORDERED BY CLOSED-CANOPY COAST LIVE OAK WOODLAND ON NE-FACING SLOPE TO WEST OF RIVER. HABITAT RESTORATION INCLUDING ARUNDO/WEED CONTROL & REVEGETATION BEGUN IN 2016.

Threats:

WATER EXTRACTION, FERAL CATS.

General:

1 ADULT MALE HEARD & SEEN SINGING ON TERRITORY ON 18 APR 2016. SEVERAL ADULTS SEEN THROUGHOUT BREEDING SEASON, AN ADDITIONAL BIRD OBSERVED IN OCT WAS LIKELY A TRANSIENT.

PLSS: T03N, R23W, Sec. 8, SE (S)
Accuracy: 80 meters
Area (acres): 5

UTM: Zone-11 N3803462 E287981
Latitude/Longitude: 34.35081 / -119.30517
Elevation (feet): 223

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

HUN16F0012 HUNT, L. - FIELD SURVEY FORM FOR SETOPHAGA PETECHIA 2016-10-01

HUN16F0022 HUNT, L. - FIELD SURVEY FORM FOR SETOPHAGA PETECHIA 2016-04-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	23967	**EO Index:**	7167
Key Quad:	Ventura (3411933)	**Element Code:**	ABPBXB0020
Occurrence Number:	238	**Occurrence Last Updated:**	2016-04-04

Scientific Name: *Agelaius tricolor*

Common Name: tricolored blackbird

Listing Status:
- **Federal:** None
- **State:** Threatened

CNDDB Element Ranks:
- **Global:** G1G2
- **State:** S2

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_EN-Endangered
NABCI_RWL-Red Watch List
USFWS_BCC-Birds of Conservation Concern

General Habitat:

HIGHLY COLONIAL SPECIES, MOST NUMEROUS IN CENTRAL VALLEY AND VICINITY. LARGELY ENDEMIC TO CALIFORNIA.

Micro Habitat:

REQUIRES OPEN WATER, PROTECTED NESTING SUBSTRATE, AND FORAGING AREA WITH INSECT PREY WITHIN A FEW KM OF THE COLONY.

Last Date Observed:	1993-05-12	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1993-05-12	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG VENTURA RIVER, ABOUT 0.5 MI SW OF HWY 33 & STANLEY AVE INTERSECTION, 1.1 MI N OF HWY 101 & HWY 33 INTXN, VENTURA.

Detailed Location:

LOCATION DESCRIBED AS "VENTURA RIVER, ABOUT 1 MILE UPSTREAM FROM 101 NORTH." COLONY DATA STORED IN UC DAVIS TRICOLORED BLACKBIRD PORTAL; SITE NAME "VENTURA RIVER."

Ecological:

HABITAT CONSISTED OF A TYPHUS/SCIRPUS FRESHWATER MARSH, LOCATED ADJACENT TO A COASTAL SAGE SCRUB HILLSIDE. PONDED WATER WITH VEGETATION ON SIDES. PONDS FORMED BY ABANDONED SAND & GRAVEL OPERATION. FILLED WITH WATER IN MAR 1991.

Threats:

General:

ABOUT 40 BIRDS OBSERVED NESTING ON 3 & 12 MAY 1993. ABOUT 50+ NESTING RED-WINGED BLACKBIRDS ALSO OBSERVED. TRICOLORS USING WETTER AREA AT ONE END OF POND AWAY FROM RED-WINGS.

PLSS:	T03N, R23W, Sec. 32, E (S)	**Accuracy:**	2/5 mile	**Area (acres):**	0
UTM:	Zone-11 N3797254 E287652	**Latitude/Longitude:**	34.29480 / -119.30720	**Elevation (feet):**	40

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

BOU93F0001	BOUCKE, M. - FIELD SURVEY FORM FOR AGELAIUS TRICOLOR (NESTING COLONY) 1993-05-12
BOU93F0003	BOUCKE, M. ET AL. - FIELD SURVEY FORM FOR AGELAIUS TRICOLOR 1993-05-12
TRI14D0001	TRICOLORED BLACKBIRD PORTAL - ICE (UNIVERSITY OF CALIFORNIA, DAVIS) - 1907-2014 TRICOLORED BLACKBIRD RECORDS FROM UC DAVIS TRICOLORED BLACKBIRD PORTAL, INFORMATION CENTER FOR THE ENVIRONMENT (ICE) 2014-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	30038	**EO Index:**	29737
Key Quad:	Matilija (3411943)	**Element Code:**	AFCHA0209J
Occurrence Number:	3	**Occurrence Last Updated:**	1999-09-29

Scientific Name: *Oncorhynchus mykiss irideus pop. 10*

Common Name: steelhead - southern California DPS

Listing Status: **Federal:** Endangered

State: Candidate Endangered

Rare Plant Rank:

Other Lists: AFS_EN-Endangered

CNDDB Element Ranks: **Global:** G5T1Q

State: S1

General Habitat:

FEDERAL LISTING REFERS TO POPULATIONS FROM SANTA MARIA RIVER SOUTH TO SOUTHERN EXTENT OF RANGE (SAN MATEO CREEK IN SAN DIEGO COUNTY).

Micro Habitat:

SOUTHERN STEELHEAD LIKELY HAVE GREATER PHYSIOLOGICAL TOLERANCES TO WARMER WATER AND MORE VARIABLE CONDITIONS.

Last Date Observed:	1993-01-04	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1993-01-04	**Occurrence Rank:**	Unknown
Owner/Manager:	PVT, USFS-LOS PADRES NF	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

VENTURA RIVER & TRIBUTARIES, UPSTREAM OF VENTURA.

Detailed Location:

FROM MOUTH AT OCEAN TO BASE OF LAKE CASITAS (COYOTE CREEK) & LAKE MATILIJA (MATILIJA CREEK), INCLUDING NORTH FORK MATILIJA CREEK, SAN ANTONIO CREEK & TRIBUTARIES LION, THACHER & REEVES CREEKS.

Ecological:

MATILIJA CREEK WAS THE MAJOR HISTORIC SPAWING AREA UNTIL MATILIJA DAM WAS BUILT. A PROVISION IN THE DAM WAS SAID TO HAVE BEEN INCLUDED TO CAPTURE STEELHEAD BELOW MATILIJA DAM AND MOVE THEM UPSTREAM TO SPAWN (NOTHING DONE AS OF 5/90).

Threats:

WATER DIVERSION, POLLUTION, DAMS (LARGE RUNS UNTIL LATE 1940'S, DECIMATED BY DAM & DROUGHT).

General:

1976 BIOASSAY SUGGESTED WATER QUALITY NEG IMPACTED BY EFFLUENT FROM OAK VIEW TREATMENT PLANT. N FK MATILIJA, COYOTE & ANTONIO CREEKS STOCKED WITH RESCUED STEELHEAD. NO FORMAL RECORD OF HISTORICAL RUN IN SAN ANTONIO CR, BUT SOME IN TRIBS.

PLSS:	T04N, R23W (S)	**Accuracy:**	non-specific area	**Area (acres):**	2,848
UTM:	Zone-11 N3808707 E289942	**Latitude/Longitude:**	34.39848 / -119.28514	**Elevation (feet):**	350

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933), Ojai (3411942), Matilija (3411943), Wheeler Springs (3411953)

Sources:

BOY75U0001	BOYDSTUN, L.B. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - MEMO: CASITAS RESERVOIR AND VENTURA RIVER RAINBOW TROUT SCALES. 1975-08-13
BOY76U0001	BOYDSTUN, L.B. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - MEMO: SCALE SAMPLES. 1976-06-17
CAP79U0001	CAPELLI, M.H. - LETTER TO MARK MOORE REGARDING SCALE SAMPLES AND ANGLER SURVEY DATA COLLECTED ON STEELHEAD AND RAINBOW TROUT ON THE VENTURA RIVER. 1979-01-19
DFG46U0001	CALIFORNIA DEPARTMENT OF FISH & GAME - LETTER TO JOHN MAGA AND LEO SHAPOVALOV, REGARDING FISH OF THE VENTURA RIVER. 1946-01-03
KEL77R0001	KELLY, D.W. - FURTHER EVIDENCE OF STEELHEAD RAINBOW TROUT, SALMO GAIRDNERI IN THE VENTURA RIVER, WITH LETTER TO PERRY HERGESOLL REGARDING STEELHEAD. 1977-03-10
TIT94R0001	TITUS, R.G. & D.C. ERMAN - HISTORY AND STATUS OF STEELHEAD IN CALIFORNIA COASTAL DRAINAGES SOUTH OF SAN FRANCISCO BAY (IN REVIEW, HILGARDIA). 205 PP. 1994-XX-XX
VEN54R0001	U.S. FISH & WILDLIFE SERVICE - PRELIMINARY REPORT ON FISH AND WILDLIFE RESOURCES AFFECTED BY THE PROPOSED VENTURA RIVER PROJECT, VENTURA RIVER, CALIFORNIA. 1954-05-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15536
EO Index: 26266
Key Quad: Ventura (3411933)
Element Code: AFCQN04010
Occurrence Number: 75
Occurrence Last Updated: 1999-10-26

Scientific Name: *Eucyclogobius newberryi*
Common Name: tidewater goby

Listing Status: **Federal:** Endangered
State: None
Rare Plant Rank:
Other Lists: AFS_EN-Endangered
IUCN_NT-Near Threatened

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:

BRACKISH WATER HABITATS ALONG THE CALIFORNIA COAST FROM AGUA HEDIONDA LAGOON, SAN DIEGO COUNTY TO THE MOUTH OF THE SMITH RIVER.

Micro Habitat:

FOUND IN SHALLOW LAGOONS AND LOWER STREAM REACHES, THEY NEED FAIRLY STILL BUT NOT STAGNANT WATER AND HIGH OXYGEN LEVELS.

Last Date Observed: 1995-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1995-XX-XX
Occurrence Rank: Unknown
Owner/Manager: PVT, CITY OF VENTURA
Trend: Stable
Presence: Presumed Extant

Location:

VENTURA RIVER, FROM MOUTH TO ABOUT 2.0 MILES UPSTREAM, AT THE NORTHERN EDGE OF VENTURA.

Detailed Location:

SITE OCCUPIES 2-25 ACRES.

Ecological:

HABITAT INCLUDES THE SOUTHERN CALIFORNIA COASTAL LAGOON COMMUNITY AT THE MOUTH AND PART OF THE SOUTHERN CALIFORNIA STEELHEAD STREAM COMMUNITY ALONG THE VENTURA RIVER.

Threats:

General:

LACM 36216-1, COLLECTED 12/12/74. 1991, 52 FISH WERE TAKEN FROM THE MOUTH OF THE VENTURA RIVER AND INTRODUCED BACK INTO MALIBU LAGOON. OBSERVED ~12 IN 1992. LAST COLLECTED HERE IN 1995. CONSIDERED TO BE A RELATIVELY LARGE POPULATION.

PLSS: T02N, R23W, Sec. 05 (S)
Accuracy: non-specific area
Area (acres): 142
UTM: Zone-11 N3796549 E287571
Latitude/Longitude: 34.28844 / -119.30791
Elevation (feet): 20

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

FAW94U0001	FAWCETT, M.H. - SCIENTIFIC COLLECTING PERMIT FOR ARROYO CHUB, SANTA ANA SUCKER, TIDEWATER GOBY, SOUTHERN STEELHEAD & RED-LEGGED FROG 1994-02-19
FWS96R0003	U.S. FISH & WILDLIFE SERVICE - APPENDIX "A" FROM DRAFT RECOVERY PLAN FOR TIDEWATER GOBY 1996-XX-XX
FWS96U0008	U.S. FISH & WILDLIFE SERVICE - TABLE OF TIDEWATER GOBY LOCATIONS AND DATE LAST SEEN 1996-11-05
SWI86R0001	SWIFT, C. ET AL. - BIOLOGY AND DISTRIBUTION OF THE TIDEWATER GOBY 1986-XX-XX
SWI90R0001	SWIFT, C. ET AL. (LOS ANGELES COUNTY MUSEUM) - STATUS OF FRESHWATER FISHES OF SOUTHERN CALIFORNIA WITH RECOMMENDATIONS FOR PRESERVES TO MAINTAIN THEIR EXISTENCE. REPORT TO DFG, CONTRACT FG-7455. 228PP. 1990-07-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 31516
Key Quad: Ventura (3411933)
Occurrence Number: 13

EO Index: 59782
Element Code: AMACB02010
Occurrence Last Updated: 2005-01-31

Scientific Name: *Choeronycteris mexicana*
Common Name: Mexican long-tongued bat

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S1

Rare Plant Rank:

Other Lists: CDFW_SSC-Species of Special Concern
IUCN_NT-Near Threatened

General Habitat:

OCCASIONALLY FOUND IN SAN DIEGO COUNTY, WHICH IS ON THE PERIPHERY OF THEIR RANGE.

Micro Habitat:

FEEDS ON NECTAR AND POLLEN OF NIGHT-BLOOMING SUCCULENTS. ROOSTS IN RELATIVELY WELL-LIT CAVES, AND IN AND AROUND BUILDINGS.

Last Date Observed: 1994-11-15
Last Survey Date: 1994-11-15
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

VENTURA.

Detailed Location:

EXACT LOCATION UNKNOWN. LOCATION ONLY GIVEN AS VENTURA. MAPPED IN THE GENERAL VICINTY OF VENTURA.

Ecological:

Threats:

General:

ONE MALE SPECIMEN COLLECTED 15 NOV 1994 BY D. CONSTANTINE AT "VENTURA." DEPOSITED AT LACM #94032.

PLSS: T02N, R23W, Sec. 04 (S)
UTM: Zone-11 N3796410 E288219

Accuracy: 1 mile
Latitude/Longitude: 34.28732 / -119.30084

Area (acres): 0
Elevation (feet): 40

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

MAN04S0018 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF CHOERONYCTERIS MEXICANA SPECIMEN RECORDS FROM MANIS. THIS INCLUDES RECORDS FROM MVZ, LACM, CAS & MSU. 2004-12-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 66643
EO Index: 66787
Key Quad: Ventura (3411933)
Element Code: AMACC10010
Occurrence Number: 311
Occurrence Last Updated: 2006-10-05

Scientific Name: *Antrozous pallidus*
Common Name: pallid bat

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFS_S-Sensitive

General Habitat:
DESERTS, GRASSLANDS, SHRUBLANDS, WOODLANDS AND FORESTS. MOST COMMON IN OPEN, DRY HABITATS WITH ROCKY AREAS FOR ROOSTING.

Micro Habitat:
ROOSTS MUST PROTECT BATS FROM HIGH TEMPERATURES. VERY SENSITIVE TO DISTURBANCE OF ROOSTING SITES.

Last Date Observed: 1906-06-01
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1906-06-01
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
VENTURA.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB CENTERED ON THE CITY OF VENTURA.

Ecological:

Threats:

General:
1 FEMALE COLLECTED, UNKNOWN DATE, LACM #30244, 1 UNKNOWN SPECIMEN COLLECTED 27 MAR 1906, MVZ #9446, 2 MALES COLLECTED 1 JUN 1906, MVZ #4030-4031, BY J. HORNUNG.

PLSS: T02N, R23W, Sec. 03 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3795343 E290267
Latitude/Longitude: 34.27812 / -119.27834
Elevation (feet): 120

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:

MAN04S0028	MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF ANTROZOUS PALLIDUS SPECIMEN RECORDS FROM MANIS. INCLUDES RECORDS FROM MVZ, CAS, KU, UWBM, UMNH, LACM, MSB, FMNH, TTU, MSU. 2004-12-09

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 60370
EO Index: 66426
Key Quad: Ventura (3411933)
Element Code: AMACD02011
Occurrence Number: 93
Occurrence Last Updated: 2006-09-26

Scientific Name: *Eumops perotis californicus*
Common Name: western mastiff bat

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern

CNDDB Element Ranks: **Global:** G4G5T4
State: S3S4

General Habitat:

MANY OPEN, SEMI-ARID TO ARID HABITATS, INCLUDING CONIFER AND DECIDUOUS WOODLANDS, COASTAL SCRUB, GRASSLANDS, CHAPARRAL, ETC.

Micro Habitat:

ROOSTS IN CREVICES IN CLIFF FACES, HIGH BUILDINGS, TREES AND TUNNELS.

Last Date Observed: 1907-08-20
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1907-08-20
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

WELDON.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED IN THE GENERAL VICINITY OF WELDON.

Ecological:

Threats:

General:

1 SPECIMEN COLLECTED BY J. HORNUNG, LACM #30253. 1 FEMALE COLLECTED ON 20 AUG 1907, LACM #71244.

PLSS: T03N, R23W, Sec. 09 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3802803 E288700
Latitude/Longitude: 34.34502 / -119.29718
Elevation (feet):

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

MAN04S0027 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF EUMOPS PEROTIS CALIFORNICUS SPECIMEN RECORDS FROM MANIS. INCLUDES RECORDS FROM MVZ, CAS, TTU, ROM, LACM, KU, MSU AND FMNH. 2004-12-10

PIE98R0001 PIERSON, E. & W. RAINEY - DISTRIBUTION, HABITAT ASSOCIATIONS, STATUS AND SURVEY METHODOLOGIES FOR THREE MOLOSSID BAT SPECIES AND THE VESPERTILIONID. FINAL REPORT CAL FISH & GAME WILDLIFE MANAGEMENT DIVISION 1998-04-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 60370
EO Index: 60406
Key Quad: Ventura (3411933)
Element Code: AMAFD05021
Occurrence Number: 51
Occurrence Last Updated: 2005-03-04

Scientific Name: *Chaetodipus californicus femoralis*
Common Name: Dulzura pocket mouse

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern

CNDDB Element Ranks: **Global:** G5T3
State: S3

General Habitat:
VARIETY OF HABITATS INCLUDING COASTAL SCRUB, CHAPARRAL AND GRASSLAND IN SAN DIEGO COUNTY.

Micro Habitat:
ATTRACTED TO GRASS-CHAPARRAL EDGES.

Last Date Observed: XXXX-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: XXXX-XX-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
WELDON.

Detailed Location:
EXACT LOCATION NOT KNOWN. MAPPED IN THE GENERAL VICINITY OF WELDON.

Ecological:

Threats:

General:
1 FEMALE COLLECTED AT AN UNKNOWN DATE BY J. HORNUNG AT "WELDONS." DEPOSITED AT LACM #30074.

PLSS: T03N, R23W, Sec. 09 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3802803 E288700
Latitude/Longitude: 34.34502 / -119.29718
Elevation (feet): 206

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:

MAN04S0019 MAMMAL NETWORKED INFORMATION SYSTEM (MANIS) - PRINTOUT OF CHAETODIPUS CALIFORNICUS FEMORALIS SPECIMEN RECORDS FROM MANIS. INCLUDES RECORDS FROM LACM, MVZ, CAS, KU, FMNH, MSB. 2004-12-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 73800
EO Index: 74783
Key Quad: Ventura (3411933)
Element Code: AMAJF04010
Occurrence Number: 421
Occurrence Last Updated: 2009-03-05

Scientific Name: *Taxidea taxus*
Common Name: American badger

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern

CNDDB Element Ranks: **Global:** G5
State: S3

General Habitat:

MOST ABUNDANT IN DRIER OPEN STAGES OF MOST SHRUB, FOREST, AND HERBACEOUS HABITATS, WITH FRIABLE SOILS.

Micro Habitat:

NEEDS SUFFICIENT FOOD, FRIABLE SOILS AND OPEN, UNCULTIVATED GROUND. PREYS ON BURROWING RODENTS. DIGS BURROWS.

Last Date Observed: 2008-04-28
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2008-04-28
Occurrence Rank: Fair
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

FOSTER PARK & VENTURA RIVER, ALONG SOUTH SIDE OF HWY 33, ABOUT 0.18 MI ESE OF INTERSECTION OF HWY 33 & CASITAS VISTA RD.

Detailed Location:

RIGHT SHOULDER OF RAMP ON HWY 33. MAPPED TO PROVIDED COORDINATES.

Ecological:

HWY 33 ADJACENT TO VENTURA RIVER RIPARIAN CORRIDOR. OAK WOODLAND PRESENT ON NORTH SIDE OF HWY 33 NEAR SITE. SURROUNDING LAND USED AS RECREATIONAL PARKLAND WITH LIGHT INDUSTRIAL AND AGRICULTURAL USES.

Threats:

HIGHWAY VEHICLE STRIKES.

General:

ON 28 APR 2008 PREGNANT FEMALE FOUND DEAD ALONG THE SOUTHBOUND ROAD SHOULDER OF HWY 33, JUST EAST OF THE FOSTER PARK ON RAMP.

PLSS: T03N, R23W, Sec. 09, W (S)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N3803488 E288202
Latitude/Longitude: 34.35109 / -119.30276
Elevation (feet): 230

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

KIR08F0001 KIRKLAND, S. (U.S. FISH AND WILDLIFE SERVICE) - FIELD SURVEY FORM FOR TAXIDEA TAXUS 2008-04-28

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15497
Key Quad: Ventura (3411933)
Occurrence Number: 822
EO Index: 28243
Element Code: ARAAD02030
Occurrence Last Updated: 1989-08-10

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G3G4
State: S3
Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:
A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:
NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 1969-02-05
Last Survey Date: 1969-02-05
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
NEAR CASITAS LAKE DAM, CASITAS VISTA ROAD.

Detailed Location:

Ecological:

Threats:

General:
MUSEUM COLLECTION. LACM #105321.

PLSS: T03N, R23W, Sec. 06 (S)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-11 N3805492 E285450
Latitude/Longitude: 34.36859 / -119.33317
Elevation (feet): 400

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:

BRA88R0001	BRATTSTROM, B. & D. MESSER - CURRENT STATUS OF THE SOUTHWESTERN POND TURTLE, CLEMMYS MARMORATA PALLIDA, IN SOUTHERN CALLIFORNIA. REPORT TO CALIFORNIA DEPARTMENT OF FISH AND GAME. 1988-XX-XX
HOL88U0002	HOLLAND, D. (UNIVERSITY OF SOUTHWESTERN LOUISIANA) - LIST OF DOCUMENTED CLEMMYS MARMORATA LOCALITIES 1988-03-23

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A1893	**EO Index:**	103502
Key Quad:	Ventura (3411933)	**Element Code:**	ARAAD02030
Occurrence Number:	1308	**Occurrence Last Updated:**	2016-09-22

Scientific Name: *Emys marmorata* **Common Name:** western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed:	2016-03-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-03-10	**Occurrence Rank:**	Good
Owner/Manager:	VEN COUNTY, CITY OF VENTURA	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG THE VENTURA RIVER FROM THE CASITAS VISTA RD CROSSING TO ABOUT 0.4 MILES NORTH, BETWEEN VENTURA & CASITAS SPRINGS.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

RESIDUAL POOLS IN THE VENTURA RIVER CHANNEL. RIPARIAN HABITAT SURROUNDED BY RESIDENTIAL AND AGRICULTURAL LAND USE.

Threats:

CONSTRUCTION UNDERWAY AT TIME OF 2006 DETECTION.

General:

3 OBSERVED ON 23 MAR 2006. 1 OBSERVED ON 18 JUN 2008. 2 OBSERVED ON 13 JUN 2013. 2 ADULTS OBSERVED ON 10 MAR 2016.

PLSS:	T03N, R23W, Sec. 8, NE (S)	**Accuracy:**	specific area	**Area (acres):**	18
UTM:	Zone-11 N3804125 E287556	**Latitude/Longitude:**	34.3567 / -119.30994	**Elevation (feet):**	235

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

GIB06U0001	GIBSON, M. (CASITAS MUNICIPAL WATER DISTRICT) - CASITAS MUNICIPAL WATER DISTRICT BANK/SNORKEL SURVEYS IN 2005 AND 2006 2006-07-14
GIL08U0001	GILLILAND, K. (PADRE ASSOCIATES, INC.) - SCIENTIFIC COLLECTING REPORT OF SPECIMENS CAPTURED OR SALVAGED [SC-009081] 2008-XX-XX
GIL16F0001	GILLILAND, K. - FIELD SURVEY FORM FOR EMYS MARMORATA 2016-03-10
LIM13D0003	LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A4051	**EO Index:**	105708
Key Quad:	Matilija (3411943)	**Element Code:**	ARAAD02030
Occurrence Number:	1348	**Occurrence Last Updated:**	2017-03-27

Scientific Name: *Emys marmorata*

Common Name: western pond turtle

Listing Status: **Federal:** None

State: None

CNDDB Element Ranks: **Global:** G3G4

State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed:	2016-11-03	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2016-11-03	**Occurrence Rank:**	Good
Owner/Manager:	PVT, UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

VENTURA RIVER & SAN ANTONIO CREEK NEAR THEIR CONFLUENCE, 0.3 MI NW-1.4 NNE OF EDISON DR AT RANCH RD IN CASITAS SPRINGS.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

FRESHWATER POND & PERENNIAL POOLS IN INTERMITTENT REACHES OF SAN ANTONIO CREEK & VENTURA RIVER. WILLOW, SYCAMORE, & ARUNDO RIPARIAN IN COAST LIVE OAK WOODLAND W/RESIDENTIAL AREAS. 2016 DETECTIONS DURING MONITORING FOR GIANT REED REMOVAL.

Threats:

INVASIVE PLANTS & PREDATORS (CRAYFISH, BULLFROGS, SLIDERS); COLLECTING; WATER EXTRACTION; DROUGHT; VEG CLEARING (2015).

General:

UP TO 99 OBSERVED IN 2010. 12 OBS MAR-JUN 2013. 12 ADULTS & 1 JUVENILE OBS ON 5 OCT; 10 ADULTS & 3 SUBADULTS ON 12 OCT 2015. 1 HATCHLING OBS ON 10 MAR 2016. 7 ADULTS OBS ON 18 JUL 2016. 3 ADULTS OBS BASKING ON 5 OCT 2016. 2 OBS 3 NOV 2016.

PLSS:	T04N, R23W, Sec. 32, SE (S)	**Accuracy:**	specific area	**Area (acres):**	68
UTM:	Zone-11 N3806270 E287855	**Latitude/Longitude:**	34.37609 / -119.30723	**Elevation (feet):**	301

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933), Matilija (3411943)

Sources:

ALL10D0001	ALLEN, M. (THOMAS R. PAYNE & ASSOCIATES) - EXCEL TABLE WITH 2010 FROG AND TURTLE OBSERVATIONS IN THE VENTURA/MATILIJA BASIN 2010-11-01
ASE16F0001	ASEF, T. - FIELD SURVEY FORM FOR EMYS MARMORATA 2016-10-05
DEL16F0019	DEL VECCHIO, C. - FIELD SURVEY FORM FOR EMYS MARMORATA 2016-11-03
DEL16F0020	DEL VECCHIO, C. - FIELD SURVEY FORM FOR EMYS MARMORATA 2016-11-03
HER16D0001	HERP, INC. - HERPETOLOGICAL EDUCATION AND RESEARCH PROJECT (HERP) DATABASE. FORMERLY A PROJECT OF THE NORTH AMERICAN FIELD HERPING ASSOCIATION. 2016-10-11
HUN15F0014	HUNT, L. (HUNT & ASSOCIATES BIOLOGICAL CONSULTING SERVICES) - FIELD SURVEY FORM FOR EMYS MARMORATA 2015-10-05
HUN15F0019	HUNT, L. - FIELD SURVEY FORM FOR EMYS MARMORATA 2015-10-12
HUN16F0004	HUNT, L. - FIELD SURVEY FORM FOR EMYS MARMORATA 2016-03-10
HUN16F0018	HUNT, L. - FIELD SURVEY FORM FOR EMYS MARMORATA 2016-07-18
LIM13D0003	LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7338
EO Index: 109106
Key Quad: Ventura (3411933)
Element Code: ARAAD02030
Occurrence Number: 1414
Occurrence Last Updated: 2017-12-01

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:
A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:
NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 2013-04-19
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2013-04-19
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
ALONG VENTURA RIVER, ABOUT 0.5 MI NNW OF HWY 101 AT HWY 33, W OF VENTURA.

Detailed Location:
MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:
ONE OBSERVED ON 19 APR 2013.

PLSS: T02N, R23W, Sec. 5, NE (S)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-11 N3796200 E287469
Latitude/Longitude: 34.28527 / -119.30894
Elevation (feet): 24

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:
LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A7339	**EO Index:**	109107
Key Quad:	Ventura (3411933)	**Element Code:**	ARAAD02030
Occurrence Number:	1415	**Occurrence Last Updated:**	2017-12-04

Scientific Name: *Emys marmorata* **Common Name:** western pond turtle

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed:	2013-04-19	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-04-19	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG VENTURA RIVER, ABOUT 0.6 MI SSW OF HWY 33 AT STANLEY AVE, 1 MI N OF HWY 101 AT HWY 33, 1.1 MI NW OF VENTURA PO.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

ONE OBSERVED ON 19 APR 2013.

PLSS:	T03N, R23W, Sec. 32, SE (S)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-11 N3797102 E287702	**Latitude/Longitude:**	34.29345 / -119.30663	**Elevation (feet):**	51

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7340
Key Quad: Ventura (3411933)
Occurrence Number: 1416

EO Index: 109108
Element Code: ARAAD02030
Occurrence Last Updated: 2017-12-04

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 2013-04-19
Last Survey Date: 2013-04-19
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

ALONG VENTURA RIVER, 0.5 MI N OF HWY 33 AT STANLEY AVE, 0.6 MI SSW OF HWY 33 AT SHELL RD, 2.1 MI NNW OF VENTURA PO.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

1 MALE OBSERVED ON 19 APR 2013.

PLSS: T03N, R23W, Sec. 28, NW (S)
UTM: Zone-11 N3798774 E288352

Accuracy: 80 meters
Latitude/Longitude: 34.30865 / -119.29998

Area (acres): 5
Elevation (feet): 91

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A7341	**EO Index:**	109109
Key Quad:	Ventura (3411933)	**Element Code:**	ARAAD02030
Occurrence Number:	1417	**Occurrence Last Updated:**	2017-12-04

Scientific Name: *Emys marmorata* **Common Name:** western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed:	2013-04-03	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-04-03	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ALONG VENTURA RIVER, ABOUT 0.2 MI NNW OF HWY 33 AT SHELL RD, 0.5 MI SW OF VENTURA AVE AT MCKEE ST, N OF VENTURA.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

1 MALE OBSERVED ON 3 APR 2013.

PLSS:	T03N, R23W, Sec. 21, SE (S)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-11 N3799969 E288814	**Latitude/Longitude:**	34.31951 / -119.29526	**Elevation (feet):**	130

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7342
Key Quad: Ventura (3411933)
Occurrence Number: 1418

EO Index: 109110
Element Code: ARAAD02030
Occurrence Last Updated: 2017-12-04

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 2013-04-19
Last Survey Date: 2013-04-19
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

ALONG VENTURA RIVER, ABOUT 0.7 MI N OF HWY 33 AT SHELL RD, 1.1 MI S OF HWY 33 AT CANADA LARGA RD, N OF VENTURA.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

1 FEMALE OBSERVED ON 19 APR 2013.

PLSS: T03N, R23W, Sec. 21, NE (S)
UTM: Zone-11 N3800692 E288853

Accuracy: 80 meters
Latitude/Longitude: 34.32603 / -119.29501

Area (acres): 5
Elevation (feet): 147

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7343
Key Quad: Ventura (3411933)
Occurrence Number: 1419

EO Index: 109111
Element Code: ARAAD02030
Occurrence Last Updated: 2017-12-04

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 2013-04-19
Last Survey Date: 2013-04-19
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

ALONG VENTURA RIVER, ABOUT 0.8 MI SSW OF HWY 33 AT CANADA LARGA RD, 1 MI NNW OF HWY 33 AT SHELL RD, N OF VENTURA.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

1 OBSERVED ON 12 JUL 2010. 1 MALE OBSERVED ON 3 APR 2013. 1 MALE OBSERVED ON 19 APR 2013.

PLSS: T03N, R23W, Sec. 16, SW (S)
UTM: Zone-11 N3801203 E288693

Accuracy: specific area
Latitude/Longitude: 34.3306 / -119.29688

Area (acres): 13
Elevation (feet): 160

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

ALL10D0001	ALLEN, M. (THOMAS R. PAYNE & ASSOCIATES) - EXCEL TABLE WITH 2010 FROG AND TURTLE OBSERVATIONS IN THE VENTURA/MATILIJA BASIN 2010-11-01
LIM13D0003	LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7345
Key Quad: Ventura (3411933)
Occurrence Number: 1420

EO Index: 109113
Element Code: ARAAD02030
Occurrence Last Updated: 2017-12-04

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 2013-04-03
Last Survey Date: 2013-04-03
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

ALONG VENTURA RIVER, 0.3 MI SW OF HWY 33 AT CANADA LARGA RD, 1.5 MI NNW OF HWY 33 AT SHELL RD, N OF VENTURA.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

1 OBSERVED ON 12 MAR 2013. 1 FEMALE OBSERVED ON 28 MAR 2013. 1 OBSERVED ON 3 APR 2013.

PLSS: T03N, R23W, Sec. 16, NW (S)
UTM: Zone-11 N3802090 E288680

Accuracy: specific area
Latitude/Longitude: 34.33859 / -119.29724

Area (acres): 15
Elevation (feet): 180

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7346
Key Quad: Ventura (3411933)
Occurrence Number: 1421

EO Index: 109114
Element Code: ARAAD02030
Occurrence Last Updated: 2017-12-04

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 2013-04-22
Last Survey Date: 2013-04-22
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

ALONG VENTURA RIVER, ABOUT 0.5 MI NW OF HWY 33 AT CANADA LARGA RD, 0.6 MI SE OF HWY 33 AT CASITAS VISTA RD, WELDONS.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

2 OBSERVED ON 11 APR 2013. 3 OBSERVED ON 22 APR 2013.

PLSS: T03N, R23W, Sec. 9, SW (S)
UTM: Zone-11 N3802980 E288426

Accuracy: specific area
Latitude/Longitude: 34.34656 / -119.30021

Area (acres): 14
Elevation (feet): 206

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7370
EO Index: 109136
Key Quad: Ventura (3411933)
Element Code: ARAAD02030
Occurrence Number: 1428
Occurrence Last Updated: 2017-12-04

Scientific Name: *Emys marmorata*
Common Name: western pond turtle

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:
A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:
NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed: 2016-08-03
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2016-08-03
Occurrence Rank: Unknown
Owner/Manager: PVT, UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
JUST E OF HARBOR BLVD AT OYSTER ST, 0.3 MI NNW OF HARBOR BLVD AT BEACHMONT ST, 2.2 MI SE OF VENTURA POST OFFICE.

Detailed Location:
MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:
1 ADULT MALE, 1 ADULT FEMALE, AND 1 SUB-ADULT MALE OBSERVED ON 19 OCT 2013. 4 ADULTS (AT LEAST 2 MALES) OBSERVED ON 3 AUG 2016.

PLSS: T02N, R23W, Sec. 14, NE (S)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-11 N3793117 E291827
Latitude/Longitude: 34.25837 / -119.26088
Elevation (feet): 45

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

HER16D0001	HERP, INC. - HERPETOLOGICAL EDUCATION AND RESEARCH PROJECT (HERP) DATABASE. FORMERLY A PROJECT OF THE NORTH AMERICAN FIELD HERPING ASSOCIATION. 2016-10-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A7373	**EO Index:**	109139
Key Quad:	Ventura (3411933)	**Element Code:**	ARAAD02030
Occurrence Number:	1429	**Occurrence Last Updated:**	2017-12-04

Scientific Name: *Emys marmorata* **Common Name:** western pond turtle

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3G4
State: S3

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_VU-Vulnerable
USFS_S-Sensitive

General Habitat:

A THOROUGHLY AQUATIC TURTLE OF PONDS, MARSHES, RIVERS, STREAMS AND IRRIGATION DITCHES, USUALLY WITH AQUATIC VEGETATION, BELOW 6000 FT ELEVATION.

Micro Habitat:

NEEDS BASKING SITES AND SUITABLE (SANDY BANKS OR GRASSY OPEN FIELDS) UPLAND HABITAT UP TO 0.5 KM FROM WATER FOR EGG-LAYING.

Last Date Observed:	2013-08-21	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-08-21	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ABOUT 0.2 MI E OF HWY 101 AT SANJON RD, 0.8 MI W OF THOMPSON BLVD AT SEAWARD AVE, 0.8 MI SE OF VENTURA POST OFFICE.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

MARSH.

Threats:

General:

2 ADULTS OBSERVED ON 21 AUG 2013.

PLSS:	T02N, R23W, Sec. 10, NW (S)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-11 N3794729 E290073	**Latitude/Longitude:**	34.27254 / -119.28031	**Elevation (feet):**	19

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

HER16D0001 HERP, INC. - HERPETOLOGICAL EDUCATION AND RESEARCH PROJECT (HERP) DATABASE. FORMERLY A PROJECT OF THE NORTH AMERICAN FIELD HERPING ASSOCIATION. 2016-10-11

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 45419
EO Index: 45419
Key Quad: Ventura (3411933)
Element Code: ARACC01070
Occurrence Number: 3
Occurrence Last Updated: 2001-08-07

Scientific Name: *Anniella spp.*
Common Name: California legless lizard

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern

CNDDB Element Ranks: **Global:** G3G4
State: S3S4

General Habitat:

CONTRA COSTA COUNTY SOUTH TO SAN DIEGO, WITHIN A VARIETY OF OPEN HABITATS.THIS ELEMENT REPRESENTS CALIFORNIA RECORDS OF ANNIELLA NOT YET ASSIGNED TO NEW SPECIES WITHIN THE ANNIELLA PULCHRA COMPLEX.

Micro Habitat:

VARIETY OF HABITATS; GENERALLY IN MOIST, LOOSE SOIL. THEY PREFER SOILS WITH A HIGH MOISTURE CONTENT.

Last Date Observed: 2001-05-01
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2001-05-01
Occurrence Rank: Poor
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

ANACAPA STREET, BETWEEN HWY 101 AND CHANNEL DR, VENTURA.

Detailed Location:

SITE IS LOCATED ON THE SW PORTION OF 511 S. ANACAPA STREET, VENTURA; 4 METERS FROM RAILROAD TRACKS AND 18 METERS FROM A REMNANT BARRANCA. FORMERLY A. P. PULCHRA EO #16; UNCERTAIN WHICH NEW ANNIELLA SPECIES OCCURS HERE.

Ecological:

HABITAT CONSISTED OF A DEGRADED RESIDENTIAL COMMUNITY.

Threats:

THREATS INCLUDE DOMESTIC PETS, YARD MAINTENANCE ACTIVITIES, AND OTHER HOMEOWNER ACTIVITIES.

General:

1 ADULT FOUND BENEATH A FLAT-BOTTOMED BOAT, NESTED WITHIN GRASS/LEAVES/SOIL, ON 1 MAY 2001.

PLSS: T02N, R23W, Sec. 10, W (S)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N3794622 E290790
Latitude/Longitude: 34.27173 / -119.27249
Elevation (feet): 75

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

HOW01F0001 HOWE, D. (PADRE ASSOCIATES, INC.) - FIELD SURVEY FORM FOR ANNIELLA PULCHRA PULCHRA 2001-05-01

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A8095
Key Quad: Ventura (3411933)
Occurrence Number: 36
EO Index: 109876
Element Code: ARACC01070
Occurrence Last Updated: 2018-01-16

Scientific Name: *Anniella spp.*
Common Name: California legless lizard

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern

CNDDB Element Ranks: **Global:** G3G4
State: S3S4

General Habitat:

CONTRA COSTA COUNTY SOUTH TO SAN DIEGO, WITHIN A VARIETY OF OPEN HABITATS.THIS ELEMENT REPRESENTS CALIFORNIA RECORDS OF ANNIELLA NOT YET ASSIGNED TO NEW SPECIES WITHIN THE ANNIELLA PULCHRA COMPLEX.

Micro Habitat:

VARIETY OF HABITATS; GENERALLY IN MOIST, LOOSE SOIL. THEY PREFER SOILS WITH A HIGH MOISTURE CONTENT.

Last Date Observed: 1979-02-03
Last Survey Date: 1979-02-03
Owner/Manager: DPR-EMMA WOOD STATE BEACH
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location:

COASTAL DUNES WEST OF THE VENTURA RIVER MOUTH, EMMA WOOD STATE BEACH, JUST WEST OF VENTURA.

Detailed Location:

Ecological:

IT IS CURRENTLY UNKNOWN WHICH NEWLY (2013) DESCRIBED SPECIES OF ANNIELLA OCCURS HERE. A. PULCHRA IS KNOWN FROM NW OF HERE AND A. STEBBINSI FROM S OF HERE (OXNARD). ALL ANNIELLA ARE A CALIF SPECIES OF SPECIAL CONCERN.

Threats:

General:

FOUR COLLECTED ON 2 FEB 1979.

PLSS: T02N, R23W, Sec. 5, S (S)
Accuracy: 1/10 mile
Area (acres): 18
UTM: Zone-11 N3795264 E287274
Latitude/Longitude: 34.27679 / -119.31083
Elevation (feet): 12

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

SWE79S0005 SWEET, S. & S. MACKESSY - CCBER #8446, 8447, 8448 & 8449 COLLECTED AT COASTAL DUNES, 250 M W OF MOUTH OF VENTURA RIVER 1979-02-03

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A8097
Key Quad: Ventura (3411933)
Occurrence Number: 37
EO Index: 109878
Element Code: ARACC01070
Occurrence Last Updated: 2018-01-17

Scientific Name: *Anniella spp.*
Common Name: California legless lizard

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: CDFW_SSC-Species of Special Concern

CNDDB Element Ranks: **Global:** G3G4
State: S3S4

General Habitat:

CONTRA COSTA COUNTY SOUTH TO SAN DIEGO, WITHIN A VARIETY OF OPEN HABITATS.THIS ELEMENT REPRESENTS CALIFORNIA RECORDS OF ANNIELLA NOT YET ASSIGNED TO NEW SPECIES WITHIN THE ANNIELLA PULCHRA COMPLEX.

Micro Habitat:

VARIETY OF HABITATS; GENERALLY IN MOIST, LOOSE SOIL. THEY PREFER SOILS WITH A HIGH MOISTURE CONTENT.

Last Date Observed: 2014-09-01
Last Survey Date: 2014-09-01
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Poor
Trend: Unknown

Location:

ALONG SUNSET DR ABOUT 100 YARDS NORTH OF HALL CANYON RD, NORTH OF PRINCE BARRANCA, VENTURA.

Detailed Location:

NEAR CENTER OF SECTION 2. FOUND DEAD ON THE SIDEWALK OF A RESIDENTIAL DEVELOPMENT BUILT PRIOR TO THE 1950S THAT IS ADJACENT TO MORE OPEN SPACE TYPE FOOTHILLS, NORTH SIDE OF VENTURA.

Ecological:

IT IS CURRENTLY UNKNOWN WHICH NEWLY (2013) DESCRIBED SPECIES OF ANNIELLA OCCURS HERE. A. PULCHRA IS KNOWN FROM NW OF HERE AND A. STEBBINSI FROM S OF HERE (OXNARD). ALL ANNIELLA ARE A CALIF SPECIES OF SPECIAL CONCERN.

Threats:

General:

ONE ADULT FOUND RECENTLY DEAD ON THE SIDEWALK ON 1 SEP 2014.

PLSS: T02N, R23W, Sec. 2 (S)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-11 N3795643 E291928
Latitude/Longitude: 34.28115 / -119.2604
Elevation (feet): 209

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

WOR14F0001 WORDEN, J. (IMPACT SCIENCES) - FIELD SURVEY FORM FOR ANNIELLA PULCHRA PULCHRA 2014-09-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 76044
EO Index: 77044
Key Quad: Ventura (3411933)
Element Code: ARADB36160
Occurrence Number: 117
Occurrence Last Updated: 2009-07-30

Scientific Name: *Thamnophis hammondii*
Common Name: two-striped gartersnake

Listing Status: **Federal:** None
State: None
Rare Plant Rank:

CNDDB Element Ranks: **Global:** G4
State: S3S4
Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFS_S-Sensitive

General Habitat:

COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.

Micro Habitat:

HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.

Last Date Observed: 2008-09-10
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2008-09-10
Occurrence Rank: Good
Owner/Manager: PVT-AERA ENERGY
Trend: Unknown
Presence: Presumed Extant

Location:

0.28 MILES WEST OF VENTURA RIVER, 2.25 MILES NORTH OF VENTURA, FROM STATE ROUTE 1 AND STATE ROUTE 33 JUNCTION.

Detailed Location:

ALONG MILL CANYON ROAD NORTH OF DEVIL'S CANYON ROAD INTERSECTION. MAPPED TO PROVIDED COORDINATES.

Ecological:

UPLAND AREA SUPPORTING MULEFAT SCRUB ON ONE SIDE OF THE ROAD AND COASTAL SAGE SCRUB ON OPPOSITE SIDE OF ROAD. OIL LEASE LANDS WITH MOSTLY OPEN SPACE WITH A FEW OIL WELLS ON-SITE AND GRADED ROADS.

Threats:

General:

ONE ADULT SNAKE OBSERVED ON 10 SEPT 2008 WHICH QUICKLY FLED INTO MULEFAT SCRUB.

PLSS: T03N, R23W, Sec. 28, NW (S)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N3799111 E288022
Latitude/Longitude: 34.31162 / -119.30364
Elevation (feet): 148

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

HUM08F0010 HUMBLE, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FIELD SURVEY FORM FOR THAMNOPHIS HAMMONDII 2008-09-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A4293
Key Quad: Ventura (3411933)
Occurrence Number: 162

EO Index: 105975
Element Code: ARADB36160
Occurrence Last Updated: 2017-04-18

Scientific Name: *Thamnophis hammondii*
Common Name: two-striped gartersnake

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G4
State: S3S4

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFS_S-Sensitive

General Habitat:

COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.

Micro Habitat:

HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.

Last Date Observed: 2016-10-06
Last Survey Date: 2016-10-06
Owner/Manager: PVT
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location:

W SIDE OF VENTURA RIVER, 0.4 MI NW OF N VENTURA AVE AT CANADA LARGA RD & 0.7 MI SE OF HWY 33 AT CASITAS VISTA RD.

Detailed Location:

MAPPED TO PROVIDED COORDINATES. FOSTER PARK PRESERVE, VENTURA HILLSIDES CONSERVANCY.

Ecological:

EMERGENT VEGETATION IN SHALLOW WATER ALONG MARGIN OF ACTIVE CHANNEL LINED W/ MULEFAT RIPARIAN SCRUB & SCATTERED ARROYO WILLOW RIPARIAN WOODLAND. NEAR AVOCADO ORCHARDS & WASTEWATER TREATMENT PLANT. ARUNDO ERADICATION BEGUN IN 2016.

Threats:

WATER EXTRACTION, WASTEWATER PLANT EFFLUENT, SEDIMENTATION FROM ADJACENT ORCHARDS.

General:

1 ADULT OBSERVED BASKING ON EMERGENT VEGETATION ALONG MARGIN OF ACTIVE CHANNEL ON 6 OCT 2016.

PLSS: T03N, R23W, Sec. 9, SW (S)
UTM: Zone-11 N3802867 E288491

Accuracy: 80 meters
Latitude/Longitude: 34.34556 / -119.29948

Area (acres): 5
Elevation (feet): 191

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

HUN16F0006 HUNT, L. - FIELD SURVEY FORM FOR THAMNOPHIS HAMMONDII 2016-10-06

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	A7308	**EO Index:**	109078
Key Quad:	Ventura (3411933)	**Element Code:**	ARADB36160
Occurrence Number:	169	**Occurrence Last Updated:**	2017-11-30

Scientific Name: *Thamnophis hammondii*

Common Name: two-striped gartersnake

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G4
State: S3S4

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFS_S-Sensitive

General Habitat:

COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.

Micro Habitat:

HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.

Last Date Observed:	2013-04-19	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2013-04-19	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

ABOUT 0.3 MI SW OF HWY 33 AT SHELL RD, 0.9 MI NNE OF HWY 33 AT STANLEY AVE, WADSTROM.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

1 DETECTED ON 19 APR 2013.

PLSS:	T03N, R23W, Sec. 21, SW (S)	**Accuracy:**	80 meters	**Area (acres):**	5
UTM:	Zone-11 N3799372 E288646	**Latitude/Longitude:**	34.31409 / -119.29694	**Elevation (feet):**	114

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A7310
Key Quad: Ventura (3411933)
Occurrence Number: 170

EO Index: 109080
Element Code: ARADB36160
Occurrence Last Updated: 2017-11-30

Scientific Name: *Thamnophis hammondii*
Common Name: two-striped gartersnake

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G4
State: S3S4

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFS_S-Sensitive

General Habitat:

COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.

Micro Habitat:

HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.

Last Date Observed: 2013-05-21
Last Survey Date: 2013-05-21
Owner/Manager: UNKNOWN
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

VENTURA RIVER, ABOUT 0.4 MI SW OF HWY 33 AT NYE RD, 0.7 MI NNW OF HWY 33 AT CASITAS VISTA RD, CASITAS SPRINGS.

Detailed Location:

MAPPED TO THE PROVIDED COORDINATES.

Ecological:

Threats:

General:

1 DETECTED ON 21 MAY 2013.

PLSS: T03N, R23W, Sec. 5, SE (S)
UTM: Zone-11 N3804752 E287404

Accuracy: 80 meters
Latitude/Longitude: 34.36232 / -119.31176

Area (acres): 5
Elevation (feet): 252

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

LIM13D0003 LIMA, C. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - VENTURA RIVER ANIMAL OBSERVATIONS 2013 2013-06-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B3727
Key Quad: Ventura (3411933)
Occurrence Number: 184

EO Index: 116640
Element Code: ARADB36160
Occurrence Last Updated: 2019-08-16

Scientific Name: *Thamnophis hammondii*
Common Name: two-striped gartersnake

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G4
State: S3S4

Rare Plant Rank:

Other Lists: BLM_S-Sensitive
CDFW_SSC-Species of Special Concern
IUCN_LC-Least Concern
USFS_S-Sensitive

General Habitat:

COASTAL CALIFORNIA FROM VICINITY OF SALINAS TO NORTHWEST BAJA CALIFORNIA. FROM SEA TO ABOUT 7,000 FT ELEVATION.

Micro Habitat:

HIGHLY AQUATIC, FOUND IN OR NEAR PERMANENT FRESH WATER. OFTEN ALONG STREAMS WITH ROCKY BEDS AND RIPARIAN GROWTH.

Last Date Observed: 2018-05-09
Last Survey Date: 2018-05-09
Owner/Manager: VEN COUNTY
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Good
Trend: Unknown

Location:

ALONG THE VENTURA RIVER, FROM ABOUT 0.25-0.5 MI SW OF HWY 33 AT BROCK RD & 0.7-0.9 MI N OF FOSTER PARK.

Detailed Location:

MAPPED TO PROVIDED COORDINATES.

Ecological:

2017:SLOW MOVING WATER OVER ROCKY SUBSTRATE, RIPARIAN HABITAT PRESENT BUT NO EMERGENT VEGETATION.

Threats:

TEMPORARY STREAM DIVERSION AND EXCAVATION ACTIVITIES (2017).

General:

1 JUVENILE OBSERVED ON 18 OCT 2017. 1 INDIVIDUAL OBSERVED ON 9 APR 2014 & 1 ON 9 MAY 2018 DURING SALMONID SPAWNER SURVEYS.

PLSS: T03N, R23W, Sec. 5, NE (S)
Accuracy: specific area
Area (acres): 10

UTM: Zone-11 N3805720 E287568
Latitude/Longitude: 34.37108 / -119.31021
Elevation (feet): 281

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

BEN17F0024	BENSON, T. - FIELD SURVEY FORM FOR THAMNOPHIS HAMMONDII 2017-10-18
EVA19D0001	EVANS, K. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - TABLE OF SPECIES OBSERVATIONS FROM STREAM SURVEYS 2013-2019 2019-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 30036
EO Index: 3518
Key Quad: Ventura (3411933)
Element Code: CALE1220CA
Occurrence Number: 2
Occurrence Last Updated: 1995-04-17

Scientific Name: *Southern California Coastal Lagoon*
Common Name: Southern California Coastal Lagoon

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** GNR
State: SNR

General Habitat:

Micro Habitat:

Last Date Observed: 1984-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1984-XX-XX
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:

VENTURA RIVER NEAR MOUTH, VENTURA COUNTY.

Detailed Location:

FROM MOUTH TO ABOUT 1/4 MILE UPSTREAM TO RAILROAD CROSSING.

Ecological:

TIDEWATER GOBY, STEELHEAD, PACIFIC LAMPREY, PRICKLY SCULPIN & PARTIALLY ARMORED THREESPINE STICKLEBACK CAN BE FOUND HERE.

Threats:

REDUCED WATER FLOW FROM UPSTREAM DIVERSIONS AND DAMS, URBANIZATION AND CHANNELIZATION RESULT IN LOWER WATER QUALITY.

General:

52 ADULT GOBIES FROM MOUTH OF VENTURA RIVER WERE SUCCESSFULLY INTRODUCED INTO MALIBU LAGOON IN 1991.

PLSS: T02N, R23W, Sec. 05 (S)
Accuracy: non-specific area
Area (acres): 5
UTM: Zone-11 N3795131 E287534
Latitude/Longitude: 34.27565 / -119.30796
Elevation (feet): 20

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

MOY91R0001	MOYLE, P. & C. SWIFT - CATALOGUE OF POTENTIAL AQUATIC DIVERSITY AREAS 1991-09-XX
MOY93R0001	MOYLE, P. ET AL. (UNIVERSITY OF CALIFORNIA, DAVIS) - FISH SPECIES OF SPECIAL CONCERN (DRAFT) 1993-06-XX
SWI93R0001	SWIFT, C, ET AL. - THE STATUS AND DISTRIBUTION OF THE FRESHWATER FISHES OF SOUTHERN CALIFORNIA. BULLETIN OF THE SOUTHERN CALIFORNIA ACADEMY OF SCIENCE 92(3):101-167. 1993-12-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	30038	**EO Index:**	5286
Key Quad:	Matilija (3411943)	**Element Code:**	CARE2310CA
Occurrence Number:	2	**Occurrence Last Updated:**	1994-06-07

Scientific Name: *Southern California Steelhead Stream*

Common Name: Southern California Steelhead Stream

Listing Status: **Federal:** None

State: None

Rare Plant Rank:

Other Lists:

CNDDB Element Ranks: **Global:** GNR

State: SNR

General Habitat:

Micro Habitat:

Last Date Observed:	1990-05-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1990-05-XX	**Occurrence Rank:**	Fair
Owner/Manager:	PVT	**Trend:**	Decreasing
Presence:	Presumed Extant		

Location:

LOWER VENTURA RIVER, VENTURA COUNTY.

Detailed Location:

FROM MOUTH AT OCEAN TO BASE OF LAKE CASITAS (COYOTE CREEK) & LAKE MATILIJA (MATILIJA CREEK), INCLUDING NORTH FORK MATILIJA CREEK, SAN ANTONIO CREEK & TRIBUTARIES LION, THACHER & REEVES CREEKS.

Ecological:

STEELHEAD AND PACIFIC LAMPREY SPAWNING STREAM. PARTIALLY ARMORED STICKLEBACK (ABUNDANT IN LOWER REACH), PRICKLY SCULPIN AND TIDEWATER GOBY (FOUND IN LAGOON NEAR MOUTH) ALSO OCCUR.

Threats:

DAMS RESTRICTING FISH MIGRATION AND REDUCING WATER FLOW DOWNSTREAM. URBAN AREA WITH SOME AGRICULTURAL USE.

General:

LAGOON IMPORTANT HABITAT FOR JUVENILE ANADROMOUS SPP. AND TIDEWATER GOBIES.

PLSS:	T04N, R23W (S)	**Accuracy:**	non-specific area	**Area (acres):**	2,848
UTM:	Zone-11 N3808707 E289942	**Latitude/Longitude:**	34.39848 / -119.28514	**Elevation (feet):**	350

County Summary:

Ventura

Quad Summary:

Ventura (3411933), Ojai (3411942), Matilija (3411943), Wheeler Springs (3411953)

Sources:

MOY91R0001	MOYLE, P. & C. SWIFT - CATALOGUE OF POTENTIAL AQUATIC DIVERSITY AREAS 1991-09-XX
MOY93R0001	MOYLE, P. ET AL. (UNIVERSITY OF CALIFORNIA, DAVIS) - FISH SPECIES OF SPECIAL CONCERN (DRAFT) 1993-06-XX
SWI93R0001	SWIFT, C, ET AL. - THE STATUS AND DISTRIBUTION OF THE FRESHWATER FISHES OF SOUTHERN CALIFORNIA. BULLETIN OF THE SOUTHERN CALIFORNIA ACADEMY OF SCIENCE 92(3):101-167. 1993-12-XX
WEL75R0001	WELLS, A. & J. DIANA (CALIFORNIA STATE UNIVERSITY, LONG BEACH) - SURVEY OF THE FRESHWATER FISHES AND THEIR HABITATS IN THE COASTAL DRAINAGES OF SOUTHERN CALIFORNIA. REPORT SUBMITTED TO CALIFORNIA DEPARTMENT FISH AND GAME, INLAND FISHERIES BRANCH 1975-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15576	**EO Index:**	16014
Key Quad:	Ventura (3411933)	**Element Code:**	CTT61310CA
Occurrence Number:	24	**Occurrence Last Updated:**	1998-08-02

Scientific Name: *Southern Coast Live Oak Riparian Forest* **Common Name:** Southern Coast Live Oak Riparian Forest

Listing Status: **Federal:** None **Rare Plant Rank:**

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G4

State: S4

General Habitat:

Micro Habitat:

Last Date Observed:	1986-12-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1986-12-10	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

MANUEL CANYON, FROM ABOUT 0.3 MILE EAST OF HWY 33 U/S FOR OVER 1.5 MILES.

Detailed Location:

MAPPED PER INTERPRETATION OF 1987 AERIAL PHOTOS.

Ecological:

OPEN STAND OF QUERCUS AGRIFOLIA ACCORDING TO WIESLANDER SURVEY.

Threats:

General:

NEEDS FIELD VERIFICATION OF VEGETATION CONDITION, COMPOSITION. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS:	T03N, R23W (S)	**Accuracy:**	specific area	**Area (acres):**	137
UTM:	Zone-11 N3801202 E290708	**Latitude/Longitude:**	34.33101 / -119.27499	**Elevation (feet):**	340

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

FWS81M0003	U.S. FISH & WILDLIFE SERVICE - NATIONAL WETLANDS INVENTORY (USGS 15' AND 7 1/2' MAPS). 1981-XX-XX
HOL87M0003	HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18
USF34M0003	U.S. FOREST SERVICE - VEGETATION TYPE MAP, VENTURA COUNTY. WIESLANDER MAP. 1934-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15528	**EO Index:**	15996
Key Quad:	Ventura (3411933)	**Element Code:**	CTT61310CA
Occurrence Number:	42	**Occurrence Last Updated:**	1998-08-31

Scientific Name: *Southern Coast Live Oak Riparian Forest* **Common Name:** Southern Coast Live Oak Riparian Forest

Listing Status: **Federal:** None **Rare Plant Rank:**

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G4

State: S4

General Habitat:

Micro Habitat:

Last Date Observed:	1986-12-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1986-12-10	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

CANADA DE RODRIGUEZ, EXTENDING U/S FROM HWY 33 FOR MORE THAN 2 MILES.

Detailed Location:

MAPPED PER INTERPRETATION OF 1986 AERIAL PHOTOS. NOT SHOWN ON 1981 NWI MAPS.

Ecological:

OPEN WOODLAND OF QUERCUS AGRIFOLIA ACCORDING TO WIESLANDER SURVEY.

Threats:

General:

NEEDS FIELD VERIFICATION OF VEGETATION CONDITION, COMPOSITION. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS:	T03N, R23W, Sec. 17 (S)	**Accuracy:**	specific area	**Area (acres):**	192
UTM:	Zone-11 N3802247 E287022	**Latitude/Longitude:**	34.33967 / -119.31528	**Elevation (feet):**	480

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

HOL87M0003	HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18
USF34M0003	U.S. FOREST SERVICE - VEGETATION TYPE MAP, VENTURA COUNTY. WIESLANDER MAP. 1934-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15498	**EO Index:**	15994
Key Quad:	Ventura (3411933)	**Element Code:**	CTT61310CA
Occurrence Number:	43	**Occurrence Last Updated:**	1998-08-02

Scientific Name: *Southern Coast Live Oak Riparian Forest* **Common Name:** Southern Coast Live Oak Riparian Forest

Listing Status: **Federal:** None **Rare Plant Rank:**

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G4

State: S4

General Habitat:

Micro Habitat:

Last Date Observed:	1986-12-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1986-12-10	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Decreasing
Presence:	Presumed Extant		

Location:

CANADA DEL DIABLO, ABOUT 1.4 MILES WEST OF HWY 33 U/S FOR ABOUT 1.75 MILES, ALSO TRIBUTARY TO NORTH.

Detailed Location:

MAPPED PER INTERPRETATION OF 1986 AERIAL PHOTOS. ONCE EXTENDED FARTHER ACCORDING TO WIESLANDER & NWI MAPS.

Ecological:

QUERCUS AGRIFOLIA ACCORDING TO WIESLANDER SURVEY; WEST PART W/CLOSED CANOPY; EAST PART OVER GRASS.

Threats:

General:

VEG APPEARED SPARSE, DISTURBED IN PHOTOS, NEEDS FIELD VERIFICATION OF VEGETATION CONDITION, COMPOSITION. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS:	T03N, R23W, Sec. 19 (S)	**Accuracy:**	specific area	**Area (acres):**	189
UTM:	Zone-11 N3799950 E285104	**Latitude/Longitude:**	34.31858 / -119.33554	**Elevation (feet):**	360

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

FWS81M0003	U.S. FISH & WILDLIFE SERVICE - NATIONAL WETLANDS INVENTORY (USGS 15' AND 7 1/2' MAPS). 1981-XX-XX
HOL87M0003	HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18
USF34M0003	U.S. FOREST SERVICE - VEGETATION TYPE MAP, VENTURA COUNTY. WIESLANDER MAP. 1934-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15546	**EO Index:**	15993
Key Quad:	Ventura (3411933)	**Element Code:**	CTT61310CA
Occurrence Number:	44	**Occurrence Last Updated:**	1998-08-02

Scientific Name: *Southern Coast Live Oak Riparian Forest* **Common Name:** Southern Coast Live Oak Riparian Forest

Listing Status: **Federal:** None **Rare Plant Rank:**

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G4

State: S4

General Habitat:

Micro Habitat:

Last Date Observed:	1986-12-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1986-12-10	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

INTERMITTENT STREAM WEST OF ORTONVILLE.

Detailed Location:

MAPPED PER INTERPRETATION OF 1986 AERIAL PHOTOS. NOT SHOWN ON NWI MAPS.

Ecological:

OPEN STAND OF QUERCUS AGRIFOLIA ACCORDING TO WIESLANDER SURVEY.

Threats:

General:

NEEDS FIELD VERIFICATION OF VEGETATION CONDITION, COMPOSITION. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS:	T03N, R23W, Sec. 21 (S)	**Accuracy:**	specific area	**Area (acres):**	40
UTM:	Zone-11 N3800639 E288462	**Latitude/Longitude:**	34.32548 / -119.29924	**Elevation (feet):**	260

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

HOL87M0003	HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18
USF34M0003	U.S. FOREST SERVICE - VEGETATION TYPE MAP, VENTURA COUNTY. WIESLANDER MAP. 1934-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15587	**EO Index:**	13414
Key Quad:	Ventura (3411933)	**Element Code:**	CTT61310CA
Occurrence Number:	45	**Occurrence Last Updated:**	1998-08-02

Scientific Name: *Southern Coast Live Oak Riparian Forest* **Common Name:** Southern Coast Live Oak Riparian Forest

Listing Status: **Federal:** None **Rare Plant Rank:**

State: None **Other Lists:**

CNDDB Element Ranks: **Global:** G4

State: S4

General Habitat:

Micro Habitat:

Last Date Observed:	1934-XX-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1986-12-10	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Decreasing
Presence:	Presumed Extant		

Location:

CANADA LARGA, FROM HWY 33 U/S BEYOND CANADA DE ALISO & ALSO UP CANADA DE ALISO.

Detailed Location:

CANADA LARGA: EXTIRPATED, ORCHARD, RANCH IN 1986 PHOTOS. CANADA DE ALISO: LOWEST 0.8 MILE EXTIRPATED, ORCHARDS. U/S OF THAT EXTANT IN 1986 AERIALS.

Ecological:

CANADA LARGA: WAS OPEN WOODLAND OF QUERCUS AGRIFOLIA PER WIESLANDER SURVEY. CLOSED CANOPY Q. AGRIFOLIA PER WIESLANDER. CANADA DE ALISO: CLOSED CANOPY Q. AGRIFOLIA PER WIESLANDER.

Threats:

General:

NEEDS FIELD VERIFICATION OF VEGETATION CONDITION, COMPOSITION. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS:	T03N, R23W (S)	**Accuracy:**	specific area	**Area (acres):**	363
UTM:	Zone-11 N3804578 E291594	**Latitude/Longitude:**	34.36161 / -119.26618	**Elevation (feet):**	320

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933), Matilija (3411943)

Sources:

HOL87M0003	HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18
USF34M0003	U.S. FOREST SERVICE - VEGETATION TYPE MAP, VENTURA COUNTY. WIESLANDER MAP. 1934-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15548	**EO Index:**	15510
Key Quad:	Ventura (3411933)	**Element Code:**	CTT62400CA
Occurrence Number:	43	**Occurrence Last Updated:**	1998-07-22

Scientific Name: *Southern Sycamore Alder Riparian Woodland*

Common Name: Southern Sycamore Alder Riparian Woodland

Listing Status: **Federal:** None

State: None

Rare Plant Rank:

Other Lists:

CNDDB Element Ranks: **Global:** G4

State: S4

General Habitat:

Micro Habitat:

Last Date Observed:	1986-12-10	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1986-12-10	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

FRESNO CANYON, FROM NEAR HWY 33 U/S FOR ABOUT 1.2 MILES.

Detailed Location:

1987 EXTENT SHOWN BASED ON INTERPRETATION OF AERIAL PHOTOS.

Ecological:

QUERCUS AGRIFOLIA, ALNUS RHOMBIFOLIA, SALIX SPP, BACCHARIS VIMINEA & PLATANUS RACEMOSA FORMING CLOSED CANOPY ACCORDING TO WIESLANDER SURVEY. UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

Threats:

General:

REQUIRES FIELD CHECK. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS:	T03N, R23W (S)	**Accuracy:**	specific area	**Area (acres):**	88
UTM:	Zone-11 N3805503 E288750	**Latitude/Longitude:**	34.36937 / -119.29731	**Elevation (feet):**	460

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933), Matilija (3411943)

Sources:

FWS81M0003	U.S. FISH & WILDLIFE SERVICE - NATIONAL WETLANDS INVENTORY (USGS 15' AND 7 1/2' MAPS). 1981-XX-XX
HOL87M0003	HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18
USF34M0003	U.S. FOREST SERVICE - VEGETATION TYPE MAP, VENTURA COUNTY. WIESLANDER MAP. 1934-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15495
EO Index: 12470
Key Quad: Ventura (3411933)
Element Code: CTT62400CA
Occurrence Number: 44
Occurrence Last Updated: 1998-07-22

Scientific Name: *Southern Sycamore Alder Riparian Woodland*
Common Name: Southern Sycamore Alder Riparian Woodland

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G4
State: S4

General Habitat:

Micro Habitat:

Last Date Observed: 1986-12-10
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1986-12-10
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:

INTERMITTENT CREEK ON NORTH SIDE OF RED MOUNTAIN ABOVE CASITAS CREEK.

Detailed Location:

MAPPED FROM INTERPRETATION OF 1986 AERIAL PHOTOS ONLY. NOT MAPPED BY WIESLANDER OR NWI.

Ecological:

UNABLE TO CONVERT TO FLORISTIC CLASSIFICATION, LACKS SPP. INFO.

Threats:

General:

NEEDS FIELD VISIT TO DETERMINE VEGETATION CONDITION, COMPOSITION. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS: T03N, R23W (S)
Accuracy: specific area
Area (acres): 64
UTM: Zone-11 N3804616 E285265
Latitude/Longitude: 34.36066 / -119.33496
Elevation (feet): 600

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

HOL87M0003 HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15518	**EO Index:**	15508
Key Quad:	Ventura (3411933)	**Element Code:**	CTT62400CA
Occurrence Number:	45	**Occurrence Last Updated:**	1998-07-22

Scientific Name: *Southern Sycamore Alder Riparian Woodland*

Common Name: Southern Sycamore Alder Riparian Woodland

Listing Status: **Federal:** None

State: None

Rare Plant Rank:

Other Lists:

CNDDB Element Ranks: **Global:** G4

State: S4

General Habitat:

Micro Habitat:

Last Date Observed:	1987-11-18	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	1987-11-18	**Occurrence Rank:**	Unknown
Owner/Manager:	UNKNOWN	**Trend:**	Decreasing
Presence:	Presumed Extant		

Location:

COYOTE CREEK, FROM ABOUT 1/2 MILE D/S OF LAKE CASITAS D/S TO FLOODPLAIN OF VENTURA RIVER.

Detailed Location:

Ecological:

PLATANUS RACEMOSA & QUERCUS AGRIFOLIA. WIESLANDER DID NOT DISTINGUISH A DIFFERENT VEG TYPE FROM SURROUNDING QUERCUS LOBATA FORESTS & WOODLANDS.

Threats:

General:

PORTION ON FLOODPLAIN IS FOSTER PARK DAY-USE AREA W/LAWN; APPEARS LESS DISTURBED ALONG COYOTE CREEK. SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS:	T03N, R23W (S)	**Accuracy:**	specific area	**Area (acres):**	193
UTM:	Zone-11 N3804506 E286811	**Latitude/Longitude:**	34.35999 / -119.31813	**Elevation (feet):**	220

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

FWS81M0003	U.S. FISH & WILDLIFE SERVICE - NATIONAL WETLANDS INVENTORY (USGS 15' AND 7 1/2' MAPS). 1981-XX-XX
HOL87M0001	HOLLAND, R.F. & V. DAINS - INTERPRETATION OF 1986 AERIAL PHOTOGRAPHS IN SAN DIEGO COUNTY. SOUTHERN RIPARIAN COMMUNITIES ON SEVERAL QUADS. 1987-XX-XX
HOL87U0001	HOLLOMBE, D. - LETTER TO R. BITTMAN 1987-02-21

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15524
EO Index: 15065
Key Quad: Ventura (3411933)
Element Code: CTT71210CA
Occurrence Number: 37
Occurrence Last Updated: 1998-09-01

Scientific Name: *California Walnut Woodland*
Common Name: California Walnut Woodland

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists:

CNDDB Element Ranks: **Global:** G2
State: S2.1

General Habitat:

Micro Habitat:

Last Date Observed: 1987-11-18
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1987-11-18
Occurrence Rank: None
Owner/Manager: PVT
Trend: Unknown
Presence: Extirpated

Location:

CASITAS SPRINGS. SLOPE WEST OF SANTA ANA ROAD NORTH OF ITS JUNCTION W/ CASITAS PASS ROAD.

Detailed Location:

HOLLAND, 1987, NOTES NOT MANY WALNUTS REMAIN, HOUSES AND EUCALYPTUS THERE NOW.

Ecological:

MAPPED BY WIESLANDER SURVEY AS JUGLANS CALIFORNICA AND QUERCUS AGRIFOLIA.

Threats:

HOUSING DEVELOPMENT & EUCALYPTUS.

General:

SEE HTTPS://WILDLIFE.CA.GOV/DATA/VEGCAMP/NATURAL-COMMUNITIES TO INTERPRET AND ADDRESS THE PRESENCE OF RARE COMMUNITIES.

PLSS: T03N, R23W (S)
Accuracy: specific area
Area (acres): 35
UTM: Zone-11 N3804865 E287062
Latitude/Longitude: 34.36327 / -119.31550
Elevation (feet): 340

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

HOL87M0003	HOLLAND, R.F. & C.L. ROYE - PHOTO VERIFICATION OF WIESLANDER DATA AND INTERPRETATION OF NEW STANDS OF RIPARIAN VEGETATION IN VENTURA COUNTY (INCLUDES INFO ON WALNUT WOODLAND AND VALLEY OAK WOODLAND AS WELL). 1987-11-18
HOL87U0001	HOLLOMBE, D. - LETTER TO R. BITTMAN 1987-02-21
USF34M0003	U.S. FOREST SERVICE - VEGETATION TYPE MAP, VENTURA COUNTY. WIESLANDER MAP. 1934-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15571
EO Index: 61127
Key Quad: Ventura (3411933)
Element Code: IICOL4A010
Occurrence Number: 25
Occurrence Last Updated: 2007-11-27

Scientific Name: *Coelus globosus*
Common Name: globose dune beetle

Listing Status: **Federal:** None
State: None
Rare Plant Rank:
Other Lists: IUCN_VU-Vulnerable

CNDDB Element Ranks: **Global:** G1G2
State: S1S2

General Habitat:

INHABITANT OF COASTAL SAND DUNE HABITAT; ERRATICALLY DISTRIBUTED FROM TEN MILE CREEK IN MENDOCINO COUNTY SOUTH TO ENSENADA, MEXICO.

Micro Habitat:

INHABITS FOREDUNES AND SAND HUMMOCKS; IT BURROWS BENEATH THE SAND SURFACE AND IS MOST COMMON BENEATH DUNE VEGETATION.

Last Date Observed: 1954-09-25
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1954-09-25
Occurrence Rank: None
Owner/Manager: DPR-SAN BUENAVENTURA SB
Trend: Unknown
Presence: Possibly Extirpated

Location:

VENTURA.

Detailed Location:

MAPPED ALONG THE BEACH AREA.

Ecological:

Threats:

General:

2 SPECIMENS COLLECTED 25 SEP 1954 AND DEPOSITED IN CALIFORNIA STATE COLLECTION OF ARTHROPODS, CDFA.

PLSS: T02N, R23W, Sec. 10 (S)
Accuracy: non-specific area
Area (acres): 87
UTM: Zone-11 N3794279 E290146
Latitude/Longitude: 34.26851 / -119.27939
Elevation (feet): 20

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

SHA05S0006 SHANKS, S. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-CALIFORNIA NATURAL DIVERSITY DATABASE) - MUSEUM SPECIMEN DATA TAKEN FROM CALIFORNIA STATE COLLECTION OF ARTHROPODS (CDFA). 2005-04-20

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 31516
EO Index: 98907
Key Quad: Ventura (3411933)
Element Code: IIHYM24480
Occurrence Number: 123
Occurrence Last Updated: 2015-09-21

Scientific Name: *Bombus crotchii*
Common Name: Crotch bumble bee

Listing Status: **Federal:** None
Rare Plant Rank:
State: Candidate Endangered
Other Lists: IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:
COASTAL CALIFORNIA EAST TO THE SIERRA-CASCADE CREST AND SOUTH INTO MEXICO.

Micro Habitat:
FOOD PLANT GENERA INCLUDE ANTIRRHINUM, PHACELIA, CLARKIA, DENDROMECON, ESCHSCHOLZIA, AND ERIOGONUM.

Last Date Observed: 1949-06-30
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1949-06-30
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
VENTURA.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE GENERAL VICINITY OF THE CITY OF VENTURA.

Ecological:

Threats:

General:
A COLLECTION WAS MADE IN THIS VICINITY ON 30 JUN 1949.

PLSS: T02N, R23W, Sec. 04 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3796410 E288219
Latitude/Longitude: 34.28732 / -119.30084
Elevation (feet): 80

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:
MAR49S0001 MARSH, R. - EMEC #554160 COLLECTED FROM VENTURA 1949-06-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B6597
EO Index: 119656
Key Quad: Ventura (3411933)
Element Code: IIHYM24480
Occurrence Number: 406
Occurrence Last Updated: 2020-12-02

Scientific Name: *Bombus crotchii*
Common Name: Crotch bumble bee

Listing Status: **Federal:** None
State: Candidate Endangered
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:
COASTAL CALIFORNIA EAST TO THE SIERRA-CASCADE CREST AND SOUTH INTO MEXICO.

Micro Habitat:
FOOD PLANT GENERA INCLUDE ANTIRRHINUM, PHACELIA, CLARKIA, DENDROMECON, ESCHSCHOLZIA, AND ERIOGONUM.

Last Date Observed: 2018-06-30
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2018-06-30
Occurrence Rank: Unknown
Owner/Manager: PVT
Trend: Unknown
Presence: Presumed Extant

Location:
NEAR THE INTERSECTION OF NAHUA LANE AND ALGONQUIAN STREET, VENTURA.

Detailed Location:
MAPPED TO PROVIDED COORDINATES.

Ecological:
OBSERVED ON LANTANA FLOWERS IN POLLINATOR GARDEN.

Threats:

General:
1 QUEEN OBSERVED AND PHOTOGRAPHED ON 30 JUN 2018.

PLSS: T03N, R23W, Sec. 27, SW (S)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-11 N3798196 E289855
Latitude/Longitude: 34.30374 / -119.28352
Elevation (feet): 307

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:
INA18U0101 INATURALIST - OBSERVATION 13923057 FROM HTTP://WWW.INATURALIST.ORG. ACCESSED 2020-09-29 2018-06-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15580
Key Quad: Ventura (3411933)
Occurrence Number: 165
EO Index: 22828
Element Code: IILEPP2012
Occurrence Last Updated: 2015-11-16

Scientific Name: *Danaus plexippus plexippus pop. 1*
Common Name: monarch - California overwintering population

Listing Status: **Federal:** Candidate
State: None
CNDDB Element Ranks: **Global:** G4T1T2Q
State: S2
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered
USFS_S-Sensitive

General Habitat:

WINTER ROOST SITES EXTEND ALONG THE COAST FROM NORTHERN MENDOCINO TO BAJA CALIFORNIA, MEXICO.

Micro Habitat:

ROOSTS LOCATED IN WIND-PROTECTED TREE GROVES (EUCALYPTUS, MONTEREY PINE, CYPRESS), WITH NECTAR AND WATER SOURCES NEARBY.

Last Date Observed: 198X-XX-XX
Last Survey Date: 1989-12-26
Owner/Manager: PVT
Presence: Extirpated
Occurrence Type: Natural/Native occurrence
Occurrence Rank: None
Trend: Unknown

Location:

SEAWARD AVENUE, ADJACENT TO HWY 101 JUNCTION, VENTURA.

Detailed Location:

XERCES SITE #3139.

Ecological:

ROOST TREES WERE EUCALYPTUS. "LARGE CLUSTER SITE" DESTROYED WHEN THE EUCALYPTUS GROVE WAS CUT DOWN TO ACCOMODATE A FARMING OPERATION ON UNKNOWN DATE, PRIOR TO 1985. SITE WAS SUBSEQUENTLY PAVED AND DEVELOPED.

Threats:

TREE REMOVAL. DEVELOPMENT. COLLISIONS WITH CARS.

General:

MONARCHS REPORTEDLY CLUSTERED AT THIS SITE FOR SEVERAL YEARS PRIOR TO 1985. NONE OBSERVED ON 26 DEC 1989, SURVEYOR NOTED: "NO GOOD HABITAT IN VICINITY. SITE IS LOST?"

PLSS: T02N, R23W, Sec. 10, SE (S)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-11 N3793870 E290993
Latitude/Longitude: 34.26499 / -119.27011
Elevation (feet): 10

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

NAG85R0001	NAGANO, C. & J. LANE - A SURVEY OF THE LOCATION OF MONARCH BUTTERFLY OVERWINTERING ROOSTS IN THE STATE OF CALIFORNIA, USA: FIRST YEAR 1984/1985. 1985-08-30
SAK00F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED UP TO AND INCLUDING WINTER 1999-2000. 2000-XX-XX
SAK89F0001	SAKAI, W.H. - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES (5 PARTS), SURVEYED FROM 1984-1988. 1989-02-24
SAK89M0004	SAKAI, W.H. - QUAD MAPS OF SANTA BARBARA, VENTURA & LOS ANGELES COUNTIES MONARCH WINTERING SITES. 1989-02-24
SAK89R0001	SAKAI, W.H. ET AL. (SANTA MONICA COLLEGE) - "THE WINTERING COLONIES OF THE MONARCH BUTTERFLY (DANAUS PLEXIPPUS) IN THE STATE OF CALIFORNIA." 1989-XX-XX
SAK90F0013	SAKAI, W.H. - FIELD SURVEY FORM FOR MONARCH OVERWINTERING SITE OBSERVATIONS DURING THE 1989-1990 SEASON. 1990-XX-XX
XER14D0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS (DRAFT) 2014-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	15570	**EO Index:**	22825
Key Quad:	Ventura (3411933)	**Element Code:**	IILEPP2012
Occurrence Number:	166	**Occurrence Last Updated:**	2022-09-23

Scientific Name: *Danaus plexippus plexippus pop. 1*

Common Name: monarch - California overwintering population

Listing Status: **Federal:** Candidate

State: None

Rare Plant Rank:

Other Lists: IUCN_EN-Endangered
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G4T1T2Q

State: S2

General Habitat:

WINTER ROOST SITES EXTEND ALONG THE COAST FROM NORTHERN MENDOCINO TO BAJA CALIFORNIA, MEXICO.

Micro Habitat:

ROOSTS LOCATED IN WIND-PROTECTED TREE GROVES (EUCALYPTUS, MONTEREY PINE, CYPRESS), WITH NECTAR AND WATER SOURCES NEARBY.

Last Date Observed:	2021-11-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2022-01-XX	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Fluctuating
Presence:	Presumed Extant		

Location:

VICINITY OF 1586 VISTA DEL MAR DR AND ABOUT 0.1 MILE NE (BEHIND 1594-1612 E THOMPSON BLVD), VENTURA.

Detailed Location:

TWO SITES REPRESENTED. SW SITE IS 'VISTA DEL MAR DR" [=VM] SITE, XERCES SITE #3140; ROOST TREES IN GROVE SPLIT BETWEEN 1586 & 1594 VISTA DEL MAR DRIVE. NE SITE IS "OCEAN AVE PARK" [=OP] SITE, XERCES #3193; BEHIND THE E THOMPSON ADDRESSES.

Ecological:

VM: ROOST TREES WERE PINES WITHIN A MIXED GROVE OF TREES, INCLUDING EUCALYPTUS, CYPRESS, AND PITTOSPORUM. OP: NECTAR AVAILABLE NEARBY FROM EUCALYPTUS AND HOME GARDENS; CLUSTER TREES GET MORNING SUNLIGHT.

Threats:

TREE TRIMMING/REMOVAL (2013).

General:

VM: 20K IN 1985. 25 IN 1990, 100S IN 1992-94. 30 IN JAN 1996. 1000S-50K IN 1997-99, 2001-03, 2006-08, 2014. 0 IN 1988, 1995, 2010, 2017. OP: 850-6K IN 2010-14, 2016. 12 IN 2017. 105 IN 2018. 1-8 IN 2019-20. 1355 IN OCT 2021.

PLSS:	T02N, R23W, Sec. 10, N (S)	**Accuracy:**	1/5 mile	**Area (acres):**	0
UTM:	Zone-11 N3794843 E290196	**Latitude/Longitude:**	34.27360 / -119.27900	**Elevation (feet):**	40

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

INA21U0246	INATURALIST - OBSERVATION 100041782 FROM HTTP://WWW.INATURALIST.ORG. ACCESSED 2022-09-23. 2021-11-01
INA21U0247	INATURALIST & J. FENDI - OBSERVATION 99296918 FROM HTTP://WWW.INATURALIST.ORG. ACCESSED 2022-09-23. 2021-10-24
INA21U0248	INATURALIST - OBSERVATION 99223974 FROM HTTP://WWW.INATURALIST.ORG. ACCESSED 2022-09-23. 2021-10-24
INA21U0249	INATURALIST & J. FENDI - OBSERVATION 99223554 FROM HTTP://WWW.INATURALIST.ORG. ACCESSED 2022-09-23. 2021-10-24
MON15U0001	MONROE, M. ET AL. - THE XERCES SOCIETY WESTERN MONARCH THANKSGIVING COUNT 1997-2014. 2015-XX-XX
SAK00F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED UP TO AND INCLUDING WINTER 1999-2000. 2000-XX-XX
SAK89F0001	SAKAI, W.H. - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES (5 PARTS), SURVEYED FROM 1984-1988. 1989-02-24
SAK89F0005	SAKAI, W.H. - FIELD SURVEY FORMS FOR MONARCH OVERWINTERING SITE OBSERVATIONS DURING THE 1988-1989 SEASON. 1989-XX-XX
SAK89M0004	SAKAI, W.H. - QUAD MAPS OF SANTA BARBARA, VENTURA & LOS ANGELES COUNTIES MONARCH WINTERING SITES. 1989-02-24
SAK89R0001	SAKAI, W.H. ET AL. (SANTA MONICA COLLEGE) - "THE WINTERING COLONIES OF THE MONARCH BUTTERFLY (DANAUS PLEXIPPUS) IN THE STATE OF CALIFORNIA." 1989-XX-XX
SAK91F0002	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1990-91. 1991-XX-XX
SAK93F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1992-93. 1993-XX-XX
SAK94F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED DURING WINTER 1993-94. 1994-XX-XX
SAK95F0001	SAKAI, W. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1994-95. 1995-XX-XX
SAK96F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1995-96. 1996-XX-XX
SAK98F0001	SAKAI, W. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1997-98. 1998-XX-XX
XER14D0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS (DRAFT) 2014-XX-XX
XERNDD0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS XXXX-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 15534
EO Index: 22826
Key Quad: Ventura (3411933)
Element Code: IILEPP2012
Occurrence Number: 167
Occurrence Last Updated: 2015-10-01

Scientific Name: *Danaus plexippus plexippus pop. 1*
Common Name: monarch - California overwintering population

Listing Status: **Federal:** Candidate
State: None
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G4T1T2Q
State: S2

General Habitat:

WINTER ROOST SITES EXTEND ALONG THE COAST FROM NORTHERN MENDOCINO TO BAJA CALIFORNIA, MEXICO.

Micro Habitat:

ROOSTS LOCATED IN WIND-PROTECTED TREE GROVES (EUCALYPTUS, MONTEREY PINE, CYPRESS), WITH NECTAR AND WATER SOURCES NEARBY.

Last Date Observed: 1965-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1985-02-21
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Extirpated

Location:

MOUTH OF VENTURA RIVER, BETWEEN SEASIDE WILDERNESS AREA & SURFERS POINT, VENTURA.

Detailed Location:

XERCES SITE #3141.

Ecological:

ROOST TREES WERE PINES, CYPRESS, AND PALMS. 1989: GROVE OF TREES APPEARED TO BE DYING, PERHAPS DUE TO GROUND-WATER REMOVAL UPSTREAM.

Threats:

General:

ANECDOTE OF CLUSTERS OF 1000S IN 1938. REPORTEDLY OBSERVED FROM MID-1950S TO ABOUT 1965. "APPARENTLY NO LONGER USED" IN 1981. NONE DETECTED IN FEB 1985, PRESUMED EXTIRPATED.

PLSS: T02N, R23W, Sec. 05, SE (S)
Accuracy: 1/5 mile
Area (acres): 0
UTM: Zone-11 N3795309 E287469
Latitude/Longitude: 34.27725 / -119.30871
Elevation (feet): 10

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

NAG85R0001	NAGANO, C. & J. LANE - A SURVEY OF THE LOCATION OF MONARCH BUTTERFLY OVERWINTERING ROOSTS IN THE STATE OF CALIFORNIA, USA: FIRST YEAR 1984/1985. 1985-08-30
SAK00F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED UP TO AND INCLUDING WINTER 1999-2000. 2000-XX-XX
SAK89F0001	SAKAI, W.H. - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES (5 PARTS), SURVEYED FROM 1984-1988. 1989-02-24
SAK89M0004	SAKAI, W.H. - QUAD MAPS OF SANTA BARBARA, VENTURA & LOS ANGELES COUNTIES MONARCH WINTERING SITES. 1989-02-24
SAK89R0001	SAKAI, W.H. ET AL. (SANTA MONICA COLLEGE) - "THE WINTERING COLONIES OF THE MONARCH BUTTERFLY (DANAUS PLEXIPPUS) IN THE STATE OF CALIFORNIA." 1989-XX-XX
XER14D0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS (DRAFT) 2014-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 33183
EO Index: 2193
Key Quad: Ventura (3411933)
Element Code: IILEPP2012
Occurrence Number: 294
Occurrence Last Updated: 2022-10-14

Scientific Name: *Danaus plexippus plexippus pop. 1*
Common Name: monarch - California overwintering population

Listing Status: **Federal:** Candidate
State: None
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G4T1T2Q
State: S2

General Habitat:

WINTER ROOST SITES EXTEND ALONG THE COAST FROM NORTHERN MENDOCINO TO BAJA CALIFORNIA, MEXICO.

Micro Habitat:

ROOSTS LOCATED IN WIND-PROTECTED TREE GROVES (EUCALYPTUS, MONTEREY PINE, CYPRESS), WITH NECTAR AND WATER SOURCES NEARBY.

Last Date Observed: 2017-11-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 2021-11-XX
Occurrence Rank: Good
Owner/Manager: PVT
Trend: Decreasing
Presence: Presumed Extant

Location:

TAYLOR RANCH, WEST OF THE VENTURA RIVER AND NORTH OF MAIN STREET, ON THE VENTURA RIVER FLOODPLAIN, VENTURA.

Detailed Location:

XERCES SITE #3150. 2000: "WINDROW... RUNS ALONG THE NORTH SIDE OF MAIN STREET. AT THE ENTRANCE TO THE RANCH, THE WINDROW WINDS NORTH PARALLELLING THE CONTOUR OF THE LANDSCAPE."

Ecological:

1998: ROOST TREES IN EUCALYPTUS WINDROWS SURROUNDING AN ORCHARD. 2000: CLUSTERS MOSTLY NEAR RANCH ENTRANCE, WITH SMALL GROUPS ALL ALONG THE WINDROW RUNNING INLAND (ALONG TAYLOR RANCH ROAD, NOW DEMOLISHED). SITE IS PROBABLY LESS PRODUCTIVE.

Threats:

AIR PHOTOS INDICATE THAT THE WINDROWS ALONG TAYLOR RANCH RD & SOME ALONG MAIN ST WERE REMOVED BETWEEN 2009 & 2011.

General:

60K+ REPORTED IN 1989-90. 100S FLYERS IN 1993-94. NONE OBS FROM ENTRANCE, JAN 1998. 4K-9K IN 1998-2000. 0 IN 2001. 950 IN 2008. 500 IN 2010. 0 IN 2014. 80 IN 2017. 12 IN 2018. 0 IN 2019-2020. 20 IN 2021.

PLSS: T02N, R23W, Sec. 05, N (S)
Accuracy: 2/5 mile
Area (acres): 0
UTM: Zone-11 N3796429 E287342
Latitude/Longitude: 34.28731 / -119.31037
Elevation (feet): 30

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

MON15U0001	MONROE, M. ET AL. - THE XERCES SOCIETY WESTERN MONARCH THANKSGIVING COUNT 1997-2014. 2015-XX-XX
SAK00F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED UP TO AND INCLUDING WINTER 1999-2000. 2000-XX-XX
SAK90F0013	SAKAI, W.H. - FIELD SURVEY FORM FOR MONARCH OVERWINTERING SITE OBSERVATIONS DURING THE 1989-1990 SEASON. 1990-XX-XX
SAK94F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED DURING WINTER 1993-94. 1994-XX-XX
SAK98F0001	SAKAI, W. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1997-98. 1998-XX-XX
XER14D0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS (DRAFT) 2014-XX-XX
XERNDD0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS XXXX-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number:	33346	**EO Index:**	13334
Key Quad:	Ventura (3411933)	**Element Code:**	IILEPP2012
Occurrence Number:	311	**Occurrence Last Updated:**	2022-10-14

Scientific Name: *Danaus plexippus plexippus pop. 1*

Common Name: monarch - California overwintering population

Listing Status: **Federal:** Candidate

State: None

Rare Plant Rank:

Other Lists: IUCN_EN-Endangered
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G4T1T2Q

State: S2

General Habitat:

WINTER ROOST SITES EXTEND ALONG THE COAST FROM NORTHERN MENDOCINO TO BAJA CALIFORNIA, MEXICO.

Micro Habitat:

ROOSTS LOCATED IN WIND-PROTECTED TREE GROVES (EUCALYPTUS, MONTEREY PINE, CYPRESS), WITH NECTAR AND WATER SOURCES NEARBY.

Last Date Observed:	2022-01-XX	**Occurrence Type:**	Natural/Native occurrence
Last Survey Date:	2022-01-XX	**Occurrence Rank:**	Good
Owner/Manager:	PVT	**Trend:**	Unknown
Presence:	Presumed Extant		

Location:

JUST EAST OF HARBOR BLVD, BETWEEN HWY 101 & ARUNDELL BARRANCA, NE END OF VENTURA HARBOR, VENTURA.

Detailed Location:

XERCES SITE #3151.

Ecological:

TWO OR THREE WINDROWS OF EUCALYPTUS WITH AGRICULTURAL FIELDS TO THE EAST. 2013: TREES PRUNED HEAVILY AND CUT DOWN THE YEAR PRIOR, EXPOSING OVERWINTERING AREA; REGROWTH PROVIDED MORE SHELTER IN 2013.

Threats:

TREE TRIMMING/REMOVAL (2013).

General:

1000S (UP TO 30K) OBS IN 1992-1994, 1997-2001. 600 IN 2002. 4960 IN 2003. 200-450 IN 2005-2007. 1000S IN 2010 & 2011. 0 IN 2012. 100S IN 2013 & 2014. 2K IN 2016. 1100 IN 2017. 289 IN 2018. 4-10 IN 2019-2020. 5547 IN NOV 2021; 921 BY JAN.

PLSS:	T02N, R23W, Sec. 14, N (S)	**Accuracy:**	non-specific area	**Area (acres):**	9
UTM:	Zone-11 N3793333 E291669	**Latitude/Longitude:**	34.26029 / -119.26264	**Elevation (feet):**	50

County Summary:	**Quad Summary:**
Ventura	Ventura (3411933)

Sources:

MON15U0001	MONROE, M. ET AL. - THE XERCES SOCIETY WESTERN MONARCH THANKSGIVING COUNT 1997-2014. 2015-XX-XX
SAK00F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED UP TO AND INCLUDING WINTER 1999-2000. 2000-XX-XX
SAK93F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1992-93. 1993-XX-XX
SAK94F0001	SAKAI, W.H. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED DURING WINTER 1993-94. 1994-XX-XX
SAK95F0001	SAKAI, W. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1994-95. 1995-XX-XX
SAK98F0001	SAKAI, W. (SANTA MONICA COLLEGE) - STATEWIDE SET OF FIELD SURVEY FORMS FOR MONARCH WINTERING SITES, SURVEYED IN WINTER 1997-98. 1998-XX-XX
XER14D0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS (DRAFT) 2014-XX-XX
XERNDD0001	XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS XXXX-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B8296
Key Quad: Ventura (3411933)
Occurrence Number: 434
EO Index: 121418
Element Code: IILEPP2012
Occurrence Last Updated: 2022-09-23

Scientific Name: *Danaus plexippus plexippus pop. 1*
Common Name: monarch - California overwintering population

Listing Status: **Federal:** Candidate
State: None
CNDDB Element Ranks: **Global:** G4T1T2Q
State: S2
Rare Plant Rank:
Other Lists: IUCN_EN-Endangered
USFS_S-Sensitive

General Habitat:

WINTER ROOST SITES EXTEND ALONG THE COAST FROM NORTHERN MENDOCINO TO BAJA CALIFORNIA, MEXICO.

Micro Habitat:

ROOSTS LOCATED IN WIND-PROTECTED TREE GROVES (EUCALYPTUS, MONTEREY PINE, CYPRESS), WITH NECTAR AND WATER SOURCES NEARBY.

Last Date Observed: 2021-11-XX
Last Survey Date: 2022-01-XX
Owner/Manager: PVT
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

JUST EAST OF HIGHWAY 101 AT SOUTH SEAWARD AVE, EAST OF PIERPONT BAY, CITY OF VENTURA.

Detailed Location:

XERCES SITE #3139. SITE NAME: VISTA DEL MAR SE, VENTURA. THE OLD LOCATION OF XERCES SITE #3139 WAS TO THE WEST (CNDDB OCCURRENCE 165).

Ecological:

ECUALYTPUS AND CYPRESS TREES IN THE VENTURA CREDIT UNION PARKING LOT.

Threats:

General:

260 COUNTED IN 2014. 0 COUNTED IN 2016 & 2017. 223 DURING THANKSGIVING COUNT IN 2018; 7 BY NEW YEAR COUNT. 6 IN 2020. 300 ON 4 NOV 2021. 207 OBS DURING THANKSGIVING COUNT 2021, 2 BY NEW YEAR COUNT.

PLSS: T02N, R23W, Sec. 11, SW (S)
Accuracy: 80 meters
Area (acres): 5
UTM: Zone-11 N3793832 E291433
Latitude/Longitude: 34.26474 / -119.26533
Elevation (feet): 69

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

INA21U0238 INATURALIST - OBSERVATION 100280603 FROM HTTP://WWW.INATURALIST.ORG. ACCESSED 2022-09-09. 2021-11-04

XERNDD0001 XERCES SOCIETY - DATABASE OF WESTERN MONARCH OVERWINTERING LOCATIONS XXXX-XX-XX

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 47567
EO Index: 47567
Key Quad: Ventura (3411933)
Element Code: PDAST20095
Occurrence Number: 24
Occurrence Last Updated: 2010-06-14

Scientific Name: *Chaenactis glabriuscula var. orcuttiana*
Common Name: Orcutt's pincushion

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1

CNDDB Element Ranks: **Global:** G5T1T2
State: S1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_CRES-San Diego Zoo CRES Native Gene Seed Bank

General Habitat:
COASTAL BLUFF SCRUB, COASTAL DUNES.

Micro Habitat:
SANDY SITES. 3-80 M.

Last Date Observed: 1961-05-23
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1961-05-23
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Decreasing
Presence: Possibly Extirpated

Location:
PIERPONT BAY BOULEVARD, VENTURA.

Detailed Location:
MAPPED BY CNDDB AS BEST GUESS ALONG PIERPONT BLVD.

Ecological:

Threats:
DEVELOPMENT, RECREATION.

General:
FORMERLY COMMON LOCALLY IN PIERPONT BAY AREA, LARGELY EXTIRPATED IN 1961.

PLSS: T02N, R23W, Sec. 10 (S)
Accuracy: non-specific area
Area (acres): 141
UTM: Zone-11 N3793799 E290812
Latitude/Longitude: 34.26432 / -119.27206
Elevation (feet):

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:
POL61S0001 POLLARD, H. - POLLARD SN POM #351771 1961-05-23

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 31516
EO Index: 9348
Key Quad: Ventura (3411933)
Element Code: PDAST5L0A1
Occurrence Number: 52
Occurrence Last Updated: 1995-07-11

Scientific Name: *Lasthenia glabrata ssp. coulteri*
Common Name: Coulter's goldfields

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4T2
State: S2

Rare Plant Rank: 1B.1
Other Lists: BLM_S-Sensitive
SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_SBBG-Santa Barbara Botanic Garden

General Habitat:
COASTAL SALT MARSHES, PLAYAS, VERNAL POOLS.

Micro Habitat:
USUALLY FOUND ON ALKALINE SOILS IN PLAYAS, SINKS, AND GRASSLANDS. 1-1375 M.

Last Date Observed: 1895-05-13
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1895-05-13
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
VENTURA.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB IN THE VICINITY OF VENTURA AND THE VENTURA RIVER.

Ecological:
NEAR BEACH.

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS AN 1895 PETTIBONE COLLECTION. ORIGINAL LABEL L. GLABRATA ANNOTATED TO SSP. COULTERI BY ORNDUFF IN 1961.

PLSS: T02N, R23W, Sec. 04 (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3796410 E288219
Latitude/Longitude: 34.28732 / -119.30084
Elevation (feet): 40

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:
PET95S0001 PETTIBONE, N. & F. HUBBY - PETTIBONE SN CAS #345522, CAS-BOT-BC #329164 1895-05-13

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 17566
Key Quad: Ventura (3411933)
Occurrence Number: 8
EO Index: 11754
Element Code: PDCHE02010
Occurrence Last Updated: 2012-05-02

Scientific Name: *Aphanisma blitoides*
Common Name: aphanisma

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G3G4
State: S2
Rare Plant Rank: 1B.2
Other Lists: SB_CRES-San Diego Zoo CRES Native Gene Seed Bank
SB_SBBG-Santa Barbara Botanic Garden

General Habitat:
COASTAL BLUFF SCRUB, COASTAL DUNES, COASTAL SCRUB.

Micro Habitat:
ON BLUFFS AND SLOPES NEAR THE OCEAN IN SANDY OR CLAY SOILS. 3-305 M.

Last Date Observed: 1963-06-01
Last Survey Date: 1963-06-01
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
NEAR VENTURA, ABOUT 1.5 MILES WEST OF VENTURA RIVER.

Detailed Location:
AT THE BASE OF BULLDOZED COASTAL BLUFF OF TAYLOR RANCH. EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB IN VICINITY OF COASTAL BLUFFS ALONG HIGHWAY 101, FROM 1 TO 2 ROAD MILES NORTHWEST OF VENTURA RIVER.

Ecological:
SURFACE OF A SAND AND GRAVEL DETRITUS DUMP AT THE BASE OF BULLDOZED COASTAL BLUFF.

Threats:

General:
MAIN SOURCE OF INFORMATION FOR THIS SITE IS A 1963 POLLARD COLLECTION. NEEDS FIELDWORK.

PLSS: T03N, R23W, Sec. 31 (S)
Accuracy: non-specific area
Area (acres): 69
UTM: Zone-11 N3796806 E285271
Latitude/Longitude: 34.29028 / -119.33293
Elevation (feet):

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

POL63S0001	POLLARD, H. - POLLARD SN CAS #463296, CAS-BOT-BC #176333 1963-06-01
SMI82U0002	SMITH, D. - FIELD SURVEY OF CANDIDATE THREATENED OR ENDANGERED PLANT SPECIES AT VANDENBERG AFB WITH ADDENDUM 1982-06-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 17566
Key Quad: Ventura (3411933)
Occurrence Number: 86
EO Index: 86879
Element Code: PDCHE040E0
Occurrence Last Updated: 2012-05-03

Scientific Name: *Atriplex coulteri*
Common Name: Coulter's saltbush

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G3
State: S1S2
Rare Plant Rank: 1B.2
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_CRES-San Diego Zoo CRES Native Gene Seed Bank

General Habitat:

COASTAL BLUFF SCRUB, COASTAL DUNES, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:

OCEAN BLUFFS, RIDGETOPS, AS WELL AS ALKALINE LOW PLACES. ALKALINE OR CLAY SOILS. 2-460 M.

Last Date Observed: 1963-06-02
Last Survey Date: 1963-06-02
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:

COASTAL BLUFF APPROXIMATELY 1.5 MILES WEST OF VENTURA RIVER.

Detailed Location:

EXACT LOCATION UNKNOWN. MAPPED AS BEST GUESS BY CNDDB IN VICINITY OF COASTAL BLUFFS ALONG HIGHWAY 101, FROM 1 TO 2 ROAD MILES NORTHWEST OF VENTURA RIVER.

Ecological:

DRY, SANDY-CALCAREOUS SLOPE OF COASTAL BLUFF, WITH PLANTAGO INSULARIS.

Threats:

General:

ONLY SOURCE OF INFORMATION FOR THIS OCCURRENCE IS A 1963 COLLECTION BY POLLARD. THERE IS A 1963 POLLARD COLLECTION HERE FROM THE SAME DATE FOR A. PACIFICA; UNKNOWN THESE ATRIPLEX CO-OCCUR HERE OR IF THIS IS A MIS-ID OF THE SAME POPULATION.

PLSS: T03N, R23W, Sec. 31 (S)
Accuracy: non-specific area
Area (acres): 69
UTM: Zone-11 N3796806 E285271
Latitude/Longitude: 34.29028 / -119.33293
Elevation (feet):

County Summary:

Ventura

Quad Summary:

Ventura (3411933)

Sources:

POL63S0002 POLLARD, H. - POLLARD SN CDA #23231 1963-06-02

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: B1542
Key Quad: Ventura (3411933)
Occurrence Number: 133

EO Index: 113448
Element Code: PDCHE040E0
Occurrence Last Updated: 2018-12-05

Scientific Name: *Atriplex coulteri*
Common Name: Coulter's saltbush

Listing Status: **Federal:** None
State: None

CNDDB Element Ranks: **Global:** G3
State: S1S2

Rare Plant Rank: 1B.2
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_CRES-San Diego Zoo CRES Native Gene Seed Bank

General Habitat:
COASTAL BLUFF SCRUB, COASTAL DUNES, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
OCEAN BLUFFS, RIDGETOPS, AS WELL AS ALKALINE LOW PLACES. ALKALINE OR CLAY SOILS. 2-460 M.

Last Date Observed: 2009-01-30
Last Survey Date: 2009-01-30
Owner/Manager: DPR-EMMA WOOD SB
Presence: Presumed Extant

Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
EMMA WOOD STATE BEACH, ADJACENT TO VENTURA RIVER.

Detailed Location:
MAPPED ACCORDING TO 2009 CAHILL COORDINATES.

Ecological:

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 2009 CAHILL COLLECTION.

PLSS: T02N, R23W, Sec. 5, S (S)
Accuracy: 80 meters
Area (acres): 5

UTM: Zone-11 N3795420 E287154
Latitude/Longitude: 34.27818 / -119.31216
Elevation (feet): 12

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:
CAH09S0001 CAHILL, J. - CAHILL #3198 UCR #207176 2009-01-30

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 86442
Key Quad: Ventura (3411933)
Occurrence Number: 89
EO Index: 87481
Element Code: PDCHE041C0
Occurrence Last Updated: 2012-08-03

Scientific Name: *Atriplex pacifica*
Common Name: south coast saltscale

Listing Status: **Federal:** None
State: None
CNDDB Element Ranks: **Global:** G4
State: S2
Rare Plant Rank: 1B.2
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_CRES-San Diego Zoo CRES Native Gene Seed Bank

General Habitat:
COASTAL SCRUB, COASTAL BLUFF SCRUB, PLAYAS, COASTAL DUNES.

Micro Habitat:
ALKALI SOILS. 1-400 M.

Last Date Observed: 1972-06-10
Last Survey Date: 1972-06-10
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
SOUTHERN PACIFIC RAILROAD R-O-W AT FREEWAY OVERPASS, APPROXIMATELY 1.5 MILES WEST OF VENTURA RIVER.

Detailed Location:
MAPPED AS BEST GUESS BY CNDDB AT THE HWY 1 OVERPASS OF THE RAILROAD. ADDITIONAL LOCALITIES ATTRIBUTED HERE INCLUDE "COASTAL BLUFF ~1.5 MI W OF VENTURA RIVER ESTUARY" AND "~100 YDS FROM BEACH AND 1.5 MI W OF VENTURA RIVER ESTUARY."

Ecological:
DRIED MUD FLAT, NEAR FOOT OF MARITIME BLUFF. DRY, SANDY-CALCAREOUS SLOPE OF COASTAL BLUFF.

Threats:

General:
OCCURRENCE IS BASED ON THREE POLLARD COLLECTIONS FROM 1963, 1967, AND 1972. THERE IS A 1963 POLLARD COLLECTION HERE FROM THE SAME DATE FOR A. COULTERI; UNKNOWN IF THESE ATRIPLEX CO-OCCUR HERE OR IF THIS IS A MIS-ID OF THE SAME POPULATION.

PLSS: T03N, R24W, Sec. 36 (S)
Accuracy: 1/10 mile
Area (acres): 0
UTM: Zone-11 N3797135 E284755
Latitude/Longitude: 34.29314 / -119.33862
Elevation (feet):

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

POL63S0003	POLLARD, H. - POLLARD SN SBBG #36733, CAS #463645, CAS-BOT-BC #180881 1963-06-02
POL67S0002	POLLARD, H. - POLLARD SN SBBG #38429, CAS #489160, CAS-BOT-BC #180880 1967-03-30
POL72S0001	POLLARD, H. - POLLARD SN SBBG #45502 1972-06-10

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: A5710
Key Quad: Ventura (3411933)
Occurrence Number: 12
EO Index: 107451
Element Code: PDFAB0F2X3
Occurrence Last Updated: 2017-08-04

Scientific Name: *Astragalus didymocarpus var. milesianus*
Common Name: Miles' milk-vetch

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.2
Other Lists:

CNDDB Element Ranks: **Global:** G5T2
State: S2

General Habitat:
COASTAL SCRUB.

Micro Habitat:
CLAY SOILS. 50-385 M.

Last Date Observed: 1945-04-08
Last Survey Date: 1945-04-08
Owner/Manager: UNKNOWN
Presence: Presumed Extant
Occurrence Type: Natural/Native occurrence
Occurrence Rank: Unknown
Trend: Unknown

Location:
CASITAS ROAD, VENTURA.

Detailed Location:
EXACT LOCATION UNKNOWN. MAPPED BY CNDDB AS BEST GUESS AROUND THE CASITAS PASS ROAD AREA WHERE IT PARALLELS COYOTE CREEK. OTHER POLLARD COLLECTIONS FROM THE SAME DAY FOR DIFFERENT SPECIES WERE FROM COYOTE CREEK.

Ecological:

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS A 1945 POLLARD COLLECTION. ID NEEDS CONFIRMATION. COLLECTION AT SBBG IS IDENTIFIED AS VAR. MILESIANUS WHILE COLLECTION AT CAS IS IDENTIFIED AS VAR. DIDYMOCARPUS.

PLSS: T03N, R23W, Sec. 6 (S)
Accuracy: 1 mile
Area (acres): 1,987
UTM: Zone-11 N3805108 E286034
Latitude/Longitude: 34.36525 / -119.32673
Elevation (feet):

County Summary:
Ventura

Quad Summary:
Ventura (3411933), Matilija (3411943)

Sources:
POL45S0007 POLLARD, H. - POLLARD SN SBBG #68226 1945-04-08

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 40344
EO Index: 35351
Key Quad: Ventura (3411933)
Element Code: PDFAB0F7B1
Occurrence Number: 6
Occurrence Last Updated: 2009-07-14

Scientific Name: *Astragalus pycnostachyus var. lanosissimus*
Common Name: Ventura Marsh milk-vetch

Listing Status: **Federal:** Endangered
State: Endangered
Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
SB_SBBG-Santa Barbara Botanic Garden

CNDDB Element Ranks: **Global:** G2T1
State: S1

General Habitat:
MARSHES AND SWAMPS, COASTAL DUNES, COASTAL SCRUB.

Micro Habitat:
WITHIN REACH OF HIGH TIDE OR PROTECTED BY BARRIER BEACHES, MORE RARELY NEAR SEEPS ON SANDY BLUFFS. 1-60 M.

Last Date Observed: 1911-08-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1987-08-30
Occurrence Rank: None
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Possibly Extirpated

Location:
VENTURA.

Detailed Location:
EXACT LOCATION NOT KNOWN. MAPPED IN THE GENERAL AREA OF THE CITY OF VENTURA.

Ecological:

Threats:

General:
MAIN SOURCE OF INFORMATION FOR THIS SITE IS 1911 COLLECTION BY ESSIG. VICINITY OF PIERPORT BEACH AND SAN BUENAVENTURA STATE BEACH SEARCHED BY BURGESS IN 1987, BUT NO PLANTS FOUND. ONLY MARGINALLY SUITABLE HABITAT REMAINING AT THESE SITES.

PLSS: T03N, R23W, Sec. 33 (S)
Accuracy: 5 miles
Area (acres): 0
UTM: Zone-11 N3797778 E288635
Latitude/Longitude: 34.29973 / -119.29666
Elevation (feet): 200

County Summary:
Ventura

Quad Summary:
Oxnard (3411922), Saticoy (3411932), Ventura (3411933), Pitas Point (3411934)

Sources:

BUR87F0006	BURGESS, R. - FIELD SURVEY FORM FOR ASTRAGALUS PYCNOSTACHYUS VAR. LANOSISSIMUS 1987-08-30
ESS11S0001	ESSIG, E. - ESSIG SN JEPS #74641 RSA #269258 CDA #26739 1911-08-XX
MAG98R0001	MAGNEY, D. - PETITION TO THE FISH AND GAME COMMISSION TO LIST THE VENTURA MARSH MILKVETCH AS AN ENDANGERED SPECIES. 1998-09-23

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 87909
EO Index: 88873
Key Quad: Ventura (3411933)
Element Code: PDLAM180A5
Occurrence Number: 5
Occurrence Last Updated: 2013-01-17

Scientific Name: *Monardella hypoleuca ssp. hypoleuca*
Common Name: white-veined monardella

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.3
Other Lists: SB_SBBG-Santa Barbara Botanic Garden

CNDDB Element Ranks: **Global:** G4T3
State: S3

General Habitat:
CHAPARRAL, CISMONTANE WOODLAND.

Micro Habitat:
DRY SLOPES. 50-1280 M.

Last Date Observed: 1969-09-05
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1969-09-05
Occurrence Rank: Unknown
Owner/Manager: VEN COUNTY
Trend: Unknown
Presence: Presumed Extant

Location:
FOSTER PARK, CASITAS PASS ROAD (CASITAS VISTA ROAD), SOUTH OF CASITAS SPRINGS.

Detailed Location:
"NEAR AMPHITHEATER AND CARETAKER'S HOUSE." MAPPED BY CNDDB AS BEST GUESS NEAR THE CAMPGROUND AND AMPHITHEATER AREA WITHIN FOSTER PARK. IN THE SW 1/4 OF THE NE 1/4 OF SECTION 8.

Ecological:
LIVE-OAK WOODLAND.

Threats:

General:
SITE BASED ON A 1967 PHILBRICK COLLECTION AND A 1969 POLLARD COLLECTION. A 1925 HOFFMANN COLLECTION FROM "CASITAS PASS" IS ALSO ATTRIBUTED TO THIS SITE. NEEDS FIELDWORK.

PLSS: T03N, R23W, Sec. 08, NE (S)
Accuracy: 1/10 mile
Area (acres): 0
UTM: Zone-11 N3803683 E287417
Latitude/Longitude: 34.35269 / -119.31134
Elevation (feet): 300

County Summary:	Quad Summary:
Ventura	Ventura (3411933)

Sources:

HOF25S0007	HOFFMANN, R. - HOFFMANN SN SBBG #71974 1925-06-16
PHI67S0018	PHILBRICK, R. - PHILBRICK SN SBBG #27761 1967-08-24
POL69S0002	POLLARD, H. - POLLARD SN CAS #540860 1969-09-05

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 72067
EO Index: 72982
Key Quad: Ventura (3411933)
Element Code: PDPLM0C130
Occurrence Number: 2
Occurrence Last Updated: 2008-08-26

Scientific Name: *Navarretia ojaiensis*
Common Name: Ojai navarretia

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.1
Other Lists: SB_CalBG/RSABG-California/Rancho Santa Ana Botanic Garden
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G2
State: S2

General Habitat:
CHAPARRAL, COASTAL SCRUB, VALLEY AND FOOTHILL GRASSLAND.

Micro Habitat:
OPENINGS IN SHRUBLANDS OR GRASSLANDS. 275-620 M.

Last Date Observed: 1999-07-14
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1999-07-14
Occurrence Rank: Unknown
Owner/Manager: USBOR
Trend: Unknown
Presence: Presumed Extant

Location:
COYOTE CREEK CANYON BELOW LAKE CASITAS DAM, RED MOUNTAIN.

Detailed Location:
AT SCE TOWER #1-2N. MAPPED BY CNDDB ACCORDING TO DIGITAL DATA SUBMITTED BY MAGNEY IN 2008.

Ecological:

Threats:

General:
UNKNOWN NUMBER OF PLANTS SEEN IN 1999.

PLSS: T04N, R23W, Sec. 31, SW (S)
Accuracy: 80 meters
Area (acres): 0
UTM: Zone-11 N3805981 E285643
Latitude/Longitude: 34.37303 / -119.33119
Elevation (feet): 600

County Summary:
Ventura

Quad Summary:
Ventura (3411933)

Sources:

MAG08D0001	MAGNEY, D. - SHAPEFILE AND EXCEL SPREADSHEET WITH NAVARRETIA OJAIENSIS LOCALITY INFORMATION. INCLUDES RECENT OBSERVATIONS AND INTERPRETATIONS OF HISTORICAL COLLECTIONS. 2008-08-26
MAG08U0003	MAGNEY, D. - EMAIL COMMUNICATION BETWEEN D. MAGNEY AND N. JENSEN REGARDING LOCALITY INFORMATION FOR NAVARRETIA OJAIENSIS. 2008-06-01
MAG99S0002	MAGNEY, D. & C. BATCHELOR - MAGNEY #SCE-81-99 UCSB #65349 (ALSO CITED IN MAG08D0001) 1999-07-14

Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database

Map Index Number: 27683
EO Index: 26813
Key Quad: Ventura (3411933)
Element Code: PMLIL0D1J2
Occurrence Number: 1
Occurrence Last Updated: 1995-12-05

Scientific Name: *Calochortus fimbriatus*
Common Name: late-flowered mariposa-lily

Listing Status: **Federal:** None
State: None
Rare Plant Rank: 1B.3
Other Lists: SB_SBBG-Santa Barbara Botanic Garden
USFS_S-Sensitive

CNDDB Element Ranks: **Global:** G3
State: S3

General Habitat:
CHAPARRAL, CISMONTANE WOODLAND, RIPARIAN WOODLAND.

Micro Habitat:
DRY, OPEN COASTAL WOODLAND, CHAPARRAL; ON SERPENTINE. 270-1645 M.

Last Date Observed: 1960-XX-XX
Occurrence Type: Natural/Native occurrence
Last Survey Date: 1960-XX-XX
Occurrence Rank: Unknown
Owner/Manager: UNKNOWN
Trend: Unknown
Presence: Presumed Extant

Location:
RED MOUNTAIN, EAST END OF RINCON HILLS.

Detailed Location:
MAPPED NORTHWEST OF VENTURA. COLLECTION MADE AT 1400' ELEVATION ACCORDING TO SOURCE.

Ecological:
ON BURN.

Threats:

General:
ONLY SOURCE OF INFORMATION FOR THIS SITE IS 1960 COLLECTION (COLLECTOR AND HERBARIUM NOT CITED) NOTED BY MAGNEY.

PLSS: T03N, R24W (S)
Accuracy: 1 mile
Area (acres): 0
UTM: Zone-11 N3803751 E284394
Latitude/Longitude: 34.35268 / -119.34420
Elevation (feet): 1,400

County Summary:
Ventura

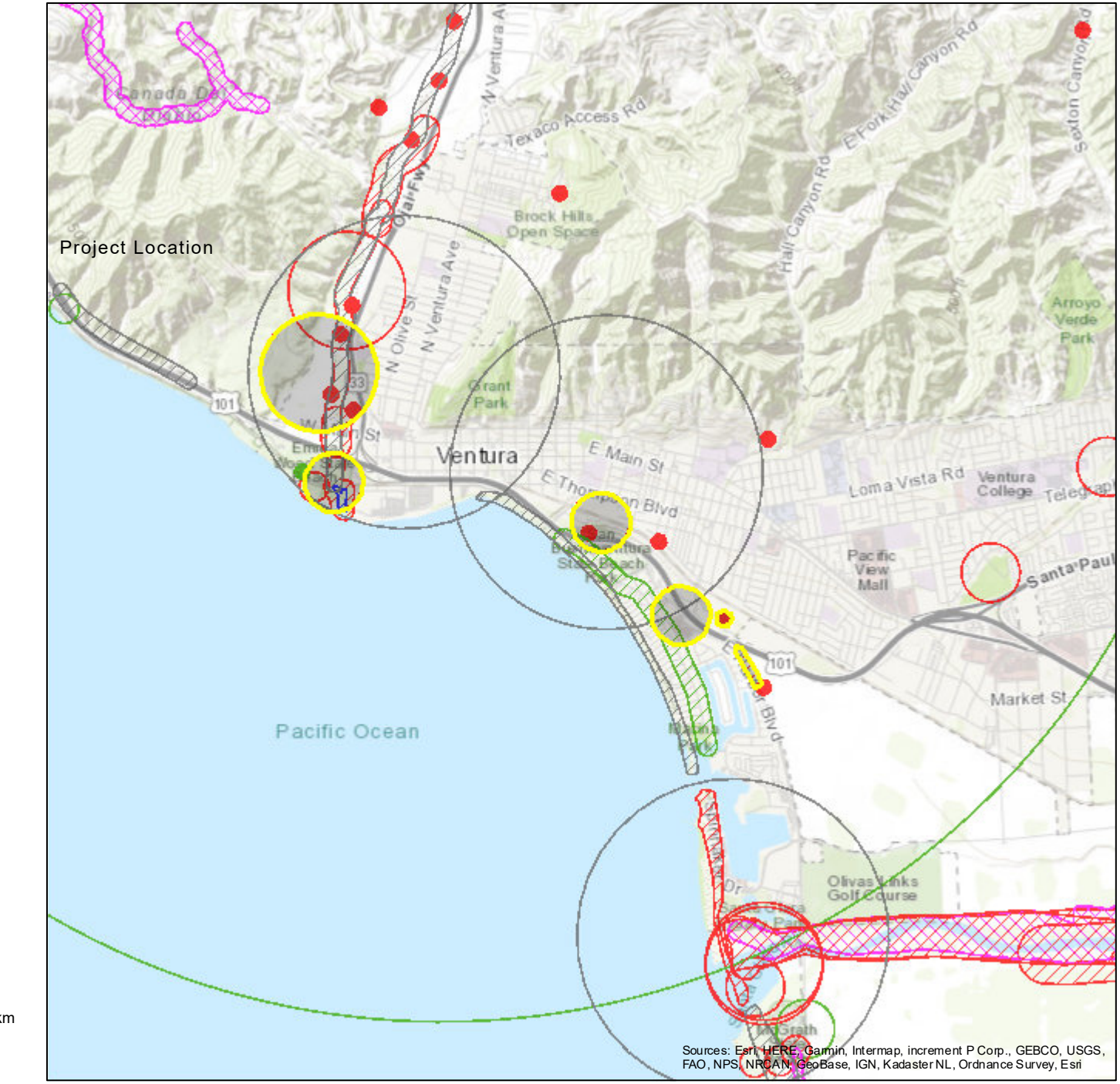
Quad Summary:
Ventura (3411933)

Sources:
MAG93U0002 MAGNEY, D. - NOTES REGARDING NUMEROUS SPECIES FOR THE 5TH EDITION OF CNPS INVENTORY 1993-09-26

Map of Project Area

California Natural Diversity Database (CNDDB) Government [ds45]

- Plant (80m)
- Plant (specific)
- Plant (non-specific)
- Plant (circular)
- Animal (80m)
- Animal (specific)
- Animal (non-specific)
- Animal (circular)
- Terrestrial Comm. (80m)
- Terrestrial Comm. (specific)
- Terrestrial Comm. (non-specific)
- Terrestrial Comm. (circular)
- Aquatic Comm. (80m)
- Aquatic Comm. (specific)
- Aquatic Comm. (non-specific)
- Aquatic Comm. (circular)
- Multiple (80m)
- Multiple (specific)
- Multiple (non-specific)
- Multiple (circular)



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December 15, 2022

Author: patrick.thompson@dot.ca.gov

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California Department of Transportation

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October 9th, 2023

Jennifer Trunk, Planner Manager
Ventura County Resource Management Agency
800 S. Victoria Ave.
Ventura, CA 93009

Subject: Submittal of Addendum Letter for proposed VEN-1 Ventura Overhead Bridge Replacement Project in Ventura County.

Dear Ms. Trunk,

The California Department of Transportation proposes to replace the VEN-1 Ventura Overhead Bridge. An Initial Study Biological Assessment (ISBA) was submitted to the Ventura County Planning Division on 07/31/2023. Below is the original project Development Proposal Description from the ISBA.

Caltrans proposes to replace the existing State Route-1, Ventura Overhead Bridge (Bridge No. 52-0040) with a new bridge at post mile (PM) 21.3-21.9 in Ventura County. The new bridge will include upgraded bridge rails that meet the requirements of the Coastal Zone Management Act of 1972 and will also include new retaining walls on the north and south sides of the bridge. A Class 1 Bike Lane (measuring 8-10 feet in width with a barrier) will also be built on the southbound of the bridge facing the ocean from PM 21.3 to 21.9. A temporary bike bridge will be installed to allow cyclists to safely bypass the bridge construction zone. The State Beach Access Road will also be permanently widened.

An addendum is required for this project to capture additional impacts that were not discussed or analyzed in the original ISBA. A bike/pedestrian bridge will be required to connect to the existing bike path at the south end of the project limits. The bridge will be approximately 12 ft wide and 49 ft in length and will span over an existing culvert known as drainage #3.

The location of drainage #3 is of poor habitat quality for various wildlife species and does not support the constituent elements required to support critical habitat for any aquatic species. The predominant plant species are ruderal. The native plant species present are upland except for mulefat and one lone cottonwood that recently sprung

up (this season). This is not a historical stream. The main function of this drain is to control rainwater flow from the 101 freeway during rain events. This drainage originates at a box channel outlet directly under the existing bridge on VEN-1. A list of the vegetative species to be impacted is listed below.

- Russian thistle (*Salsola australis*)
- Black mustard (*Brassica nigra*)
- Caster bean (*Ricinus communis*)
- Fountain grass (*Pennisetum setaceum*)
- Tree tobacco (*Nicotiana glauca*)
- *California rye grass (*Elymus condensatus*)
- *Coyote brush (*Baccharis pilularis*)
- *Mulefat (*Baccharis salicifolia*)
- *Saltbush (*Atriplex californica*)
- *Cottonwood (*Populus trichocarpa*)

* Indicates native species

All permanent impacts to native species resulting from this additional project scope will be replaced at a 2-1 ratio.

Should you have any questions, please feel free to contact me at (213) 266-6973 or by email at Patrick.Thompson@dot.ca.gov.

Sincerely,

Patrick Thompson, Associate District Biologist
(213) 266-6973
Division of Environmental Planning
California Department of Transportation, District 7