YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT
(BETWEEN RANCHO VISTA ROAD AND TIERRA VISTA ROAD)
~~DRAFT~~ FINAL INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

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Community Development Department
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Project Proposed by
City of Temecula Public Works Department
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~~November 2025~~
January 2026

1/11/2026 Revision Note: Minor revisions were made to this Initial Study to accommodate public comments received during the public comment period of December 10, 2025 to January 9, 2026 as well as includes minor administrative technical edits to correct typographical errors. Added text is reflected in underlined shaded text (added text) and deletions are reflected in shaded strikeout text (~~deleted text~~). None of the revisions constituted significant or new information that requires this Initial Study to be recirculated in accordance with CEQA Guidelines Section 15088.5.

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LIST OF ACRONYMS

Acronym	Definition
AB 32	Assembly Bill 32
AB 52	Assembly Bill 52
ADA	Americans with Disabilities Act
AFY	Acre Feet Per Year
AQMP	Air Quality Management Plan
APE	Area of Potential Effect
APN	Assessor Parcel Number
APZ	Accident Potential Zone
BMPs	Best Management Practices
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CF	cubic feet
City	City of Temecula
CMP	Congestion Management Program
CNPS	California Native Plant Society
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CRHR	California Register of Historic Places
dBA	A-Weighted Decibels
DIF	Development Impact Fees
DPM	Diesel Particulate Matter
EPA	Environmental Protection Agency
ERRP	Enhanced Recharge and Recovery Program
ESA	Endangered Species Act
FAR	Floor Area Ratio
FEMA	Federal Emergency Management Agency
FMMP	Farmland Mapping Management Program
GHG	Greenhouse Gas
GSP	Groundwater Sustainability Plan
gpd/acre	Gallons per Day per Acre
HAER	Historic American Engineering Record
HCP	Habitat Conservation Plan
ITE	Institute of Transportation Engineers
kBTU	thousand British thermal units
LID	Low Impact Design
LOS	Level of Service
LST	Localized Significance Threshold
MDAQMD	Mojave Desert Air Quality Management District
mgd	Millions of Gallons per Day
MLD	Most Likely Descendent
MMRP	Mitigation Monitoring and Reporting Program
MRZ	Mineral Resources Zone

MS4	Municipal Separate Storm Water Sewer System
MTCO2e	Metric Tons Carbon Dioxide Equivalent
NAHC	Native American Heritage Commission
NCCP	Natural Communities Conservation Plan
ND	Negative Declaration
NO2	Nitrogen Dioxide
NOx	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
PCE	Passenger Car-Equivalent
PM-2.5	Particulate Matter Less Than 2.5 Microns in Diameter
PM-10	Particulate Matter Less Than 10 Microns in Diameter
PRIMMP	Paleontological Resource Impact Mitigation Monitoring Program
RWQCB	Regional Water Quality Control Board
SGMA	the Sustainability Groundwater Management Act
SF	Square Feet
SCAG	Southern California Association of Governments
SLF	Sacred Lands File
SRA	State Responsibility Area
SSC	Species of Special Concern
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee

1 PURPOSE AND SCOPE

The City of Temecula (City) is proposing to improve 1,763 linear feet of the eastern half of Ynez Road between Tierra Vista Road to Rancho Vista Road in order to match the four-lane configuration and infrastructure that exists along Ynez Road north and south of this segment (proposed Project). Improvements include widening the road and constructing a sidewalk, curb and gutter, streetlights, a Class II bike lane, relocation of utilities, installation of medians with turn pockets as well as grading outside of the right-of-way, on private property, on the east side to facilitate the construction and maintenance of a retaining wall to provide road stability due to the steep grade that exists on the north side of the alignment.

The City's 2005 General Plan identifies Ynez Road as a six-lane, north-south Principal Arterial in the City of Temecula between Winchester Road (north) and Rancho Vista Road (south). Between Rancho California Road, south of Winchester Road, and Rancho Vista Road, it only accommodates four lanes with turn lanes. However, in the Project alignment between Tierra Vista (north) and Rancho Vista Road (south), the roadway is only striped for three lanes (one northbound lane and two southbound lanes) and provides for a turn lane at the intersections with Tierra Vista and Rancho Vista Road. In the existing condition, the lane constriction of this three-lane segment creates a "bottleneck" between Tierra Vista Road and Rancho Vista Road due to the lane restriction. Therefore, the purpose of the Project is to provide for consistent traffic flow between Tierra Vista Road and Rancho Vista Road as identified in the City's General Plan.

To accommodate the expanded roadway and ensure compliance with Caltrans standards, the Project would impact various biological resources requiring mitigation as follows:

- Removal of 10 trees (Coast live oaks and California sycamores), in addition to the pruning of one Coast live oak. Four of the trees designated for removal and the one tree slated for pruning meet the City's definition of "heritage trees" based on trunk diameter and therefore require replacement. As such, the City would plant new live oaks and sycamores in nearby City parks.

- Approximately 0.22 acre of permanent impacts to riparian/riverine habitat would occur at the intersection of Ynez Road and Rancho Vista Road. Mitigation consists of removing invasive species and placing a conservation easement over 0.66 acre of riparian/riverine habitat located within a City-owed parcel along Temecula Creek.

Permanent right-of-way easements are also required for portions of APN 944-290-17 and 944-290-16 to facilitate the Project.

The California Environmental Quality Act ("CEQA"), codified in the Public Resources Code (PRC), Section 21000 et seq., and the CEQA Guidelines, Title 14, Section 15000 et seq. of the California Code of Regulations (CCR), was established to require public agencies to consider and disclose the environmental implications of their actions (projects). CEQA was enacted in 1970 by the California Legislature to disclose to decision makers and the public the significant environmental effects of a proposed project and identify possible ways to avoid or minimize significant environmental effects

of a project by requiring implementation of mitigation measures or recommending feasible alternatives. CEQA applies to all California governmental agencies at all levels.

As provided by PRC Section 21067, the public agency with the principal responsibility for approving a project that may have a significant effect upon the environment is considered the Lead Agency. The City of Temecula ("City"), as Lead Agency for the approval of the proposed Project ("Project"), is responsible for preparing environmental documentation in accordance with CEQA as amended to determine if approval of the discretionary actions requested and subsequent implementation of the proposed Project could have a significant impact on the environment. As defined by Section 15063 of the CEQA Guidelines, an Initial Study ("IS") is prepared primarily to provide the Lead Agency with information to use as the basis for determining whether an Environmental Impact Report ("EIR"), Negative Declaration ("ND"), or Mitigated Negative Declaration ("MND") would be appropriate for providing the necessary environmental documentation and clearance for the proposed Project.

1.1 CONTENT AND FORMAT OF THE INITIAL STUDY

The Initial Study is organized as follows:

- **Section 1 – Purpose and Scope.** This section introduces the scope of the proposed Project and the City's role in the project, as well as a brief summary of findings.
- **Section 2 – Project Summary and Environmental Determination.** This section summarizes the proposed Project and actions to be undertaken by the City. This section also provides the determination of the environmental document to be approved by the City.
- **Section 3 – Project Description.** This section details the proposed Project components and general environmental setting.
- **Section 4 – Environmental Impacts**. This section contains the Environmental Checklist Form, as suggested in Section 15063(d)(3) of the State CEQA Guidelines, as amended, and includes a series of questions about the Project for each of the listed environmental topics. The Form evaluates whether or not there would be significant environmental effects associated with the development of the Project and provides mitigation measures, when required, to reduce impacts to a less than significant level. The form requires an analysis in 20 subject categories as well as Mandatory Findings of Significance.
- **Section 5 – List of Preparers.** This section identifies the names and affiliations of the individuals who contributed to the preparation of the environmental evaluation.
- **Section 6 – References.** This section identifies the references used in the preparation of this Initial Study.

1.2 INITIAL STUDY SUMMARY OF FINDINGS

Based on the analysis in Section 4, there were no environmental factors that could potentially affect ("Potentially Significant") the environment following the imposition of mitigation measures that were identified to reduce some impacts to Less Than Significant. Therefore, the determination, based on the Initial Study, is that a **Mitigated Negative Declaration** is appropriate.

1.3 DOCUMENTS INCORPORATED BY REFERENCE

Pursuant to State CEQA Guidelines Section 15150, an MND may incorporate by reference all or portions of another document which is a matter of public record or is generally available to the public. Where all or part of another document is incorporated by reference, the incorporated language shall be considered to be set forth in full as part of the MND's text.

The following reports and/or studies are applicable to development of the Project Site and are hereby incorporated by reference:

- *City of Temecula, General Plan 2005* (City, 2005). (Available at https://temeculaca.gov/345/General-Plan)
- City of Temecula Municipal Code. Available at: https://temeculaca.gov/260/Municipal-Code
- *City of Temecula, Multi-use Trails and Bikeways Master Plan*, September 2016 (City, 2016). (Available at: https://temeculaca.gov/DocumentCenter/View/1971/Multi-use-Trails-and-Bikeways-Master-Plan-PDF?bidId=)

These documents are available for review at the City of Temecula, 41000 Main Street, Temecula, CA 92590.

1.4 CONTACT PERSON

Any questions about the preparation of the Initial Study, its assumptions or its conclusions should be referred to the following:

The City of Temecula
Public Works Department
C/O Emalee Manning, Assistant Engineer II
41000 Main Street
Temecula, CA 92590
Phone: (951) 506-5171
Email: emalee.manning@temeculaca.gov

2 PROJECT SUMMARY AND ENVIRONMENTAL DETERMINATION

2.1 PROJECT SUMMARY

1.	**Project Title:**	Ynez Road Improvements – Phase I Project: PW23-02
2.	**Lead Agency Name:**	City of Temecula Community Development Department 41000 Main Street Temecula, CA 92590
3.	**Contact Person:**	Emalee Manning, Assistant Engineer II Phone: (951) 506-5171 Email: Emalee.manning@temeculaca.gov
4.	**Project Location:**	Ynez Road between Tierra Vista Road and Rancho Vista Road Site Address: None assigned. Acres: 0.5 new roadway Topographic Quad (USGS 7.5"): Temecula and Murrieta Topographic Quad Coordinates: T8S, R3W, Section 12 Latitude: 33°29'55.26 N, Longitude: -117° 8'35.44"W
5.	**Project Sponsor's Name: Address**	City of Temecula Public Works Department Attn: Emalee Manning, Assistant Engineer II 41000 Main Street Temecula, CA 92590
6.	**General Plan Designation:**	Public Roadway - Principal Arterial (6 Lanes divided)
7.	**Zoning Designation:**	Public Roadway

8. Description of Project:

The City of Temecula (City) is proposing to improve and widen 1,763 linear feet of the eastern half of Ynez Road between Tierra Vista Road to Rancho Vista Road in order to match the four-lane configuration and infrastructure that exists along Ynez Road north and south of this segment (proposed Project). Improvements include widening the road and constructing a sidewalk, curb and gutter, streetlights, a Class II bike lane, relocation of utilities, installation of medians with turn pockets as well as grading outside of the right-of-way, on private property, on the east side to facilitate the construction and maintenance of a retaining wall to provide road stability due to the steep grade that exists on the east side of the alignment. Permanent right-of-way easements are required for a portion of APN 944-290-17 and 944-290-16 to facilitate the Project. The Project will also provide mitigation for impacts to a drainage adjacent to the alignment.

9. Surrounding Land Uses:

Surrounding land uses are identified in **Table 1 – *Surrounding Land Use***. The Project Site is currently a three-lane public roadway.

Table 1: Surrounding Land Use

Direction	Land Use Description	General Plan Land Use	Zoning
North	Rancho Highland Road	Public Roadway	Public Roadway
South	Rancho Vista Road	Public Roadway	Public Roadway
East	Apartments and vacant land	PO (Professional Office)	Specific Plan SP-2, Rancho Highlands (SP-180), PO (Professional Office), M (Medium Density Residential)
West	Greenbelt adjacent to the road, Townhomes and single family residences west of the greenbelt	OS (adjacent), H (High Density Residential beyond) and LM (Low Medium Density beyond)	Specific Plan SP-2, Rancho Highlands (SP-180) with pocket of High Density residential

10. Discretionary Project Approval Actions by City

Approval by City Council of Plans and Specifications, and authorization for the Department of Public Works to solicit construction bids for the Project.

11. Other Public Agency Permits or Approvals:

The following approvals or permits are required for the Project:

State Agencies:

- California Department of Fish and Wildlife: Streambed Alteration Agreement for 0.22 acre (1,970 linear feet) of impacts to an ephemeral drainage adjacent to the east side of Ynez Road.

12. California Native American Consultation

On July 24, 2025, the City of Temecula notified via email the following tribal entities of the Project and that the 30-day timeframe in which to request consultation would end within 30 days of receipt of the letter, in accordance with AB52. The following summarizes the results of the AB52 consultation.

- Agua Caliente Band of Cahuilla Indians. Result: The Project is outside of the Tribe's traditional use area; defer to other tribes. Consultation concluded.

- Pechanga Band of Indians. Result: Mitigation measures are incorporated into the Project to avoid/minimize unanticipated impacts to potential tribal resources. Consultation will be concluded prior to MND adoption.

- Rincon Band of Luiseño Indians. Result: No response. Consultation concluded.

- Soboba Band of Luiseño Indians. Result: The tribe defers the Project to the Pechanga Band of Indians. Consultation concluded.

- Torres-Martinez Desert Cahuilla Indians: Email received August 1, 2025 stating that the Project is not located in the Tribe's traditional area. Consultation concluded.

Mitigation measures to ensure resources to tribal cultural resources are minimized have been incorporated into this Initial Study.

2.2 ENVIRONMENTAL ANALYSIS AND DETERMINATION

In accordance with the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000-21178.1), this Initial Study has been prepared to analyze the proposed Project to determine any potential significant impacts upon the environment that would result from construction and implementation of the Project. This Initial Study is based on an Environmental Checklist Form (Form), as suggested in Section 15063(d)(3) of the State CEQA Guidelines, as amended, and includes a series of questions about the Project for each of the listed environmental topics. The Form evaluates whether or not there would be significant environmental effects associated with the development of the Project and provides mitigation measures, when required, to reduce impacts to a less than significant level.

In accordance with California Code of Regulations, Section 15063, this Initial Study is prepared by the Lead Agency in consultation with other jurisdictional agencies, to determine whether a Negative Declaration, Mitigated Negative Declaration, or an Environmental Impact Report is required for the proposed Project. The purpose of this Initial Study is to inform the decision-makers, affected agencies, and the public of potential environmental impacts associated with the implementation of the proposed Project. The conclusion of this Initial Study is that a Mitigated Negative Declaration is appropriate. This document thus includes both the Initial Study and the Mitigated Negative Declaration.

2.2.1 Organization of Environmental Analysis

Section 4 provides a discussion of the potential environmental impacts of the Project. The evaluation of environmental impacts follows the questions provided in the Checklist provided in the CEQA Guidelines.

2.2.2 Evaluation of Environmental Impacts

A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to the project (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

All answers must take account of the whole action involved, including off site as well as on site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

Once the Lead Agency has determined that a particular physical impact may occur, the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant.

"Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

"Less Than Significant with Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." Mitigation measures are identified and explain how they reduce the effect to a less than significant level (mitigation measures may be cross-referenced).

Earlier analyses may be used where, pursuant to the Program EIR or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration or mitigated negative declaration. (Section 15063[c] [3][D]. In this case, a brief discussion should identify the following:

a) Earlier analyses used where they are available for review.

b) Which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards and whether such effects were addressed by mitigation measures based on the earlier analysis.

c) The mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project for effects that are "Less than Significant with Mitigation Measures Incorporated.

References and citations have been incorporated into the checklist references to identify information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document, where appropriate, include a reference to the page or pages where the statement is substantiated.

Source listings and other sources used, or individuals contacted are cited in the discussion.

The explanation of each issue should identify:

a) The significance criteria or a threshold, if any, used to evaluate each question
b) The mitigation measure identified, if any, to reduce the impact to less than significant.

2.2.3 Environmental Factors Potentially Affected

Based on the analysis in Section 4, the proposed Project could potentially affect ("Potentially Significant") the environmental factor(s) checked below. The following pages present a more detailed checklist and discussion of each environmental factor and identifies where mitigation measures would be necessary to reduce all impacts to less than significant levels.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology and Soils	☐ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☐ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	☐ Transportation	☒ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	☒ Mandatory Findings of Significance

2.2.4 Determination

On the basis of this initial evaluation, the following finding is made:

	The Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	Although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the Project have been made by or agreed to by the Project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
	The Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	The Proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	Although the Proposed Project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

Signature _____ Date _____

Name _____ Title _____

3 PROJECT DESCRIPTION

3.1 INTRODUCTION AND SETTING

In general, the proposed Project is located approximately 0.3 mile east of Interstate 15 (I-15) and approximately 857 feet south of Rancho California Road (***Exhibit 1: Regional Vicinity*** and ***Exhibit 2: Site Location: Aerial View***, located at the end of this section).

The proposed Project limits are Ynez Road beginning at Tierra Vista Road at its northern limit, spanning approximately 1,763 feet to Rancho Vista Road at its southern limit.

The site is depicted on both the *Murrieta* and *Temecula* quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 12 of Township 8 South, Range 3 West, at approximately 33°29'55.26"N latitude and -117° 8'35.44"W longitude.

Land uses along the Project alignment include single family residential on the west side, and multi-family to vacant on the east side of the road segment.

The City's General Plan identifies Ynez Road as a six-lane, north-south Principal Arterial in the City of Temecula between Winchester Road (north) and Rancho Vista Road (south). Between Rancho California Road, south of Winchester Road, and Rancho Vista Road, Ynez Road accommodates four traffic lanes with turn lanes.

However, in the Project alignment between Tierra Vista, south of Rancho California Road, and Rancho Vista Road, the roadway is only striped for three lanes (one northbound lane and two southbound lanes) and provides for turn lanes at the intersections with Tierra Vista and Rancho Vista Road. While the west side of Ynez Road along the Project alignment is built out with sidewalk, curb and gutter and streetlights, the east side is one lane, with an asphalt curb and a dirt/unimproved raised shoulder.

Beyond the road shoulder, the topography slopes steeply (2:1) to between 15 and 20 feet below the edge of the unimproved raised shoulder. Approximately 40 feet beyond the slope to the east, a drainage parallels the Ynez Road alignment within the vacant parcels 944-290-017 and -016, outletting under Rancho Vista Road. The outlet at Rancho Visa Road is heavily vegetated and includes various oak trees. A cluster of oak trees also exists along the slope of the area of the proposed retaining wall.

3.2 PROJECT DESCRIPTION

The City is proposing to improve 1,763 linear feet of the eastern half of Ynez Road between Tierra Vista Road to Rancho Vista Road in order to match the four-lane configuration and infrastructure that exists along Ynez Road north and south of this segment.

Improvements will include the following and are depicted on **Exhibit 3: *Ynez Road Phase 1 Street Improvements*** and **Exhibit 4: *Signing and Striping Plan***. A complete set of Project plans is located in **Appendix H – *Project Plans***.

- Remove the existing asphalt curb and earthen shoulder, approximately 28 feet.
- Remove existing road striping in all lanes.
- Sawcut and grind existing pavement on the north bound direction of the Ynez Road.
- Grading the slope and installation of a retaining wall along the road slope (within APNs 944-290-017 and 944-290-016). The slope grading would occur along 927 linear feet, varying from 0 feet wide by 68 feet wide, and involve approximately 6,020 cubic yards.
- Removal of 10 of the 18 trees and pruning of one tree (Coast live oaks and California sycamores). The trees to be removed and pruned are located along Ynez Road at the location of the proposed slope and retaining wall.
- Install the slope grading, retaining wall, and a maintenance access road at Rancho Vista Road/Ynez Road intersection, which would remove approximately 0.22 acre of riparian/riverine resources.
- Install a guardrail and tubular steel fence along the north side of Ynez Road.
- Add pavement section that would vary between 28 feet and 46 feet wide.
- Construct a concrete raised median to delineate the turn pocket for Tierra Vista Road, and striped median for the turn pocket at Rancho Vista.
- Stripe the new roadway for four lanes with turn pockets and Class II Bike Lanes on both the east and west sides of the road (refer to Exhibit 4).
- Installing new curbs and gutters and sidewalk along the east side of the road.
- Install new streetlights on east side of the roadway.
- Relocating utilities that conflict with the planned improvements.
- Provide ADA compliant access ramp at the northeast corner of the Ynez Road and Rancho Vista Road Intersection.

3.2.1 Construction Scenario

Construction is anticipated to occur over 12 months beginning in mid 2026. Construction activities include site mobilization; demolition; grading; installation of asphalt, concrete, and retaining wall; relocation of utilities; and traffic striping.

3.2.2 Potential Construction Equipment

Project construction will require the use of heavy equipment. While the final types and numbers of construction equipment will be determined by the construction contractor, examples of types of equipment that will be utilized for this work include but are not limited to:

- Graders
- Rubbert Tired Dozes
- Scrapers
- Crawler Tractor

3.2.3 Rights-of-Way Acquisition

The Project will generally be constructed within the City's rights-of-way (ROW). However, additional permanent easements on private land will be required to grade the slope adjacent to the road, to install a retaining wall, maintenance of the retaining wall, ingress and egress for maintenance, access ramp, 24"-wide concrete ditch along retaining wall for drainage, and erosion control elements, including installation of riprap for stabilization and protection of street improvements and private property on which retaining wall will be installed. The parcels are identified in **Table 2: *Rights-of-Way Acquisition***.

Table 2: Rights-of-Way Acquisition

APN	Approximate Area	Type: Temporary / Permanent
944-290-017	0.78 acre 617 LF by 74 wide	Permanent Easement
944-290-016	0.47 acre 387 LF by 50 wide	Permanent Easement

3.2.4 Utility Relocation and Construction

Utilities in the roadway alignment of improvements include communications vaults, a fire hydrant and water/sewer manholes. The respective utilities would be relocated outside of the area of the improvements but within the right-of-way.

New utilities in the roadway include three new streetlights, LS-3 68W LED lamps. New streetlights would include streetlights equipped with light-emitting diode (LED) lamps.

3.2.5 Construction Staging and Access

All equipment will remain on-site throughout the Project. Equipment staging and material storage will most likely occur within the existing right-of-way, and/or permanent easement area or the contractor may rent parking lots or vacant lots within the Project vicinity.

3.2.6 Traffic Control During Construction

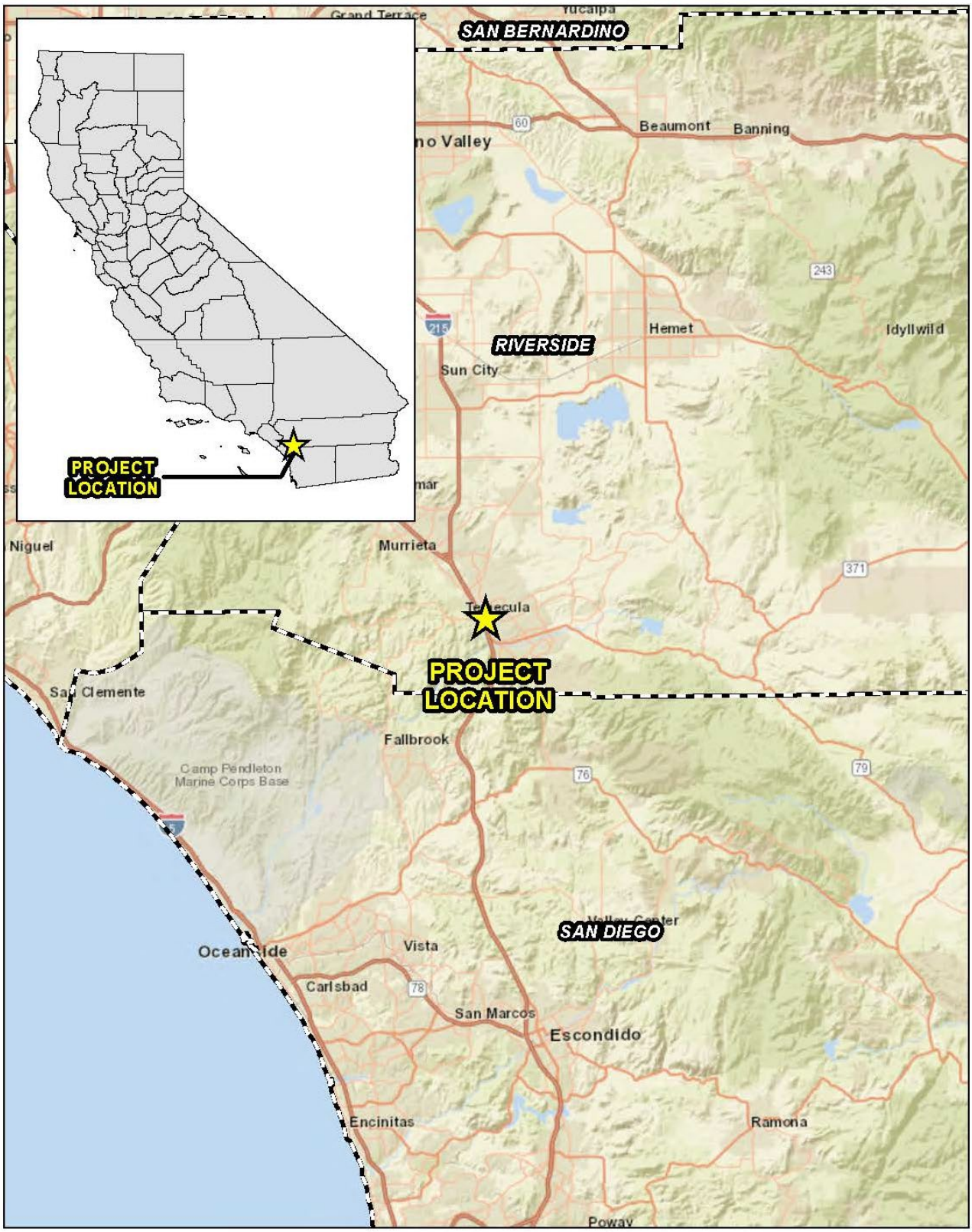
Traffic control during Project construction shall occur in accordance with the California Manual on Uniform Traffic Control Devices. Traffic control would be conducted in accordance with State and federal guidelines which provide for emergency vehicle access through the construction zone when required.

3.2.7 Best Management Practices During Construction

The following best management practices are incorporated into the Project construction specifications to identity how the Project would conform to Federal, State, and Local regulations:

- Construction Water Quality Control. The Project would disturb approximately 1.7 acres along the roadway and approximately 1.25 acres along the east slope of the road. Construction projects that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (General Construction Permit), which requires the applicant to file a notice of intent (NOI) to discharge stormwater and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes an overview of the Best Management Practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. The Project is more than 1-acre, therefore, the contractor is required to provide an SWPPP. The SWPPP will also address post-construction measures for water quality protection.

- Oak Tree Protection. For the oak trees that will not be removed, a protective zone would be established around the tree and a high density polyethylene fence installed to delineate the zone; laminated signs saying “Keep Out, Tree Protection Area” would be installed on the fence.

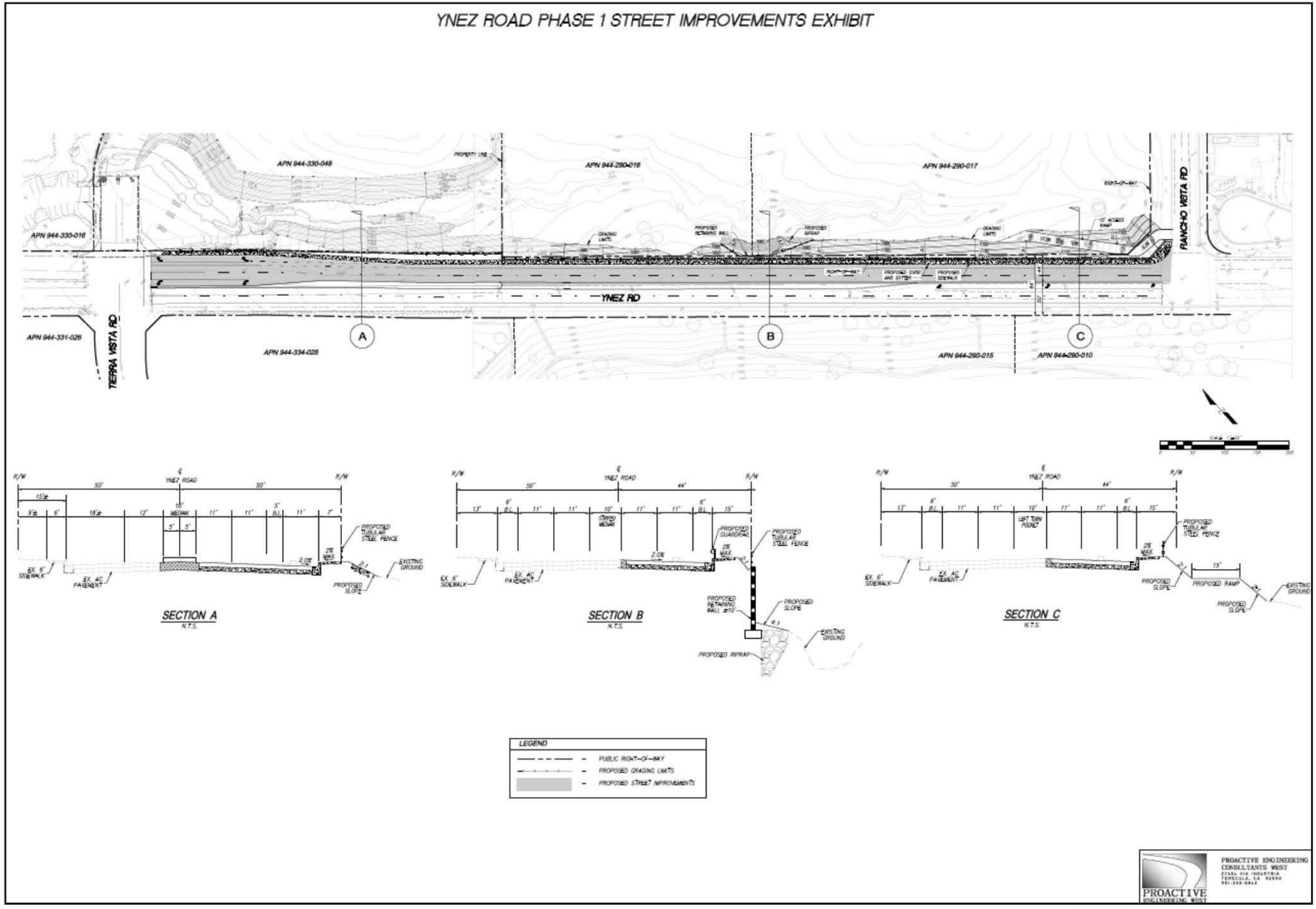


YNEZ ROAD IMPROVEMENTS
Regional Vicinity
Exhibit 1

YNEZ ROAD IMPROVEMENTS

Project Site

Exhibit 2



ELMT CONSULTING

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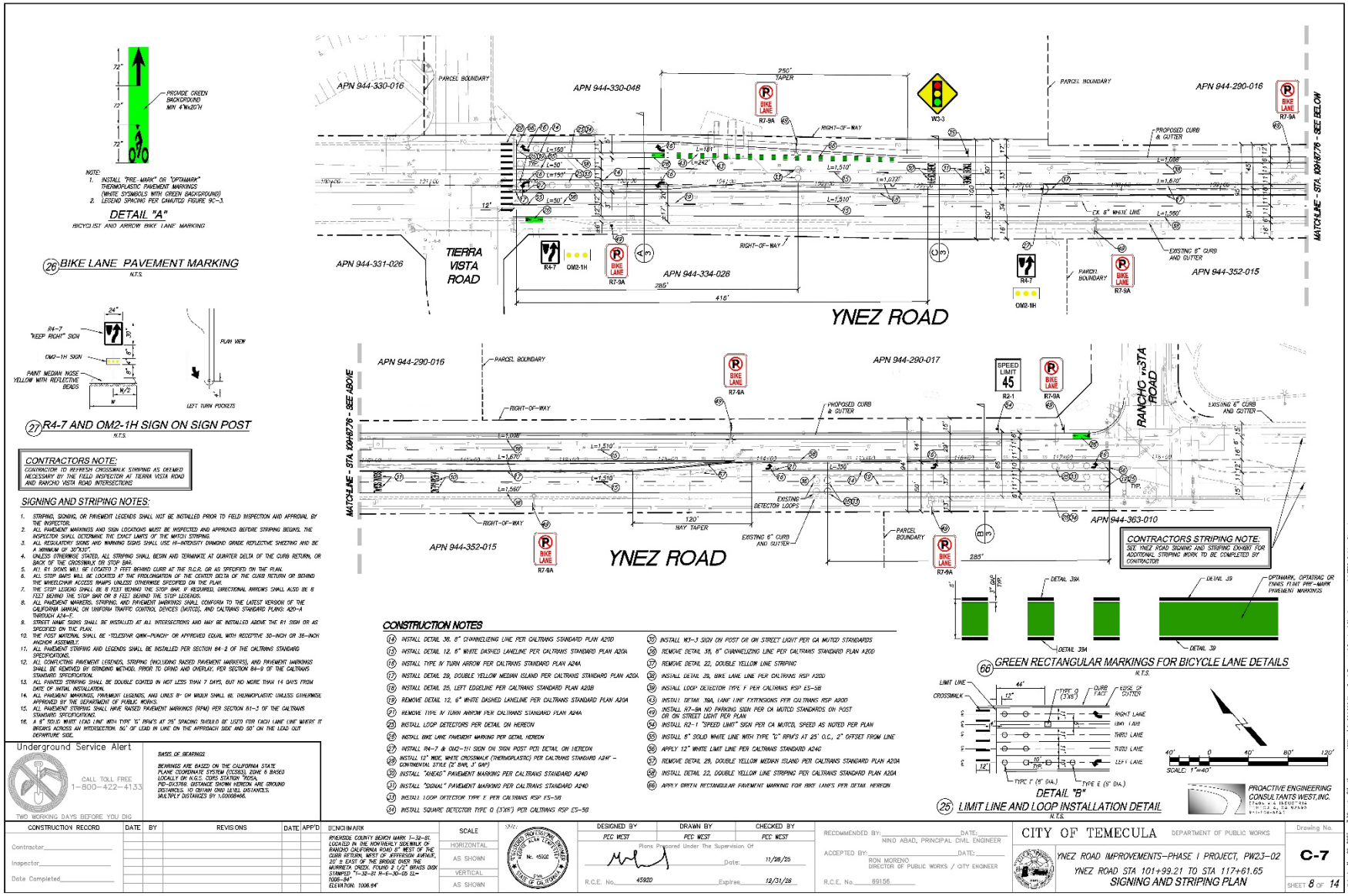
Not to Scale

Source: Proactive Engineering West

YNEZ ROAD IMPROVEMENTS

Phase 1 Street Improvements

Exhibit 3



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Source: Proactive

YNEZ ROAD WIDENING

Signing and Striping Plan

Exhibit 4

4 ENVIRONMENTAL IMPACTS

4.1 AESTHETICS

4.1.1 Environmental Setting

The environmental setting is described in Section 3.1 of this document. In general, the proposed Project is located approximately 0.3 mile east of Interstate 15 (I-15) and approximately 857 feet south of Rancho California Road (Exhibit 1 and Exhibit 2).

The proposed Project limits are Ynez Road beginning at Tierra Vista Road at its northern limit, spanning approximately 1,763 feet to Rancho Vista Road at its southern limit. Ynez Road in this segment consists of a paved, three-lane roadway, with the west side being fully improved with sidewalk curb and gutter and street lights, whereas the east side contains an asphalt curb with a dirt shoulder, and a steep (2:1) slope between 15 and 20 feet below the roadway.

Land uses along the Project alignment include single family residential on the west side, and multi-family to vacant on the east side of the road segment. The vacant parcel is bisected by a drainage that is heavily vegetated. Various species of oak trees line the drainage, and several clumps of oak trees are located within the proposed Project alignment.

4.1.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?			X	
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

Discussion

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. The CEQA Guidelines do not provide a definition of what constitutes a "scenic vista" or "scenic resource" or a reference as to from what vantage point(s) the scenic vista and/or resource, if any, should be observed. Scenic resources are typically landscape patterns and features that are visually or aesthetically pleasing and that contribute affirmatively to the definition of a distinct community or region, such as trees, rock outcroppings, and historic buildings.

A scenic vista is generally identified as a public vantage viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Common examples may include a public vantage point that provides expansive views of undeveloped hillsides, ridgelines, and open space areas that provide a unifying visual backdrop to a developed area.

The Project would encroach upon portions of undeveloped vacant land on the north side of Ynez Road where a drainage, trees and native vegetation exists. The Project would introduce paved surfaces and related improvements and remove some of native vegetation and trees in the vicinity of the alignment and at the Rancho Vista Road intersection. However, residential development surrounds the Project alignment and in the immediate vicinity. There are no significant viewsheds or scenic vistas that would be impacted by the Project development. The presence of construction equipment would be temporary and would not substantially impact the viewshed. The Project, once constructed, would be consistent with the surrounding development and views of the existing condition and would not be significantly obstructed. Therefore, impacts would be less than significant.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Less Than Significant Impact. The Project is not located within a designated scenic highway corridor. The Project is located near Interstate 15 (I-15), which is not designated by the California Department of Transportation (Caltrans) as an Eligible State Scenic Highway; however, or officially designated as a State Scenic Highway in the Project vicinity. There are no scenic highways or local scenic roadways in the Project vicinity. Due to the distance and topography, the Project would not be visible to those traveling on I-15.

The proposed Project involves the removal of 10 trees, including Coast live oaks and California sycamores, and the pruning of one Coast live oak. Four of the trees designated for removal and the one tree slated for pruning meet the City's definition of "heritage trees" based on trunk diameter and therefore require replacement. Consistent with the City's

Municipal Code, Article II "Cutting, Removal, Relocation, or Encroachment Upon Protected Trees," the Project is not required to obtain a permit but does include the planting of new live oaks and sycamores in a nearby City park.

For the oak trees that will not be removed, a protective zone will be established around the tree during construction with a high-density polyethylene fence installed to delineate the zone. Laminated signs saying "Keep Out, Tree Protection Area" will be installed on the fence. These measures aim to avoid an environmental impact of the Project and ensure compliance with relevant regulations.

Therefore, while the Project would remove oak trees in the Project alignment, the City Project includes compliance with the City municipal code to replace the trees. Additionally, the Project alignment of Ynez Road is not a scenic highway, local scenic roadway, nor would the Project be visible from any scenic highways in the vicinity. The impacts would be less than significant.

c) *In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?*

Less than Significant Impact. The proposed Project is located in a primarily urbanized area. During construction, the Project would result in a temporary change of appearance along the alignment. The Project is consistent with existing zoning and does not propose to change the zoning, thus, the Project will not create a significant impact to the visual character of the area. Therefore, impacts after construction would be less than significant.

d) *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

Less than Significant Impact. During construction, Project construction lighting would be directed to the work site to avoid unnecessary spill and would provide a level of lighting that is appropriate for work and safety for workers. Construction lighting would be shielded and/or directed away from sensitive receptors to minimize lighting impacts during construction.

The proposed roadway expansion includes the installation of new streetlights on the east side of the roadway. These new streetlights will be equipped with light-emitting diode (LED) lamps. along the north side of Ynez Road, which could generate additional light and glare in the area. However, the lighting would be directed downward to confine potential glare. Project design would conform to the City's Municipal Code and County of Riverside Palomar Light Pollution Ordinance No. 655. Therefore, impacts from lighting and glare would be less than significant.

4.1.3 Mitigation Measures:

The proposed Project involves the removal of 10 trees, including Coast live oaks and California sycamores, and the pruning of one Coast live oak. Four of the trees designated for removal and the one tree slated for pruning meet the City's definition of "heritage trees" based on trunk diameter and therefore require replacement. As part of the Project, the City is complying with its ordinance to replace trees in City parks. Because the Project includes compliance with a City ordinance that addresses potential impacts, no mitigation for aesthetic impacts is required.

4.1.4 Conclusion

As the proposed Project is designed in accordance with City ordinances, including incorporating mitigation requirements for tree removal as part of the Project, impacts to Aesthetics would be less than significant, and no mitigation would be required.

4.2 AGRICULTURE AND FORESTRY RESOURCES

4.2.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?				X
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				X

Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?

No Impact. According to the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), the Project site is identified as Urban and Built-Up Land. Therefore, there would be no potential impacts associated with conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use, and no mitigation would be required.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

No Impacts. The Project site is not subject to any Williamson Act contracts. No impacts would occur, and no mitigation is required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. No part of the Project site or its surroundings are designated as timberland. No impacts would occur, and no mitigation is required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. There is no designated forest land on the Project site, and the proposed Project would therefore not affect forests during construction or operations. No impacts would occur, and no mitigation is required.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use or the conversion of forest land to non-forest use?

No Impact. According to the California Department of Conservation Farmland Mapping and Monitoring Program (FMMP), the Project site is identified as Urban and Built-Up Land. The California Dept of Conservation defines Urban and Built-Up Land as land that is occupied by structures with a building density of at least 1 unit to 1.4.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills,

sewage treatment, and water control structures. The proposed Project is also consistent with its current zoning, which is Public Roadway. As discussed under Thresholds II.2 (b) through II.2(d), the proposed Project would not involve other changes in the existing environment that would result in conversion of forest land to non-forest land. Therefore, there are no impacts associated with changes in the environment which could result in conversion of farmland to non-agricultural use, and no mitigation would be required.

4.2.2 Mitigation Measures

No mitigation measures associated with impacts to Agriculture and Forestry Resources apply to the proposed Project.

4.2.3 Conclusion

There are no potential impacts of the proposed Project associated with Agriculture and Forestry Services, and no mitigation would be required.

4.3 AIR QUALITY

Information for this section is derived from an air quality analysis prepared for the proposed Project to evaluate the potential impacts to air quality (**Appendix A – *Ynez Road Widening Project – Focused Air Quality, Greenhouse Gas, and Energy Impact Study, City of Temecula, CA,* prepared by MD Acoustics, October 1, 2025**).

4.3.1 Regulatory Setting

Air pollutants are regulated at the national, state, and air basin level; each agency has a different level of regulatory responsibility. The United States Environmental Protection Agency (EPA) regulates at the national level under the Clean Air Act of 1970. The California Air Resources Board (ARB) regulates at the state level. The State is currently divided into 15 air basins, and each air basin is regulated on a regional level.

There are six common air pollutants, called criteria pollutants, which were identified from the provisions of the Clean Air Act of 1970.

- Ozone
- Nitrogen Dioxide (NO_2)
- Lead
- Particulate Matter (PM10 and PM2.5)
- Carbon Monoxide (CO)
- Sulfur Dioxide (SO_2)

The US environmental Protection Agency (EPA) and the California Air Resources Board (CARB) designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

The Project is located within the South Coast Air Basin (SCAB), which includes Los Angeles, San Bernardino, Riverside, and Orange counties. Air quality in the SCAB is regulated by the South Coast Air Quality Management District (SCAQMD). As a regional agency, the SCAQMD works directly with the Southern California Association of Governments (SCAG), County transportation commissions, and local governments, as well as cooperates actively with all federal and state government agencies.

4.3.2 Environmental Setting

The SCAB is characterized by a semi-arid climate with warm summers, mild winters, and moderate humidity. The SCAB is surrounded by mountains (San Gabriel, San Bernardino, and Santa Ana Mountains), which act as barriers to the east, inhibiting the eastward transport of pollutants and

contributing to their buildup. The air quality is heavily influenced by both natural factors, like wind patterns and temperature inversions, and human-caused emissions from dense populations, traffic, and industry. The topography and meteorology of the SCAB, particularly the presence of marine and radiation inversions, contribute to the accumulation and trapping of pollutants, leading to potential air quality issues.

The SCAB has a semi-arid climate with warm summers and mild winters. Rainfall is infrequent, and the region experiences moderate onshore breezes during the day and moderate humidity.

Based on temperature and precipitation patterns for Temecula, July is typically the warmest month, and December is typically the coolest month. Rainfall in the Project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry. The average rainfall for Temecula is approximately 14 inches annually.

4.3.3 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?			X	
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?			X	

Discussion

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant Impact. The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this

requirement by preparing a sequence of Air Quality Management Plans (AQMPs). An AQMP establishes a program of rules and regulations directed at attaining the National Ambient Air Quality Standards and California Ambient Air Quality Standards. The regional plan applicable to the proposed Project is the 2022 SCAQMD AQMP.

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties, and addresses regional issues relating to transportation, economy, community development, and environment. Regarding air quality planning, SCAG has prepared the Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), a long-range transportation plan that uses growth forecasts to project trends over a 20-year period to identify regional transportation strategies to address mobility needs. These growth forecasts form the basis for the land use and transportation control portions of the AQMP. These documents are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. Both the RTP/SCS and AQMP are based, in part, on projections originating with County and City General Plans.

The two principal criteria for conformance to the AQMP are:

(1) whether a project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of air quality standards; and

(2) whether a project would exceed the assumptions in the AQMP.

With respect to the first criterion, the analyses described under response III.b, below, demonstrate that the Project would not generate short-term or long-term emissions that could potentially cause an increase in the frequency or severity of existing air quality violations; cause or contribute to new violations; or delay timely attainment of air quality standards.

With respect to the second criterion, the proposed Project is improving and widening a roadway and would not result in population or employment increases and, therefore, would not exceed the growth projections assumptions in the AQMP. In addition, the proposed Project would be consistent with the City General Plan Circulation Element roadway design guidelines. The Project would support the City General Plan Policy 3.3 by providing a Class II bicycle lane along the Project alignment.

Because the Project is consistent with the City's General Plan and the growth assumptions used in developing the AQMP, pursuant to SCAQMD guidelines, the proposed Project is considered consistent with the region's AQMP. As such, proposed Project-related emissions are accounted for in the AQMP, which is crafted to bring the basin into attainment for all criteria pollutants. Accordingly, the proposed Project would be consistent with the emissions projections in the AQMP, thus resulting in a less than significant impact.

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less than Significant Impact. In accordance with CEQA Guidelines Section 15064(h)(3), the SCAQMD's approach for assessing cumulative impacts is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. If a project is not consistent with the AQMP, which is intended to bring the SCAB into attainment for all criteria pollutants, that project can be considered cumulatively considerable. Additionally, if the mass regional emissions calculated for a project exceed the applicable SCAQMD daily significance thresholds that are designed to assist the region in attaining the applicable state and national ambient air quality standards, that project can be considered cumulatively considerable.

Construction Impacts

The air quality analysis in Appendix A estimated construction emissions, as shown in **Table 3: *Regional Significance – Construction Emissions (lbs/day)*.**

Table 3: Regional Significance – Construction Emissions (lbs/day)

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grubbing & Land Clearing						
On-Site[2]	0.46	4.04	4.49	0.01	0.42	0.22
Off-Site[3]	0.03	0.03	0.41	0.00	0.10	0.02
Total	**0.49**	**4.07**	**4.90**	**0.01**	**0.52**	**0.24**
Grading & Excavation						
On-Site[2]	3.50	29.90	36.60	0.07	2.76	1.36
Off-Site[3]	0.16	0.18	2.70	0.00	0.50	0.11
Total	**3.66**	**30.08**	**39.30**	**0.07**	**3.26**	**1.47**
Drainage, Utilities, & Sub-Grade						
On-Site[2]	1.79	16.00	19.70	0.04	1.24	0.64
Off-Site[3]	0.11	0.10	1.80	0.00	0.33	0.08
Total	**1.90**	**16.10**	**21.50**	**0.04**	**1.57**	**0.72**
Paving						
On-Site[2]	0.81	7.53	11.70	0.02	0.30	0.28
Off-Site[3]	0.08	0.39	1.36	0.00	0.32	0.08
Total	**0.89**	**7.92**	**13.06**	**0.02**	**0.62**	**0.36**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No

Notes:
[1] Source: CalEEMod Version 2022.1.1.29
[2] On-site emissions from equipment operated on-site that is not operated on public roads.
[3] Off-site emissions from equipment operated on public roads.
[4] Architectural coatings and paving phases may overlap.

Emissions were calculated utilizing the SCAQMD "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds." As shown in Table 3, construction impacts would not exceed SCAQMD thresholds, and therefore, impacts would be less than significant.

Operational Impacts

The Project proposes widening and improving 1,763 linear feet of the eastern half of Ynez Road between Tierra Vista Road to Rancho Vista Road in order to match the four-lane configuration and infrastructure that exists along Ynez Road north and south of this segment. In the existing condition, the lane constriction of this three-lane segment creates a "bottleneck" between Tierra Vista Road and Rancho Vista Road due to the lane restriction. Therefore, the purpose of the Project is to provide for consistent traffic flow between Tierra Vista Road and Rancho Vista Road as envisioned by the City's General Plan. As such, because the Project would serve the existing traffic flow between two intersections, it would not increase or promote the increase of additional traffic within the additional lanes beyond the existing traffic experienced on Ynez Road. Therefore, the Project would not contribute a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. A sensitive receptor is defined by SCAQMD as any residence including private homes, condominiums, apartments, and living quarters, schools, preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. Also included are long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

The Project would widen the eastern lanes of Ynez Road. Single family residential exists on the west side of Ynez Road. The air quality assessment in Appendix A evaluated construction emissions, as shown in **Table 4: *Localized Significance – Construction Emissions (lbs/day)*.**

Table 4: Localized Significance – Construction Emissions (lbs/day)

Phase	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	**CO**	**PM10**	**PM2.5**
Grubbing & Land Clearing	4.04	4.49	0.42	0.22
Grading & Excavation	29.90	36.60	2.76	1.36
Drainage, Utilities, & Sub-Grade	16.00	19.70	1.24	0.64
Paving	7.53	11.70	0.30	0.28
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**234**	**1,100**	**7**	**4**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in the Temecula Valley Source Receptor Area (SRA 26). Project will disturb a maximum of 4.0 acres per day (see Table 7).
[2] The nearest sensitive receptor is located 20 meters southwest; therefore, the 25-meter threshold has been used.

The evaluation in Table 4 identified that none of the criteria pollutants would exceed the localized significance threshold emission at the nearest sensitive receptors along the western Project alignment.

Because the Project would add lanes to alleviate a bottleneck between two intersections, the Project is not anticipated to add new traffic to the area. Therefore, operational emissions are anticipated to remain similar to existing conditions. Additionally, the Project may actually improve emissions along the roadway because the additional lanes would decrease idling times of cars and trucks due to the addition of through lanes.

Thus, a less than significant impact to sensitive receptors during operational activity is expected.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant Impact. The Project could produce odors during proposed construction activities, resulting from heavy diesel equipment exhaust and application of asphalt; however, standard construction practices would minimize the odor emissions and their associated impacts. The increase of construction odors would be minimal, as vehicle exhaust is already prevalent in the area due to its proximity to I-15. Furthermore, any odors emitted during construction would be temporary, short-term, and intermittent in nature and would cease upon the completion of the respective phase of construction. Therefore, odor impacts from the construction of the Project would be less than significant due to the duration of exposure. The Project proposes widening and improving an existing roadway. Odors generated by traffic on the improved portion of Ynez Road would be similar to existing odors from traffic on streets and highways in the area. Therefore, long-term operation of the Project would not result in a change to existing odors in the Project vicinity, and there would be no impact.

4.3.4 Mitigation Measures

No mitigation measures associated with impacts to Air Quality apply to the proposed Project.

4.3.5 Conclusion

There are less than significant impacts of the proposed Project associated with Air Quality, and no mitigation would be required.

4.4 BIOLOGICAL RESOURCES

Several biological surveys were completed to determine potential impacts to biological resources associated with the development of the proposed Project and are provided as follows:

- **Appendix B-1** - ***Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for the Ynez Road Improvements – Phase 1 Project Located in the City of Temecula, Riverside County, California,*** **prepared by ELMT Consulting, November 2025**

- **Appendix B-2 -** ***Determination of Biologically Equivalent or Superior Preservation Report,*** **prepared by ELMT Consulting, November 2025**

- **Appendix B-3 -** ***Jurisdictional Delineation for the Proposed Ynez Road Improvements Project –Phase 1 Project Located in the City of Temecula, Riverside County, California*****, prepared by ELMT Consulting, updated October 2025**

- **Appendix B-4 -** ***Ynez Road Expansion PW23-02 Oak Tree Review and Memorandum Update, Temecula, California*****, prepared by Dudek, January 31, 2025**

4.4.1 Regulatory Setting

Given the local environment, regulations governing biological resources for this Project include the following:

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) of 1918 (16 U.S.C 703-711) provides protection for nesting birds that are both residents and migrants regardless of whether they are considered sensitive by resource agencies. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any migratory bird listed under 50 CFR 10, including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations (50 CFR 21). The direct injury or death of a migratory bird, due to construction activities or other construction-related disturbance that causes nest abandonment, nestling abandonment, or forced fledging would be considered a take under federal law. The USFWS, in coordination with the California Department of Fish and Wildlife (CDFW) administers the MBTA. CDFW's authoritative nexus to MBTA is provided in California Fish and Game Code (FGC) Section 3503.5 which protects all birds of prey and their nests and FGC Section 3800 which protects all non-game birds that occur naturally in the State.

Endangered Species Act - Federal

The United States Endangered Species Act that was established in 1973 provides protections for fish, wildlife, and plants that are listed as threatened or endangered; provides for adding species to and removing them from the list of threatened and endangered species, and for preparing and implementing plans for their recovery; provides for interagency cooperation to avoid take of listed species and for issuing permits for otherwise prohibited activities; provides for cooperation with States, including authorization of financial assistance; and implements the provisions of the Convention on International Trade in Endangered Species of Wild Flora and Fauna. The USFWS administers the federal Endangered Species Act.

California Endangered Species Act

The California Endangered Species Act (CESA) is a California environmental law that conserves and protects plant and animal species at risk of extinction. Originally enacted in 1970, CESA was repealed and replaced by an updated version in 1984 and amended in 1997. Plant and animal species may be designated threatened or endangered under CESA after a formal listing process by the California Fish and Game Commission. Approximately 250 species are currently listed under CESA. A CESA-listed species, or any part or product of the plant or animal, may not be imported into the State, exported out of the State, "taken" (i.e., killed), possessed, purchased, or sold without proper authorization. Implementation of CESA has reduced and avoided impacts to California's most imperiled plants and animals, has protected hundreds of thousands of acres of vital habitat, and has led to a greater scientific understanding of California's incredible biodiversity.

The California Department of Fish and Wildlife (CDFW) works with agencies, organizations, and other interested persons to study, protect, and preserve CESA-listed species and their habitats. CDFW also conducts scientific reviews of species petitioned for listing under CESA, administers regulatory permitting programs to authorize take of listed species, maintains an extensive database of listed species occurrences, and conducts periodic reviews of listed species to determine if the conditions that led to original listing are still present.

Western Riverside County Multiple Species Habitat Conservation Plan

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) is a comprehensive, multi-jurisdictional Habitat Conservation Plan focusing on conservation of species and their associated habitats in Western Riverside County. The MSHCP Plan Area encompasses approximately 1.26 million acres (1,966 square miles); it includes all unincorporated Riverside County land west of the crest of the San Jacinto Mountains to the Orange County line, as well as the jurisdictional areas of the Cities of Temecula, Murrieta, Lake Elsinore, Canyon Lake, Norco, Corona, Riverside, Moreno Valley, Banning, Beaumont, Calimesa, Perris, Hemet, and San Jacinto. The City of Temecula is a signatory to the MSHCP.

4.4.2 Environmental Setting

The proposed Project alignment is within the both the *Murrieta* and *Temecula* quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 12 of Township 8 South, Range 3 West at an elevation ranging from 1,052 feet to 1,132 above mean sea level. The topography of the site is relatively flat with the site sloping slopes generally from southeast to northwest. A retaining wall is required on a portion of the eastern side of the roadway to stabilize the road improvements.

The proposed Project is located within Ynez Road and along and adjacent to the northeastern shoulder, with vacant land beyond to the northeast, residential development to the southeast and southwest, and commercial development to the northwest of the northern terminus of the Project alignment. The road alignment terrain is composed of paved asphalt and compacted and graded soil which gives way to grassland and buckwheat scrub plant communities and a large unnamed drainage.

One (1) unnamed drainage occurs within the vicinity of the proposed Project alignment. This drainage is fed by a culvert leading from under Rancho Vista Road to a storm drain within a residential community to the southeast of the Project Site. The stormwaters conveyed by this drainage flow northwest through the Project site and are directed to a box culvert in the northwest portion of the site leading under Tierra Vista Road. In general, this drainage only conveys surface flow in direct response to precipitation or urban runoff.

4.4.3 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means				X
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		X		

Discussion

a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Less Than Significant Impact With Mitigation Incorporated.

Vegetation and Land Cover

The Project alignment, outside of the road right-of-way, supports buckwheat scrub, non-native grassland, and riparian plant communities (Appendix B-1).

Special Status Plants

According to the habitat assessment in Appendix B-1, 45 special-status plant species have been recorded in the *Temecula* and *Murrieta* quadrangles. No special-status plants were observed within the Project alignment site during the field investigation. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a low potential to support smooth tarplant (*Centromadia pungens* ssp. laevis) and paniculate tarplant (*Deinandra paniculate*). It was further determined that the Project alignment does not have potential to support any of the other special-status plant species known to occur in the vicinity of the site and all are presumed absent.

The proposed Project will primarily be confined to existing developed and heavily disturbed areas that have been subject to anthropogenic disturbances and development, and the site is isolated from known occupied areas. As such, if smooth tarplant and/or paniculate tarplant were to be observed onsite, their small populations are not expected to make a meaningful contribution to the conservation of the species. No additional surveys were recommended according to Appendix B. Therefore, no impacts to any special-status plant species would occur from implementation of the proposed Project, and mitigation would not be required.

Special Status Plant Communities

The habitat assessment in Appendix B-1 lists four special-status habitats as being identified within the *Temecula* and *Murrieta* quadrangles: Southern Coast Live Oak Riparian Forest, Southern Interior Basalt Flow Vernal Pool, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland. No CDFW special-status plant communities occur within the boundaries of the project site.

Special Status Wildlife

According to the habitat assessment in Appendix B-1, 45 special-status wildlife species have been reported in the *Temecula* and *Murietta* quadrangles. No special-status wildlife species were observed within the Project alignment during the field investigation. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the Project alignment has a moderate potential to support Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Costa's hummingbird (*Calypte costae*); and a low potential to support Lawrence's goldfinch (*Spinus lawrencei*). It was further determined that the Project alignment does not have potential to support any of the other special-status wildlife species known to occur in the vicinity of the site and all are presumed absent.

None of the aforementioned special-status wildlife species are state or federally listed as threatened or endangered. In order to ensure impacts to these avian species do not occur from implementation of the proposed Project, **Mitigation Measure BIO-1** to conduct a pre-construction nesting bird clearance survey prior to ground disturbance, is required. With

implementation of Mitigation Measure BIO-1, impacts to special-status avian species would be less than significant.

Burrowing Owl

The burrowing owl was granted candidate status under the California Endangered Species Act on October 10, 2024. It is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with well-drained, level to gently-sloping areas characterized by sparse vegetation and bare ground. They are dependent upon the presence of burrowing mammals (such as ground squirrels) for roosting and nesting habitat.

Portions of the Project Site are unvegetated and/or vegetated with a variety of low-growing plant species that allow for line-of-sight observation favored by burrowing owl. No burrowing owls or recent sign (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. In addition, the proposed Project does not provide suitable burrows/sites, including rock piles and non-natural substrates that could be used as burrow surrogates. Additionally, the Project alignment is surrounded by tall trees and poles that provide perching opportunities for large raptors (i.e., red-tailed hawk) that can prey on burrowing owls. Based on this information, and as a result of current and historic on-site disturbances, and surrounding development, it was determined that burrowing owls do not have potential to occur within the Project alignment.

However, to ensure burrowing owls have not moved into the site prior to construction, **Mitigation Measure BIO-2** to provide a site survey prior to construction is required to reduce potential impacts to less than significant. With the implementation of Mitigation Measure BIO-2, impacts would be less than significant.

Critical Habitat

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the USFWS regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a Clean Water Act Permit from the United States Army Corps of Engineers). If a there is a federal

nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The Project alignment is not located with federally designated Critical Habitat. The nearest designated Critical Habitat is located approximately 0.73 mile southwest of the site for San Diego ambrosia (*Ambrosia pumila*) and 2 miles south of the site for coastal California gnatcatcher (*Polioptila californica californica*). Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of implementation of the proposed Project and consultation with the USFWS will not be required. Therefore, no impacts to federally designated Critical Habitat would occur from implementation of the proposed Project.

b) *Have a substantial adverse effect on any riparian habitat or sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

Less Than Significant With Mitigation Incorporated. The Project occurs in the City of Temecula, which is a signatory to the MSHCP. The proposed Project would expand Ynez Road, extending from the existing northeastern shoulder of the road in the City of Temecula, Riverside County, California. Approximately 1.62 acres (1,970 linear feet) of riparian/riverine habitat was mapped within Drainage 1 in proximity to the Project Site. The Project was designed to avoid impacts to Drainage 1 to the greatest extent possible, with impacts only occurring to vegetation on the periphery of the drainage feature outside the bottom or low flow channel of Drainage 1. Based on the proposed site plan, approximately 0.22-acre of permanent impacts to riparian/riverine habitat would occur from Project implementation. Since the side slopes will be graded rather than restored to existing site conditions (manufactured slope), all Project-related impacts are considered permanent. No temporary or offsite impacts are proposed.

This drainage is fed by a culvert leading from under Rancho Vista Road to a storm drain within a residential community to the southeast of the Project alignment. The stormwaters conveyed by this drainage flow northwest through the Project alignment and are directed to a box culvert in the northwest portion of the alignment leading under Tierra Vista Road. In general, this drainage only conveys surface flow in direct response to precipitation or urban runoff.

In compliance with the requirements of the MSHCP for impacts to riparian/riverine resources, a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis was prepared and is included in Appendix B-2.

The DBESP identifies that the City would mitigate impacts to 0.22 acre of riverine habitat through the management (removal of non-native plant species) of 0.66 acre of habitat within a City owned parcel along Temecula Creek. The 0.66 acre of offsite mitigation area was established using a 3:1 mitigation ratio for permanent impacts to riparian/riverine habitat along the bank of Drainage 1. The offsite mitigation site is located immediately adjacent to Temecula Creek in the City of Temecula to the southeast of the Project Site within Assessor

Parcel Number (APN) 961-440-012. The 0.66 acre of riverine/riparian habitat offsite currently supports invasive plant species (i.e., tacolote mustard, prickly lettuce, etc.) that will be removed to enhance the riparian/riverine habitat. A conservation easement would be placed over the 0.66 acre of offsite riparian/riverine habitat in favor of a qualified habitat maintenance organization (an approved third party that both CDFW and the USFWS will get to review and approve),The overall habitat functions and values provided by existing habitat areas within the offsite conservation area in Temecula Creek would be enhanced by removing invasive, non-native plant species. Additionally, the manufacture slopes will either be hydroseeded or seeded by hand broadcasting of native seeds to stabilize the slopes above Drainage 1. Pursuant to the MSHCP, the DBESP, including the impacts and proposed mitigation must be reviewed and approved by the CDFW and the USFWS. The offsite mitigation area can accommodate additional mitigation acreage should any be required as part of the DBESP process. Therefore, no additional impacts will occur based on the final mitigation acreage that is identified, and all mitigation will be accommodated at the offsite location. Pursuant to the MSHCP, the City would not begin Project construction until the CDFW and the USFWS have approved the DBESP and mitigation. Mitigation for the impacts to the drainage is reflected in **Mitigation Measure BIO-3.**

Disturbance of the creek will also require jurisdictional waters permits from the California Department of Fish and Wildlife as part of State law. While compliance with State law is not mitigation, the permits may include additional mitigation and conditions to protect the drainage.

c) *Have a substantial adverse effect on state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

No Impact. The Project Site and off-site improvement area do not contain any federally protected wetlands, marsh, vernal pool, or coastal wetlands, or drainage features. The one unnamed drainage that occurs within the boundaries of the proposed Project Site is fed by a culvert leading from under Rancho Vista Road to a storm drain within a residential community to the southeast of the project site. The stormwaters conveyed by this drainage flow northwest through the Project Site and are directed to a box culvert in the northwest portion of the site leading under Tierra Vista Road. In general, this drainage only conveys surface flow in direct response to precipitation or urban runoff. The jurisdictional delineation in Appendix B-3 identifies that the habitat associated with Drainage 1 within the project footprint is heavily degraded and primarily supports non-native grasses. The drainage does not support state or federally protected wetlands (including but not limited to marsh, vernal pool, coastal, etc.). Therefore, there would be no impact.

d) *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Less Than Significant Impact. A wildlife corridor is defined as a linear landscape element which serves as a linkage between historically connected habitats/natural areas and is meant to facilitate movement between these natural areas.

The Project alignment has not been identified as occurring in a wildlife corridor or linkage by the MSHCP. However, Murietta Creek, which occurs approximately 0.5-mile to the west of the Project alignment, provides local wildlife movement opportunities through the area. The Project alignment is separated from Murrieta Creek by existing residential and commercial developments and Interstate 15. The Project will primarily be confined to existing areas that have been heavily disturbed and/or developed and is not expected to impact wildlife movement opportunities. Therefore, the Project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites because none exist in the Project alignment. The impact is less than significant, and no mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less Than Significant. The Project requires the removal of 10 trees (Coast live oaks and California sycamores) in addition to the pruning of one Coast live oak. The remaining seven trees, including four heritage trees, will be preserved in place. Based on Section 8.48.210 of the City ordinance, a permit will not be required due to the project type being a public benefit project. However, the City would plant new live oaks and sycamores in nearby City parks to replace the trees removed. Therefore, there would be a less than significant impact, and no mitigation would be required.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Less Than Significant Impact With Mitigation Incorporated. The Project alignment is within the City of Temecula, a signatory to the Riverside MSHCP. Appendix B-1 includes a consistency analysis with the MSCHP as follows:

- Riverine/Riparian Resources. The policies for the protection of species associated with Riparian/Riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP. Based on the proposed site plan, approximately 0.22-acre of permanent impacts to riparian/riverine habitat would occur from Project implementation. The DBESP identifies that the City would mitigate impacts to 0.22 acre of riverine habitat through the management (removal of non-native plant species) of 0.66 acre of habitat within a City owned parcel along Temecula Creek. Pursuant to the MSHCP, the DBESP, including the impacts and proposed mitigation has been submitted for review and approval by the CDFW and the USFWS. The offsite mitigation area can accommodate additional mitigation acreage should any be required as part of the DBESP process. Therefore, no additional impacts will occur based on the final

mitigation acreage that is identified, and all mitigation will be accommodated at the offsite location. Pursuant to the MSHCP, the City would not begin Project construction until the CDFW and the USFWS have approved the DBESP and mitigation. Mitigation for Project impacts to the drainage is reflected in Mitigation Measure BIO-3.

- Narrow Endemic Plants. The policies for the protection of Narrow Endemic Plant Species as set forth in Section 6.1.3 of the MSHCP. Through the field investigation, it was determined that the Project alignment provides marginal habitat for the following Narrow Endemic Plant Species listed under Section 6.1.3 of the MSHCP: San Diego ambrosia, smooth tarplant, and California Orcutt grass. However, none of these species were observed within the limits of disturbance for the proposed Project. Therefore, no additional surveys or analysis are required.

- Urban/Wildlands Interface. This intended to address indirect effects associated with locating Development in proximity to the MSHCP Conservation Area as detailed in Section 6.1.4 of the MSHCP. Portions of the project site are located within Criteria Cell 7079. As a result, the Urban/Wildlife Interface Guidelines will be incorporated into the Project to ensure that indirect Project-related impacts, including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized. These include the following:

- Drainage: During project construction, the project's stormwater should be directed away from the unnamed drainage which transverses the project site from the southeast to the northwest and lies to the northeast of Ynez Road. These measures will ensure that the project stormwater discharges are no greater in volume and velocity than current undeveloped conditions and that the water leaving the site complies with all applicable water quality standards. No drainage/runoff from the site shall flow into this drainage.

- Toxics: According to the MSHCP, measures shall be incorporated to ensure that application of chemicals does not result in discharge to the MSHCP Conservation Area. During the construction of the Project, construction activities have the potential to cause release of toxins that could impact areas downstream of the unnamed drainage located onsite. To address these potential short-term impacts, the project is required to stage construction operations as far away from mapped drainages to the maximum extent feasible.

- Lighting: The proposed Project is not anticipated to significantly increase lighting and glare. However, if light sources are installed, they should be designed with internal baffles to direct the lighting towards the ground and the developed areas and have a zero-side angle cut off to the horizon.

- Noise: Under the MSHCP, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards. According to the City of Temecula's noise compatibility matrix (Table N-2 of the City's General Plan),

an exterior noise level of up to 60 dBA CNEL is normally acceptable for residential uses and an exterior noise level of up to 70 dBA CNEL is conditionally acceptable for residential uses. The existing noise generated by Ynez Road was determined to be between 64 dBA and 65 dBA. The Project is anticipated to generate 0.1 dBA to 1.5 dBA (refer to Section 4.13 of this document), which is not perceptible. As the Project alignment is located in a highly-trafficked area and is located within a broader area that contains a mix of residential and commercial development including Interstate 15, increases in noise levels as a result of Project implementation are not likely to impact wildlife within an MSHCP conservation area.

- Invasive Plant Species: No landscaping is proposed as part of the Project, therefore, this does not apply.

- Barriers: Barriers would restrict direct access to the adjacent undeveloped open space from the project site by unauthorized public access. Under the MSHCP, suitable barriers include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms. No barriers are anticipated to be needed.

- Grading/Land Development: No manufactured slopes are anticipated to be constructed within the MSHCP Conservation Area. Should manufactured slopes be necessary, they will be kept within the boundaries of the development footprint and not encroach into the drainage.

- Section 6.3.2 of the MSHCP, *Additional Survey Needs and Procedures*. Additional surveys may be needed for certain species in order to achieve coverage for these species. The query of the RCA MSHCP Information Map and review of the MSHCP determined that the Project site is located within the designated survey area for burrowing owl as depicted in Figure 6-4 within Section 6.3.2 of the MSHCP. The Project site is not located within any other MSHCP designated species survey areas. Since burrowing owl are known to occur within the surrounding area, a burrowing owl suitability assessment was conducted. Although not found on site, Mitigation Measure BIO-2 requires a pre-construction survey for burrowing owl to ensure protection of the species.

- Section 6.1.1 of the MSHCP for the Project location in a Criteria Cell. A Habitat Evaluation Acquisition Negotiation Strategy (HANS) is required as the proposed Project is within a Criteria Cell is subject to review under the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process under Section 6.1.1 of the MSHCP. Project applicants whose sites fall within Criteria Areas are required to file a habitat assessment of their project site to determine if all or part of the property is necessary for inclusion in any MSHCP Conservation Areas. If it is determined by the Western Riverside County RCA and/or the Joint Project Review, the County, Cities, or various State and Federal Agencies that all or part of the property is needed for inclusion in the MSHCP Conservation Area, the property owner will enter into negotiations with such agencies to determine the extent of development allowed within the Project site that will not significantly impact the function of the conservation areas in question. A

portion of the northern portion of the Project site is located within the Southwest Area Plan of the MSHCP and is partially located within Criteria Cell 7079 that contributes to the assembly of Proposed Constrained Linkage 13. Conservation within this Cell will range from 5 percent to 15 percent of the Cell focusing on the southwestern portion of the Cell. Conservation within this Cell will contribute to assembly of Proposed Constrained Linkage 13; conservation within this Cell will focus on riparian scrub, woodland and forest habitat along Murrieta Creek west of the project site, and west of Interstate 15. The proposed Project alignment is located on the northeast corner of Criteria Cell 7079 outside of the area targeted for conservation. Section 6.1.1 of the MSHCP requires that Project applicants whose projects fall within Criteria Areas are required to undergo a Habitat Acquisition and Negotiation Strategy (HANS) with the Riverside Conservation Authority (RCA) and wildlife agencies for a final review (JPR) to determine if all or part of the Project's property is necessary for inclusion in any MSHCP Conservation Areas. The City has submitted the HANS application to the RCA that identifies the Project implementation would not conflict with the conservation goals for Criteria Cell 7079 or the assembly of Proposed Constrained Linkage 13. The City would not begin construction until the HANS process has been completed.

The Project was found consistent with the MSHCP, with Mitigation Measures with the mitigation proposed in Mitigation Measure BIO-1, BIO-2 and BIO-3. Therefore, impacts to any local, regional, or state habitat conservation plans are not expected to occur from development of the proposed Project, and mitigation is not required.

4.4.4 Mitigation Measures

BIO-1: Nesting Birds. To the extent possible, construction activities (i.e., earthwork, clearing, and grubbing) shall occur outside of the general bird nesting season for migratory birds, which is March 15 through August 31 for songbirds and January 15 to August 31 for raptors.

If construction activities (i.e., earthwork, clearing, and grubbing) must occur during the general bird nesting season for migratory birds (March 15 to August 31) and raptors (January 15 to August 31), a qualified biologist shall be retained to perform a pre-construction survey of potential nesting habitat to confirm the absence of active nests belonging to migratory birds and raptors afforded protection under the MBTA and CFG Code. The preconstruction survey shall be performed no more than seven days prior to the commencement of construction activities. The results of the pre-construction survey shall be documented by a qualified biologist. If construction is inactive for more than seven days, an additional survey shall be conducted.

If the qualified biologist determines that no active migratory bird or raptor nests occur, the activities shall be allowed to proceed without any further

requirements. If the qualified biologist determines that an active migratory bird or raptor nest is present, no impacts within 300 feet (500 feet for raptors) of the active nest shall occur until the young have fledged the nest, and the nest is confirmed to no longer be active, or as determined by the qualified biologist. The biological monitor may modify the buffer as applicable for the specific bird species and type of work, or propose other recommendations to avoid indirect impacts to nesting birds.

BIO-2 Burrowing Owl: In compliance with the MSHCP, a pre-construction survey shall be conducted on the study area within 30 days prior to ground disturbance to determine presence of burrowing owls. If the pre-construction survey is negative and burrowing owl is confirmed absent, then ground-disturbing activities (i.e., earthwork, clearing, and grubbing) shall be allowed to commence and no further mitigation would be required. If BUOW is observed during the pre-construction survey, active burrows shall be avoided by the project in accordance with the California Department of Fish and Wildlife's (CDFW) Staff Report on Burrowing Owl Mitigation (2012) or CDFW's most recent guidelines. The Project Proponent shall immediately inform the Western Riverside County Regional Conservation Authority (RCA) of BUOW observations. A BUOW Protection and Relocation Plan (plan) shall be prepared by a qualified biologist, which must be sent for approval by RCA prior to initiating ground disturbance. The RCA will coordinate directly with CDFW as needed to ensure that the plan is consistent with the MSHCP and CDFW guidelines. The plan shall detail avoidance measures that shall be implemented during construction and passive or active relocation methodology. Relocation shall only occur outside of the nesting season (September 1 through January 31). The RCA may require translocation sites to be created within the MSHCP Conservation Area for the establishment of new colonies. If required, the translocation sites must take into consideration unoccupied habitat areas, presence of burrowing mammals, existing colonies, and effects to other MSHCP Covered Species in order to successfully create suitable habitat for BUOW. The translocation sites must be developed in consultation with RCA. If required, translocation sites would also be described in the agency-approved plan.

BIO-3: The MSHCP requires that any impacts to riverine/riparian habitat be approved by the CDFW and USFWS through approval of the DBESP, which the City has prepared (Appendix B-2). The DBESP identifies that the City would mitigate impacts to 0.22 acre of riverine habitat through the management (removal of non-native plant species) of 0.66 acre of habitat within a City owned parcel along Temecula Creek. The 0.66 acre of offsite mitigation area was established using a 3:1 mitigation ratio for permanent impacts to riparian/riverine habitat along the bank of Drainage 1. Therefore, no additional impacts will occur based on the final mitigation acreage that is identified, and all mitigation will be accommodated at the offsite location. The offsite mitigation site is located immediately adjacent to Temecula

Creek in the City of Temecula to the southeast of the Project Site within Assessor Parcel Number (APN) 961-440-012. The 0.66 acre of riverine/riparian habitat offsite currently supports invasive plant species (i.e., tacolote mustard, prickly lettuce, etc.) that will be removed to enhance the riparian/riverine habitat. A conservation easement would be placed over the 0.66 acre of offsite riparian/riverine habitat in favor of a qualified habitat maintenance organization (an approved third party that both CDFW and the USFWS must review and approve). The overall habitat functions and values provided by existing habitat areas within the offsite conservation area in Temecula Creek would be enhanced by removing invasive, non-native plant species. Additionally, the manufacture slopes will either be hydroseeded or seeded by hand broadcasting of native seeds to stabilize the slopes above Drainage 1. Pursuant to the MSHCP, the DBESP, including the impacts and proposed mitigation must be reviewed and approved by the CDFW and the USFWS. The mitigation that the City has proposed may be increased, decreased or the strategy revised during the CDFW and USFWS review process. However, pursuant to the MSHCP, the City would not begin Project construction until the CDFW and the USFWS have approved the DBESP and mitigation strategy.

4.4.5 Conclusion

Implementation of **Mitigation Measures BIO-1, BIO-2,** and **BIO-3,** would reduce potential impacts of the proposed Project associated with Biological Resources to less than significant.

4.5 CULTURAL RESOURCES

A Cultural Resources Assessment for the proposed Project was performed to determine potential impacts to historic and archaeological resources (**Appendix C – *Cultural Resource Assessment Ynez Road Improvements Project*, prepared by BCR Consulting, August 7, 2025**).

4.5.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in 15064.5?			X	
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Discussion

a) Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Less Than Significant Impact. Public Resources Code Section 15064.5(a) defines historical resources, which includes: *A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 14 CCR, Section 4850 et seq.).* The study in Appendix C included a records search through the South Central Coastal Information Center (SCCIC), intensive-level pedestrian field survey, paleontological resources overview, and Sacred Lands File Search with the Native American Heritage Commission. The records search revealed that 71 cultural resource studies have taken place resulting in the recording of 35 cultural resources within a one-mile radius of the Project site. However, no cultural resources were identified within the Project alignment.

The field survey also produced negative results for potential cultural resources. The Project Site was closely inspected for any evidence of human activities dating to the prehistoric or historic period, but none was found.

The report in Appendix C determined that there are no "historical resources" as defined by CEQA that exist within or adjacent to the Project site. Therefore, potential impacts associated with an adverse change to a historical resource would be less than significant, and no mitigation would be required.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Less Than Significant Impact With Mitigation Incorporated. Archaeological and cultural sites represent the material remains of human occupation and activity either prior to European settlement (prehistoric sites) or after the arrival of Europeans (historical sites). No other potential markers of prehistoric human activities were found on the Project site.

An inquiry to the Native American Heritage Commission (NAHC) was submitted as part of the investigation in Appendix C to ascertain the presence of known sacred sites, Native American cultural resources, and/or Native American human remains within the boundaries of the proposed Project. Findings were positive during the Sacred Lands File search with the NAHC. The NAHC recommended contacting the Pechanga Band of Indians for more information. The City initiated Assembly Bill (AB) 52 Native American Consultation for the Project, the results of which are provided in this report.

As it always possible that intact archaeological deposits could be present at subsurface levels, the Project site should be treated as potentially sensitive for archaeological and cultural resources. Implementation of **Mitigation Measures CUL-1 through CUL-6,** located at the end of this section, are required to manage unanticipated discoveries of archaeological and Native American resources. Implementation of Mitigation Measures CUL-1 through CUL-6 would reduce potential impacts to unanticipated discoveries of archaeological resources.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant Impact With Mitigation Incorporated. Based on an analysis of records and surveys of the property, it has been determined that the Project site does not include a formal cemetery or any archaeological and cultural resources that might contain interred human remains. No human remains are known to exist within the Project area. However, although unlikely, it is possible that ground disturbance associated with the proposed Project may encounter and damage or destroy previously undiscovered human remains.

Therefore, impacts are assessed as potentially significant, however, implementation of **Mitigation Measure CUL-7,** located at the end of this section, would manage unanticipated discoveries of human remains.

4.5.2 Mitigation Measures

Implementation of mitigation measures CUL-1 through CUL-7 would reduce potentially significant impacts to archaeological and cultural resources to a less-than-significant level:

CUL-1 At least 30 days prior to the start any ground-disturbing activities, the City shall contact the Pechanga Tribe to develop an Agreement ("Agreement"). This Agreement will address the treatment and disposition of cultural resources, the designation, responsibilities, and participation of professional Pechanga Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any cultural resources, sacred sites, and human remains discovered onsite. The Tribal Monitor(s) shall have the authority to temporarily divert, redirect, or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist. Pechanga Tribal Monitors shall be allowed to monitor all grading, excavation and groundbreaking activities.

CUL-2 Prior to beginning project construction, the City of Temecula shall hire an archaeologist to monitor all ground disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to a cultural resource evaluation. The archaeological monitor shall have the authority to stop and redirect grading in consultation with the Pechanga Band of Indians in order to evaluate the significance of any potential resources discovered on the property. The archaeological monitors shall be allowed to monitor all grading, excavation and groundbreaking activities.

CUL-3 A qualified archaeologist and Pechanga tribal monitor shall attend a pre-construction meeting with City staff, the contractor, and appropriate subcontractors to discuss the monitoring program, including protocols to be followed in the event that cultural material is encountered.

CUL-4 If during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to Project approval, the following procedures shall be followed. Unique cultural resources are defined, for this Mitigation only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Pechanga Band of Indians. Tribal cultural resources are excluded from the definition of unique cultural resources as those resources are defined by the tribal values ascribed to the them by their affiliated communities. Treatment of Tribal cultural resources inadvertently discovered during the project's ground-disturbing activities shall be subject to the consultation process required by state law and AB 52.

i. All ground disturbance activities within 50 feet of the discovered cultural resources shall be halted until a meeting is convened between the City, the Project Archaeologist, the Pechanga Band of Indians, and the Planning Director to discuss the significance of the find.

ii. Further ground disturbance, including but not limited to grading, trenching, vegetation clearing, etc., shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal and archaeological Monitors if needed.

iii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Tribal Representative(s) and the Project Archaeologist, a decision shall be made, with the concurrence of the Planning Director, as to the appropriate mitigation (documentation, avoidance, recovery, etc.) for the cultural resources.

iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Monitoring Agreement entered into with the Pechanga Band of Indians. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial of the resources on the Project property so they are not subject to further disturbance in perpetuity as identified in CUL –4

v. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Project Applicant and the Pechanga Band of Indians cannot agree on the significance or the mitigation for the cultural resources, these issues will be presented to the Planning Director for decision. The Planning Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to Cultural and Tribal Cultural Resources, recommendations of the Project archeologist and shall consider the cultural and religious principles and practices of the Pechanga Band of Indians. Notwithstanding any other rights available under the law, the decision of the Planning Director shall be appealable to the City Planning Commission and/or City Council.

vi. If the find is determined to be significant and avoidance of the site feasibly cannot be achieved, a Mitigation recovery plan shall be prepared by the Project Archeologist, in consultation with the Pechanga Band of Indians, and shall be submitted to the City for their review and approval prior to implementation of the said plan.

vii. Evidence of compliance with this mitigation measure, if a significant Cultural or Tribal Cultural Resource is found, shall be provided to City of Temecula upon the completion of a treatment plan and include a final report detailing the significance and treatment finding.

CUL-5 In the event that Tribal Cultural Resources are discovered during the course of grading, the following procedures shall be carried out for final disposition of the discoveries: One or more of the following treatments, in order of preference, shall be employed in consultation with the Pechanga Band of Indians.

i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.

ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods, and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.

iii. If preservation in place and/or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid shall be required.

There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to the City of Temecula upon the completion of a treatment plan and final report detailing the significance and treatment finding.

CUL-6 The City shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts that are found within the Project area, for proper treatment and disposition pursuant to the Agreement required in mitigation measure CUL-1 through CUL-5.

CUL-7 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the NAHC must be contacted within 24 hours. The NAHC must then immediately identify the most likely descendant(s) for purposes of receiving notification of discovery. The most likely descendant(s) shall then make recommendations within 48 hours of being granted access to the site and engage in

consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98 and the agreement described in mitigation measure CUL-1.

4.5.3 Conclusion

Implementation of Mitigation Measures **CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-6,** and **CUL-7** would reduce potential impacts of the proposed Project associated with Cultural Resources to less than significant.

4.6 ENERGY

This section describes the potential energy usage effects from implementation of the proposed Project for both construction activities as well as long-term operations and is based on information provided in Appendix A.

4.6.1 Environmental Setting

California is one of the lowest per capita energy users in the United States, ranked 48th in the nation, due to its energy efficiency programs and mild climate (United States Energy Information Administration [EIA] 2018). California consumed 292,039 gigawatt-hours (GWh) of electricity and 2,110,829 million cubic feet of natural gas in 2017 (California Energy Commission [CEC] 2019; EIA 2018). In addition, Californians consume approximately 18.9 billion gallons of motor vehicle fuels per year (Federal Highway Administration 2019). The single largest end-use sector for energy consumption in California is transportation (39.8 percent), followed by industry (23.7 percent), commercial (18.9 percent), and residential (17.7 percent) (EIA 2018).

Most of California's electricity is generated in-state with approximately 30 percent imported from the Northwest (Alberta, British Columbia, Idaho, Montana, Oregon, South Dakota, Washington, and Wyoming) and Southwest (Arizona, Baja California, Colorado, Mexico, Nevada, New Mexico, Texas, and Utah) in 2017. In addition, approximately 30 percent of California's electricity supply comes from renewable energy sources such as wind, solar photovoltaic, geothermal, and biomass (CEC 2018). Adopted on September 10, 2018, SB 100 accelerates the State's Renewables Portfolio Standards Program by requiring electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

To reduce statewide vehicle emissions, California requires that all motorists use California Reformulated Gasoline, which is sourced almost exclusively from refineries located in California. Gasoline is the most used transportation fuel in California with 15.5 billion gallons sold in 2017 and is used by light-duty cars, pickup trucks, and sport utility vehicles (California Department of Tax and Fee Administration 2018). Diesel is the second most used fuel in California with 4.2 billion gallons sold in 2015 and is used primarily by heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm equipment, and heavy-duty construction and military vehicles (CEC 2016). Both gasoline and diesel are primarily petroleum-based, and their consumption releases greenhouse gas (GHG) emissions, including CO_2 and NO_X. The transportation sector is the single largest source of GHG emissions in California, accounting for 41 percent of all inventoried emissions in 2016 (California Air Resources Board [CARB] 2018).

4.6.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. ENERGY: Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less Than Significant Impact. Energy use during Project construction would be primarily in the form of fuel consumption to operate heavy equipment, light-duty vehicles, machinery and employee trips. Construction of the Project is estimated to last approximately 12 months during which time diesel and gasoline fuel is anticipated to be the primary energy consumed. It is not anticipated that the Project would require significant use of natural gas or electricity (from the electrical grid) during construction. As a result, natural gas and electricity use during construction would be temporary and a negligible portion of the total construction energy. Diesel and gasoline fuel consumption would be associated with heavy-duty equipment, haul trucks involved in the transport of soil and construction materials, and workers commuting to and from the site.

The analysis in Appendix A estimated the Project's energy demand using CalEEMod 2022.1.1.26. The CalEEMod outputs detail Project related construction equipment, transportation energy demands, and facility energy demands. Electricity used for the Project during construction and operations would be provided by Southern California Edison, which serves more than 15 million customers. SCE derives electricity from varied energy resources including: fossil fuels, hydroelectric generators, nuclear power plants, geothermal power plants, solar power generation, and wind farms. Project-related vehicle trip energy consumption will be predominantly gasoline and diesel fuel. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

Construction Energy

The Project's estimated energy consumption during construction is provided in Appendix A (refer to Tables 8-11). In summary, the usage was estimated as follows:

- Table 8: Construction Equipment Fuel Consumption Estimates: 48,438 gallons of diesel fuel.
- Table 9: Construction Worker Fuel Consumption Estimates: 2,986 gallons.
- Table 10: Construction Vendor Fuel Consumption Estimates (Medium Heavy Duty Trucks): 389 gallons.
- Table 11: Construction Hauling Fuel Consumption Estimates (Heavy Heavy Duty Trucks): 70 gallons.

Construction of the proposed Project would require the typical use of energy resources. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Project construction is required to comply with applicable California Air Resources Board (CARB) regulations regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants. Compliance with these measures would result in a more efficient use of construction- related energy and would minimize or eliminate wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additionally, as required by California Code of Regulations Title 13, Motor Vehicles, Section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby minimizing or eliminating unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Therefore, Project compliance with State regulations will reduce impacts to less than significant and no mitigation is required.

Operations

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

The Project therefore would not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of

energy and aims to achieve energy conservations goals within the State of California particularly because the Project has been designed in compliance with California's Energy Efficiency Standards, such as streetlights that would be LED which would use less energy. Therefore, there is a less than significant impact, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Less Than Significant Impact. There are no state or local plans for renewable energy or energy efficiency directly applicable to the construction energy consumption from a roadway improvement project. However, a project's energy consumption is closely related to a project's GHG emissions. As described in the GHG analysis in Appendix A, the Project's amortized GHG construction emissions would not exceed the SCAQMD threshold, and the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, including the City's CAP. Therefore, the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and the impact would be less than significant.

Given the above, the proposed Project would have a less than significant potential to conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

4.6.3 Mitigation Measures

No mitigation measures associated with impacts to Energy apply to the proposed Project.

4.6.4 Conclusion

There would be less than significant of the proposed Project associated with Energy resources, and no mitigation would be required.

4.7 GEOLOGY AND SOILS

4.7.1 Environmental Setting

A geotechnical investigation was prepared for the proposed Project (**Appendix D - *Geotechnical Recommendations Report for the Proposed Widening of the East Side of Ynez Road between Station No. 101+99.21 and 117+61.56, Temecula, California*, prepared by LGC, October, 16, 2024**) to assess the potential for geological conditions that would impact site design. The potential for paleontological resources were assessed in Appendix C.

4.7.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GEOLOGY AND SOILS: Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
• Strong seismic ground shaking?			X	
• Seismic-related ground failure, including liquefaction?			X	
• Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on-site or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		

Discussion

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

- *Rupture of a known earthquake fault, as delineated on the most recent Alquist Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.*

  Less than Significant Impact. The City, like the rest of southern California, is located within a seismically active region as a result of being located near the active margin between the North American and Pacific tectonic plates. Regional active faults that occur within the southern California area include the on-shore and offshore Rose Canyon-Newport Inglewood fault zone to the southwest, the Elsinore fault zone within a portion of the site, and the San Jacinto and San Andreas faults to the northeast. The closest known active fault to the site is the Wildomar fault (part of the Elsinore Fault Zone, Temecula Section) and is located just to the west of Ynez Road (Within 100 feet of the roadway).

  The Project is mapped within an Alquist-Priolo Zone according to the City's General Plan. The Alquist-Priolo Earthquake Fault Zoning Act was signed into California law on December 22, 1972, to mitigate the hazard of surface faulting to structures for human occupancy. The proposed Project consists of a roadway lane expansion that is not designed for human occupancy. Therefore, the impacts are less than significant.

- *Strong seismic ground shaking?*

  Less Than Significant Impact. The Elsinore fault, Wildomar Strand, is located on the west side of Ynez Road beneath the east-facing slope along the roadway. While the fault crosses

Ynez Road (where the fault steps over from the west strand south of the Duck Pond to the west strand north of the Duck Pond) the location in Ynez Road is north of the proposed Ynez Road widening project. The location of the active fault strand south of the intersection of Ynez Road and Tierra Vista Road is shown on the attached Fault Setback Zone Figure from the Leighton and Associates report for Tract No. 23339 (Rancho Highlands II). As a result, it appears that there is little probability of surface rupture due to active faulting along the Ynez Road widening project beneath the site (Appendix D). Therefore, the impacts would be less than significant, and no mitigation is required.

- *Seismic related ground failure, including liquefaction?*

  Less Than Significant Impact. Liquefaction is a seismic phenomenon in which loose, saturated, fine-grained granular soils behave similarly to a fluid when subjected to high-intensity ground shaking. Liquefaction occurs when these ground conditions exist: 1) Shallow groundwater; 2) Low density, fine, clean sandy soils; and 3) High intensity ground motion. Effects of liquefaction can include sand boils, settlement, and bearing capacity failures below foundations.

  The geotechnical investigation in Appendix D, groundwater was only encountered near the bottom of the young alluvial soils present in the lower portion of the drainage ravine along the east side of Ynez Road. The geotechnical report identified that the Project soils likely consist of fill soils and the Pauba Formation (bedrock). The depth of the groundwater encountered during the preliminary geotechnical investigation was in the lower approximately 5 to 6 feet of the ravine and no groundwater was encountered in the Pauba Formation along the west side of the ravine. Additionally, the investigation found the alluvial soils to be potentially liquefiable between 16 to 17.5 feet and 20 to 22.5 feet below the existing ground surface with subsequent total seismically induced settlements of 0.5 inches and differential settlements of 0.25 inches in 30 feet. The geotechnical report in Appendix D anticipates similar settlements along the Ynez Road widening alignment if saturated young alluvial soils are present along the roadway. However, the geotechnical report in Appendix D identifies that the young alluvial soils will be removed to bedrock below the proposed retaining wall and roadway fill slope and replaced with compacted fill, eliminating the potential for liquefaction beneath the proposed fill slope. Therefore, the impacts are less than significant, and no mitigation is required.

- *Landslides?*

  Less Than Significant. The Project alignment is flat. An engineered slope occurs on the west side of Ynez Road, and the Project would reconstruct the slope on the east side of Ynez Road. Overall, the Project alignment is not located in an area mapped by the City's General Plan as being within an area of landslide risk. Therefore, the impact is less than significant, and no mitigation is required.

Based on the above, the Project will have a less than significant impact regarding exposure of people or structures to potential substantial adverse effects of earthquakes, ground shaking, liquefaction, and landslides, and no mitigation is required.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant Impact. During Project construction, when soils are exposed, temporary soil erosion may occur, which could be exacerbated by rainfall. The Project would disturb approximately 1.7 acres along the roadway and approximately 1.25 along the east slope of the road. Construction projects that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (General Construction Permit), which requires the applicant to file a notice of intent (NOI) to discharge stormwater and to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP includes an overview of the Best Management Practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. The Project is more than 1-acre, therefore, the contractor is required to provide an SWPPP. The SWPPP will also address post-construction measures for water quality protection. With the implementation of the SWPPP, impacts would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. Refer to the above discussion regarding hazards associated with liquefaction and landslide hazards. As noted, there is no potential for landslide and low potential for liquefaction. Therefore, because the Project alignment is not located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, potential impacts would be less than significant, and no mitigation is required.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Less Than Significant Impact. Expansive soil is a soil/clay (such as montmorillonite or bentonite) that is prone to expansion or shrinkage due directly to variation in water volume. Expansive soils swell when exposed to large amounts of water and shrink when the water evaporates. This continuous cycle of wet to dry soil keeps the soil in perpetual motion causing structures built on this soil to sink or rise unevenly, often requiring foundation repair. Expansive soils are comprised primarily of minerals (incredibly fine particles) with little to no organic material and are thus incredibly viscous, proving difficult to drain.

Development would occur within soils with some potential for expansion. The geotechnical investigation identified that the older fill along Ynez Road is related to the grading and

construction of the existing portion of Ynez Road along the east side of the roadway and consists mainly of silty sands. Potentially compressible deposits of young alluvium were encountered along the entire east side of Ynez Road. As observed, these deposits primarily consist of medium to dark brown and gray to red-orange brown, silty to clayey very fine to medium sands that are low to highly expansive, porous, and contain scattered organics. The upper portion of the young alluvium is considered potentially compressible in the present state.

The geotechnical report identifies guidelines for excavation and fill for the roadway and components to reduce the potential of damage caused by expansive soils. The Project does not include housing where the presence of expansive soil would cause a substantial direct or indirect risk to life and property. Therefore, impacts would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No Impact. The Project does not propose to install septic tanks or alternative wastewater disposal systems. No impacts would occur, and no mitigation is required.

f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less Than Significant With Mitigation Incorporated. The cultural resources report in Appendix C identifies that the geologic units underlying the Project area are mapped as the Pleistocene sandstone member of the Pauba Formation. Pleistocene units such as the Pauba Formation are considered to be fossiliferous and highly paleontologically sensitive.

A records review from the Western Science Center did not identify any fossil localities within the Project area or a 1-mile radius, however, there is a fossil-bearing locality less than one-half a mile outside the radius and also in the Pauba Formation. Pleistocene units throughout Southern California have produced large quantities of fossils, such as the extensive collection from Diamond Valley Lake housed at Western Science Center. Any fossil specimens recovered from the Project would be scientifically significant.

In order to reduce potential impacts from unanticipated paleontological resources that may be within the Project alignment, implementation of **Mitigation Measure GEO-1** to prepare a Paleontological Resource Management Plan (PRMP) is required. With the implementation of GEO-1, impacts would be less than significant.

4.7.3 Mitigation Measures

GEO-1 Paleontological Resource Management Plan. Prior to the start of construction, a Paleontological Resources Management Plan (PRMP) shall be prepared by a qualified Paleontologist and include the following procedures:

- Any undocumented fill, desiccated documented older fill soils, and the upper 5 feet of the young alluvial deposits are considered unsuitable in their present state and will require removal and recompaction in areas of proposed street improvements and design fills.

- Monitoring of mass grading and excavation activities in areas identified as likely to contain paleontological resources shall be performed by a qualified paleontologist or paleontological monitor. Starting at the surface, monitoring will be conducted full-time in areas of grading or excavation in undisturbed alluvial deposits.

- Development of an inadvertent discovery plan to expediently address treatment of paleontological resources should any be encountered during development associated with the Project. If these resources are inadvertently discovered during ground-disturbing activities, work must be halted within 50 feet of the find until it can be evaluated by a qualified paleontologist. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as fossil collection and curation, may be warranted and would be discussed in consultation with the appropriate regulatory agency(ies).

4.7.4 Conclusion

Implementation of **Mitigation Measure GEO-1** would reduce potential impacts of the proposed Project associated with Geology and Soils to less than significant.

4.8 GREENHOUSE GAS EMISSIONS

A Greenhouse Gas Analysis was prepared for the Project as part of the Air Quality Assessment (Appendix A).

4.8.1 Regulatory Setting

Since 1988, many countries around the world have made an effort to reduce GHG emissions since climate change is a global issue. Over the past 30 years, the United States, and the State of California, have enacted a myriad of regulations that have evolved over time aimed at reducing GHG emissions in transportation, building and manufacturing.

The Project site is located in the South Coast Air Basin (SCAB) in the Temecula Valley Source Receptor (SRA26). The nearest air monitoring station to the Project site is the Pechanga Reservation Monitoring Station. Historical air quality data for the vicinity can be found both at CARB and SCAQMD's websites. Temperature and historical precipitation data can be found at the WRCC.

4.8.2 Environmental Setting

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO2), methane (CH4), ozone, water vapor, nitrous oxide (N2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO2 and nitrous oxide (NO2) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO2, where CO2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. Appendix A provides a description of each of the greenhouse gases and their global warming potential.

For the purposes of Greenhouse Gas Analysis (Appendix A), the focus was on emissions of CO_2, CH_4, and N_2O because these gases are the primary contributors to Global Climate Change (GCC) from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

4.8.3 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. There are no established federal, state, or local quantitative thresholds for this Project to determine the quantity of GHG emissions that may significantly affect the environment. However, the California Air Resources Board (CARB), the SCAQMD, and various cities and agencies have proposed or adopted interim thresholds of significance that require GHG emission reduction measures.

SCAQMD has established recommended significance thresholds for greenhouse gases for local lead agency consideration. SCAQMD has published a five-tiered draft GHG threshold which includes a 10,000 metric ton of CO2e per year for stationary/industrial sources and 3,000 metric tons of CO2e per year significance threshold for residential/commercial projects. Tier 3 is anticipated to be the primary tier by which the SCAQMD will determine significance for projects. The Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90-precent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to CEQA analysis. The 90-percent capture rate GHG significance screening level in Tier 3 for stationary sources was derived using the SCAQMD's annual Emissions Reporting Program.

For the proposed Project, the most appropriate screening threshold for determining GHG emissions is the SCAQMD proposed Tier 3 screening threshold. This is because the Project's construction period and equipment are similar to those of a commercial or residential project to which Tier 3 applies. Therefore, a significant impact would occur if the proposed project exceeds the SCAQMD proposed Tier 3 screening threshold of 3,000 metric tons (MT) of CO2e per year.

The analysis in Appendix A determined that the Project's potential construction GHG emissions are an estimated 444.36 Metric Tons of Carbon Dioxide Equivalent (MTCO2e), which is well below the SCAQMD's draft screening threshold of 3,000 MTCO2e for all land uses. Therefore, the impact is less than significant.

b) Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The analysis in Appendix A evaluated the Project's consistency with the following plans:

- City of Temecula General Plan: The Project involves widening and improving an existing roadway to accommodate existing and future projected traffic volumes, and would not generate new vehicle trips itself. The proposed Project would not result in an increase in population or employment and would therefore be consistent with the growth projections in the GHG emissions inventory projections. Therefore, the Project is consistent with the General Plan.

- Executive Orders S-03-05 and B-30-15: These executive orders call for developing more efficient land-use patterns to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. Given the reasonably anticipated decline in Project emissions once fully constructed and operational, the Project is consistent with the Executive Order's horizon-year goal. Therefore, the Project is consistent with Executive Orders S-3-05 and B-30-15.

- AB32 Scoping Plan: The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. As the latest, 2022 Scoping Plan builds upon previous versions, Project consistency with applicable strategies are assessed in Appendix A. The Project was evaluated against the recommended actions from the Scoping Plan. The Project was found to be consistent with the recommended actions.

- SCAG's 2020-2045 RTP/SCS. At the regional level, the 2020-2045 Regional Transportation Plan (RTP) and Sustainable Communities Strategy (SCS), as published by the Southern California Council of Governments (SCAG), represent the region's Climate Action Plan that defines strategies for reducing GHGs. Appendix A evaluated the Project against various actions and strategies in the RTP/SCS, and found that the Project would be consistent with the GHG reduction related actions and strategies contained in the 2024-2050 RTP/SCS.

Therefore, the Project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Therefore, impacts are considered to be less than significant, and no mitigation is required.

4.8.4 Mitigation Measures

No mitigation measures associated with impacts to Greenhouse Gas Emissions apply to the proposed Project.

4.8.5 Conclusion

Potential impacts of the proposed Project associated with Greenhouse Gas Emissions would be less than significant, and no mitigation would be required.

4.9 HAZARDS AND HAZARDOUS MATERIALS

4.9.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard or excessive noise to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?				X

Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Less than Significant Impact. Project construction would require the use of materials that are typically associated with construction activities, such as diesel fuels, hydraulic liquids, oils, solvents, and paint. Hazardous materials used during project construction would be transported, used, and stored in accordance with state and federal regulations regarding hazardous materials. The use of these materials would be temporary, and impacts during construction would be less than significant. With regard to long-term operation, the project would not increase the use or disposal of hazardous materials in the area once constructed and operational. The Project would better accommodate traffic capacity along the affected segment of Ynez Road and would not substantially increase the number or frequency of trucks or other vehicles transporting hazardous materials through the Project area such that it would create a significant hazard to the public or the environment. Therefore, operational impacts in this regard would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Less than Significant Impact With Mitigation Incorporated. Project construction would involve the use of heavy equipment, which would contain fuels, oils, lubricants, solvents, and various other possible contaminants. During the temporary, short-term construction period, there is the possibility of accidental release of hazardous substances such as spilling of hydraulic fluid or diesel fuel associated with construction equipment maintenance. The level of risk associated with the accidental release of these hazardous substances is not considered significant due to the small volume and low concentration of hazardous materials. The construction contractor would be required to use standard construction controls and safety procedures to avoid or minimize the potential for accidental release of such substances into the environment. However, because a major watercourse is located within 70 feet of the Project alignment and within the intersection improvements at Ynez Road and Rancho Vista Road, **Mitigation Measure HAZ-1,** located at the end of this section, is required to reduce the potential for contamination of surface waters.

The proposed Project would involve the removal of existing asphalt roadway and historical asphalt road sections. Asphalt is not currently regulated as a hazardous material, but potential contaminants in the asphalt binder and aerial deposited lead from vehicular traffic require off-site disposal restrictions imposed by the State of California Integrated Waste Management Board. The asphalt removed may be ground on-site and reused in the road base material. Or, the asphalt may be hauled for disposal. Implementation of **Mitigation Measure HAZ-2**, located at the end of this section, would ensure that all asphalt removed from the proposed Project would be disposed of in accordance with current regulations at a permitted facility.

Therefore, the Project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.

c) *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?*

No Impact. The school nearest to the Project alignment is Peppertree Montessori - Temecula, located at 29373 Rancho California Rd, approximately 0.38 mile to the north east of the Project alignment. Hazardous materials such as fuel and oil would be used for construction, but the use of these materials would be temporary and in accordance with applicable standards and regulations. As there is no school within one-quarter mile of the Project alignment, impacts related to the handling of hazardous materials within one-quarter mile of a school would not occur.

d) *Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

No Impact. Pursuant to Government Code Section 65962.5 (Cortese List) requirements, the SWRCB GeoTracker database (SWRCB 2020) and the California Department of Toxic Substances Control (DTSC) EnviroStor database (DTSC 2020) were searched for hazardous materials sites within the Project area. According to these databases, there are no listed hazardous materials sites within or adjacent to the Project alignment.

Envirostore Database. There are no sites listed in the Envirostore Database within 1,000 feet of the Project site.

Geotracker Database. Geotracker is the SWRCB's database that manages potential hazardous sites to groundwater. There are no sites listed in the Geotracker Database within 1,000 feet of the Project site.

Based on the result of the database review the Project site is not located on any site that has been identified in accordance with Section 65962.5 of the Government Code.

Therefore, there are no impacts because the Project Site is not located on any site that has been identified in accordance with Section 65962.5 of the Government Code. No mitigation would be required.

e) *For a project located within an airport land use plan or, where such a plan had not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

No Impact. The French Valley Airport is located approximately 5 miles north of the Project alignment. The Project alignment is not located within the Airport Influence Area (Riverside County Airport Land Use Commission 2004). Furthermore, the Project is not located within the vicinity of a private airstrip. Therefore, no impacts would occur.

f) *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

Less than Significant Impact. During construction, parts of the roadway may be closed to vehicular traffic; however, a Traffic Control Plan would be implemented to identify traffic control measures through the duration of Project construction activities. The Traffic Control Plan would maintain adequate access and the Project would therefore not interfere with an emergency response plan or emergency evacuation plan. Upon completion of construction, the improved roadway would include more lanes and would therefore allow for improved access to the surrounding areas. As such, impacts would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

No Impact. The Project alignment is not located within or near an area designated as a state responsibility area (California Department of Forestry and Fire Protection [CAL FIRE] 2007, 2011) nor is it classified as a Very High Fire Hazard Severity Zone (VHFHSZ) or located near a VHFHSZ (CAL FIRE 2007, 2011). The Project alignment is not mapped as a VHFHSZ per the CAL FIRE Fire Hazard Severity Zone Maps prepared under the Fire and Resource Assessment Program (FRAP). According to the VHFHSZ Maps prepared by the City in collaboration with CAL FIRE, the nearest VHFHSZ is located approximately one mile west of the Project near the City's western boundary. Furthermore, the proposed roadway improvements would not house people and would not be at risk from wildlife. Therefore, no impacts would occur.

4.9.2 Mitigation Measures

HAZ-1 A hazardous spill prevention plan shall be prepared by the Contractor and submitted to the City for approval prior to construction to minimize the likelihood of a spill. The plan shall state the actions that would be required if a spill occurs to prevent contamination of surface waters and provide for cleanup of the spill. The plan shall follow Federal, state, and local safety guidelines and standards to avoid increased exposure to these pollutants.

HAZ-2 All asphalt requiring removal from the Project alignment shall be disposed of in accordance with current regulatory standards.

4.9.3 Conclusion

Implementation of Mitigation Measure **HAZ-1** and **HAZ-2** would reduce potential impacts of the proposed Project associated with Hazards and Hazardous Materials to less than significant.

4.10 HYDROLOGY AND WATER QUALITY

Hydrology and drainage of the Project alignment and Project components (**Appendix E-1 – *Hydraulic Study for Ynez Road Improvements,* prepared by JLC Engineering, July 2, 2024,** and **Appendix E-2, *Technical Memorandum for Water Quality Treatment for Ynez Road Extension*, prepared by JLC Engineering, December 12, 2023**).

4.10.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?			X	
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:				
• result in substantial erosion or siltation onsite or offsite;			X	
• substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite;			X	
• create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
• impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

Discussion

a) Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?

Less than Significant Impact.

Construction:

Construction-related runoff pollutants are typically generated from waste and hazardous materials handling or storage areas, outdoor work areas, material storage areas, and general maintenance areas (e.g., vehicle or equipment fueling and maintenance, including washing). Construction projects that disturb 1 acre or more of soil, including the proposed Project, are regulated under the construction general permit (CGP, Order No. 2009-009-DWQ) and its subsequent revisions (Order No. 2012-0006-DWQ) issued by the SWRCB. Projects obtain coverage under the CGP by developing and implementing a SWPPP, estimating sediment risk from construction activities to receiving waters, and specifying best management practices that would be implemented as a part of the Project's construction phase to minimize pollution of stormwater prior to and during grading and construction.

The Project would disturb approximately 1.7 acres along the roadway and approximately 1.25 acres along the east slope of the road, and will add 0.5 acre of new impervious surface. Construction projects that disturb 1 acre of land or more are required to obtain coverage under the NPDES General Permit for Construction Activities (General Construction Permit), which requires the applicant to file a notice of intent (NOI) to discharge stormwater and to prepare and implement a SWPPP. The SWPPP includes an overview of the Best Management Practices (BMPs) that would be implemented to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources. The Project is more than 1-acre, therefore, the contractor is required to provide a SWPPP. The SWPPP will also address post-construction measures for water quality protection.

Therefore, with implementation of the SWPPP, water quality or waste-discharge impacts from Project-related grading and construction activities would be less than significant, and no mitigation is required.

Operations:

The Project design includes catch basins and storm drains in compliance with City design standards. Appendix E-1 evaluated the proposed volume of water that would be treated by inserts in the catch basins that were installed as part of the Rancho Highlands project at the intersection of Ynez Road and Tierra Vista Road. Based on the study in Appendix E-1, approximately 1,546.9 cubic (CF) feet that must be treated, or off-set by Water Quality Credits. For this Project, the City of Temecula will apply the 1,546.9 CF toward credits that exist in the City's Alternative Compliance Program for water quality. Therefore, there would be a less than significant impact.

b) *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

Less than Significant Impact. Implementation of the proposed Project would not result in the use of groundwater. While the proposed Project would result in additional impervious surfaces on the site, the Project size would have a minimal effect on the existing groundwater infiltration. Therefore, the proposed Project would not substantially interfere with groundwater recharge or the adjacent creek such that the Project may impede sustainable groundwater management of the basin and impacts would be less than significant.

c) *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would:*

- *result in substantial erosion or siltation onsite or offsite;*
- *substantially increase the rate or amount of surface water runoff in a manner which would result in flooding on or offsite;*
- *create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or*
- *impede or redirect flood flows?*

Less Than Significant Impact.

Result in substantial erosion or siltation onsite or offsite: The SWPPP would prevent substantial erosion or siltation onsite or offsite during construction. In the post-Project condition, stormwater would flow south (Rancho Vista Drive) to north (Tierra Vista Drive), along the new curb and gutter where it will be collected in catch basin located at Tierra Vista and Ynez Road. The sideslope along the east side of the road would be graded and compacted in a manner that reduces erosion.

Substantially increase the rate or amount of surface water runoff in a manner which would result in flooding. Although the Project would increase the impervious surface of the roadway by 0.5 acre, the roadway is designed to direct water off the road surface and into the catch basin located at Tierra Vista and Ynez Road. The catch basin was designed to capture the flows from the expanded Ynez Road, therefore, the Project would not substantially increase the rate or amount of surface water runoff in a manner which would result in flooding in the roadway or intersections.

Create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Stormwater along Ynez Road, from Rancho Vista Road, is designed to drain north to a catch basin that contains a treatment system at the corner of Ynez Road and Tierra Vista Road. The catch basin has been designed to accommodate the new flows from the Project. While the culvert can handle the total flows of 2,679 cubic feet (CF), of which 1,132 CF would be treated within the catch basin's treatment system, and approximately 1,546.9 CF would not be treated within the catch basin; however, 1,546.9 CF of water quality credits elsewhere in the City would occur through the City's water quality credit program. Therefore, the Project would not create or contribute to runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

Impede or redirect flood flows. The Project is not located in a flood hazard area according to FEMA Flood Maps 06065C2720G and 06065C3285C. Therefore, the Project would not impede or redirect flood flows.

Overall, the Project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would increase flooding, stormwater system capacity or flooding. The impacts would be less than significant, and no mitigation is required.

d) Would the project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

Less Than Significant. The Project alignment is not located within a flood zone according to FEMA flood maps. Therefore, there would be no impact regarding a flood hazard.

A seiche is a standing wave that oscillates in an enclosed or partially enclosed body of water, like a lake or bay, caused by external factors such as strong winds, earthquakes, atmospheric pressure changes, or tsunamis. This rhythmic oscillation causes water levels to rise and fall and can lead to flooding along the shoreline. The only large body of water that may be subject to a seiche is the Temecula Duck Pond, which is an approximately 2 acre, manmade pond located on the northeast corner of Ynez Road and Rancho California Road, approximately 435 feet from the Project alignment. And though the Project alignment is located in an earthquake zone, the small size of the pond creates a remote possibility that a

seiche may impact the Project alignment in a manner that may flood the Project alignment. As such, the impact would be less than significant.

Regarding risk from a tsunami, there would be no impact because the City of Temecula is located more than 48 miles from the coast.

As such, the impacts related to the release of pollutants due to project site inundation in flood hazard, tsunami, and seiche zones would be less than significant, and no mitigation would be required.

e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Less Than Significant Impact. As specified above, the Project would comply with applicable City of Temecula and County of Riverside stormwater requirements and would be required to obtain coverage under the NPDES General Construction Permit. In addition, the Project would not adversely impact a groundwater management plan because project-related runoff would not otherwise impede groundwater replenishment in the Murrieta-Temecula Groundwater Basin. In addition, as noted above, Project implementation would not have the potential to result in significant adverse impacts to surface water and groundwater quality or otherwise conflict with or obstruct implementation of the Water Quality Control Plan for the San Diego Basin (Basin Plan).

4.10.2 Mitigation Measures

No mitigation measures associated with impacts to Hydrology and Water Quality apply to the proposed Project.

4.10.3 Conclusion

Potential impacts of the proposed Project associated with Hydrology and Water Quality would be less than significant, and no mitigation would be required.

4.11 LAND USE PLANNING

4.11.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?				X
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?				X

Discussion

a) Would the project physically divide an established community?

No Impact. The project would widen and extend an existing roadway and other elements within the right-of-way and would not physically divide an established community. Therefore, no impacts would occur.

b) Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

No Impact. The project would widen and extend an existing roadway consistent with the City's General Plan Circulation Element and thus would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, no impacts would occur.

4.11.2 Mitigation Measures

No mitigation measures associated with impacts to Land Use and Planning apply to the proposed Project.

4.11.3 Conclusion

There would be no potential impacts of the proposed Project associated with Land Use and Planning, and no mitigation would be required.

4.12 MINERAL RESOURCES

4.12.1 Regulatory Setting

In 1975, the California Legislature enacted the Surface Mining and Reclamation Act (SMARA). This Act provides for the reclamation of mined lands and directs the State Geologist to classify (identify and map) the non-fuel mineral resources of the State to show where economically significant mineral deposits occur and where they are likely to occur based upon the best available scientific data.

4.12.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	

Discussion

a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Less Than Significant. According to the City of Temecula General Plan, the State Division of Mines and Geology has classified the project area as MRZ-3a. This classification indicates the presence of sedimentary deposits with the potential to provide sand and gravel for concrete production, as well as crushed stone for aggregate. However, these deposits are not deemed to hold significant economic value. Given the limited scope of disturbance associated with the Project and the predominantly developed or future development zoning in the surrounding area, implementation of the Project is not anticipated to result in the loss of availability of a mineral resource considered valuable at the regional or state level. Impacts are less than significant, and no mitigation is required.

b) Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Less Than Significant. The Surface Mining and Reclamation Act of 1975 required the State Geologist to initiate mineral land classification to help identify and protect mineral resources in areas within the State. In accordance with guidelines established by the State Mining and Geology Board, mineral deposits in western Riverside County have been classified into Mineral Resource Zones (MRZ). According to the City of Temecula General Plan, the project area has been classified by the State Division of Mines and Geology as MRZ-3a. This area contains sedimentary deposits that have the potential to supply sand and gravel for concrete and crushed stone for aggregate. However, these areas are not considered to contain deposits of significant economic value. Given the limited area the project would disturb and the fact that the surrounding area is generally developed or zoned for future development, the Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Impacts are less than significant, and no mitigation is required.

4.12.3 Mitigation Measures

No mitigation measures associated with impacts to Mineral Resources apply to the proposed Project.

4.12.4 Conclusion

There are no potential impacts of the proposed Project associated with Mineral Resources, and no mitigation would be required.

4.13 NOISE

A Noise Impact Analysis to determine potential impacts from noise associated with the development of the proposed Project was prepared (**Appendix F** – ***Ynez Road Widening Project – Noise Review Letter – Temecula, CA,* prepared by MD Acoustics, August 1, 2025)**.

Environmental noise is commonly measured in A-weighted decibels (dBA). A decibel (dB) is a unit of sound energy intensity. Sound waves, traveling outward from a source, exert a sound pressure level (commonly called a "sound level") measured in dB. An A-weighted decibel (dBA) is a decibel corrected for the variation in frequency response that duplicates the sensitivity of human ears. Decibels are measured on a logarithmic scale. Generally, a three dBA increase in ambient noise levels represents the threshold at which most people can detect a change in the noise environment; an increase of 10 dBA is perceived as a doubling of loudness.

Generally noise is perceptible at an increase of 3 dBA as illustrated by the Federal Highways Administration (FHWA) and identified in **Table 5: *Effects of dBA Changes***.

Table 5: Effects of dBA Changes

Changes in Intensity Level, dBA	Changes in Apparent Loudness
1	Not perceptible
3	Just perceptible
5	Clearly noticeable
10	Twice (or half) as loud

Source: https://www.fhwa.dot.gov/environMent/noise/regulations_and_guidance/polguide/polguide02.cfm

Noise Descriptors

The noise descriptors utilized in the noise study for this Project include but are not limited to the following:

- Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

- Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24- hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

- Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time-varying noise level. The energy average noise level during the sample period.

Vibration

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels, damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

4.13.1 Regulatory Setting

City of Temecula Guidelines

According to the City of Temecula's noise compatibility matrix as identified in Table N-2 of the City's General Plan Noise Element, an exterior noise level of up to 60 dBA CNEL is normally acceptable for residential uses and an exterior noise level of up to 70 dBA CNEL is conditionally acceptable for residential uses. The noise study in Appendix F compares the traffic noise levels to the City's noise requirements.

City of Temecula's Code of Ordinances in Section 9.20.060(D) regulates construction noise. The ordinance states:

> *No person shall engage in or conduct construction activity, when the construction site is within one-quarter mile of an occupied residence, between the hours of six-thirty p.m. and seven a.m., Monday through Friday, and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. on Saturday. No construction activity shall be undertaken on Sunday and nationally recognized holidays unless exempted by Section 9.20.070 of the Temecula Municipal Code. Public works projects of any federal, state or local entity or emergency work by public utilities are exempt from the provisions of this subsection. Residents working on their homes or property are exempt from the prohibition of construction activities on Sundays and holidays and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. when working on Sundays and holidays. The city council may, by formal action, exempt projects from the provisions of this chapter.*

4.13.2 Environmental Setting

The proposed Project is located approximately 0.3 mile east of Interstate 15 (I-15) and approximately 857 feet south of Rancho California Road (Exhibit 1 and Exhibit 2).

The proposed Project limits are Ynez Road beginning at Tierra Vista Road at its northern limit, spanning approximately 1,763 feet to Rancho Vista Road at its southern limit. Land uses along the Project alignment include single family residential approximately 150 feet on the west side, and multi-family to vacant on the east side of the road segment.

The City's General Plan identifies Ynez Road as a six-lane, north-south Principal Arterial in the City of Temecula between Winchester Road (north) and Rancho Vista Road (south). Between Rancho California Road, south of Winchester Road, and Rancho Vista Road, Ynez Road accommodates four traffic lanes with turn lanes. However, in the Project alignment between Tierra Vista, south of Rancho California Road, and Rancho Vista Road, the roadway is only striped for three lanes (one northbound lane and two southbound lanes) and provides for turn lanes at the intersections with Tierra Vista and Rancho Vista Road. While the west side of Ynez Road along the Project alignment is built out with sidewalk, curb and gutter and streetlights, the east side is one lane, with an asphalt curb and a dirt/unimproved raised shoulder.

4.13.3 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. NOISE: Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive groundborne vibration or groundborne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	

a) Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

The noise study in Appendix F conducted a 24-hour noise measurement on July 16, 2025 that determined that the ambient noise level ranges from 49 to 58 dBA Leq.

Construction

The analysis in Appendix F analyzed Construction noise associated with the proposed Project calculated utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual and the FHWA Roadway Construction Noise Model, together with several key construction parameters, including distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the Project alignment (Appendix F).

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Project construction is anticipated to occur in four phases, as shown in **Table 6: *Construction Noise Level by Phase (dBA).*** The construction model assumes equipment operating as close as 75 feet and an average of 200 feet away from the southern residencies. Many sensitive receptors are further than these distances and have walls and will therefore have lower levels than those presented in Table 6.

Table 6: Construction Noise Level by Phase (dBA)

Phase	Leq at Nearest Residences
Linear, Grubbing, & Land Clearing	71
Linear, Grading, & Excavation	78
Linear, Drainage, Utilities, & Sub-Grade	73
Linear, Paving	76

Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Temecula's Municipal Code. As shown in Table 6, Project construction noise will be up to 78 dBA Leq(h) near sensitive receptors. These reflect the worst-case noise levels at Temecula residences closest to the construction work. In addition, residents with walls will have a reduction in sound level.

The City does not adopt noise level standards for construction noise. However, construction would not occur between the hours of 6:30 p.m. and 7:00 a.m., Monday through Saturday, and all-day Sunday, as required by the Municipal Code. Construction is anticipated to occur during the permissible hours according to the Municipal Code. Therefore, noise generated by construction equipment would be less than significant.

Operations

A significant increase in noise levels would occur if Project-added traffic results in an increase of 3 dB or more. The Project's primary operational noise source would be vehicular traffic. The potential off-site noise impacts caused by the proposed roadway expansion were calculated in Appendix F at distances of 80 feet on the south side, and distances of 105 feet on the north side, which are the closest residential properties to the roadway. The Project

proposes widening Ynez Rd from three travel lanes to four travel lanes. The noise levels were calculated for the Existing and Future traffic conditions along the study roadway segments with and without the proposed Project. **Table 7: *Existing/Existing + Project Scenario – Noise Levels (dBA CNEL)*** compares the traffic noise levels from Existing traffic conditions with the existing lane configuration (Existing without Project) to the noise levels from Existing traffic conditions with the proposed lane configuration (Existing plus Project).

Table 7: Existing/Existing + Project Scenario – Noise Levels (dBA CNEL)

Roadway	Segment	Receptor Location	CNEL (dBA)		Change in Noise Level
			Existing (Without Project)	Existing Plus Project	
Ynez Rd	Tierra Vista to Rancho Vista	Southern Residential P/L	64.6	64.7	0.1
		Northern Residential Facade	65.4	66.9	1.5

The identifies an exterior noise level of up to 60 dBA CNEL is normally acceptable for residential uses and an exterior noise level of up to 70 dBA CNEL is conditionally acceptable for residential uses. As shown in Table 7, the width increase of Ynez Road will increase the existing traffic noise levels by 0.1 to 1.5 dB. It takes a change of 3 dB or more to hear an audible difference, which would occur with a doubling of traffic. Therefore, the traffic noise impact is less than significant. Traffic calculations are provided in Appendix F.

Overall, the Project would not generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project site in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The impacts of construction and operations are less than significant.

b) Would the project result in the generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact. Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed Project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a vibratory roller. A vibratory has a vibration impact of 0.210 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

Construction activities are anticipated to occur as close as 130 ft to the nearest buildings. At a distance of 130 feet, a vibratory roller would yield a worst-case 0.034 PPV (in/sec), which is perceptible but below any risk of damage. Therefore, the Project would result in less than significant generation of excessive groundborne vibration or groundborne noise levels.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Less Than Significant. The Project is subject to some distant aircraft noise, though the site is not located near an active airport. The nearest airports are the Bear Creek Airport, located approximately 4 miles to the north, and the French Valley Airport, located approximately 5 miles to the northeast. At these distances, no effects related to airport noise would occur at the Project site, and impacts would be less than significant.

4.13.4 Mitigation Measures

No mitigation measures associated with impacts to Noise apply to the proposed Project.

4.13.5 Conclusion

Potential impacts of the proposed Project associated with Noise would be less than significant, and no mitigation would be required.

4.14 POPULATION AND HOUSING

4.14.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV.POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

Discussion

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant. The City's 2005 General Plan identifies Ynez Road as a six-lane, north-south Principal Arterial in the City of Temecula between Winchester Road (north) and Rancho Vista Road (south). Between Rancho California Road, south of Winchester Road, and Rancho Vista Road, it only accommodates four lanes with turn lanes. However, in the Project alignment between Tierra Vista (north) and Rancho Vista Road (south), the roadway is only striped for three lanes (one northbound lane and two southbound lanes) and provides for a turn lane at the intersections with Tierra Vista and Rancho Vista Road.

In the existing condition, the lane constriction of this three-lane segment creates a "bottleneck" between Tierra Vista Road and Rancho Vista Road due to the lane restriction. Therefore, the purpose of the Project is to provide for consistent traffic flow between Tierra Vista Road and Rancho Vista Road as envisioned by the City's General Plan.

The expanded roadway will accommodate future traffic levels projected under the buildout of the General Plan. Therefore, although the Project involves the expansion of infrastructure, it would accommodate planned growth rather than induce growth.

The Project does not include land uses, such as homes or business, that would directly induce population growth. As such, the Project would not induce direct or indirect population growth, and impacts would be less than significant.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. The proposed Project would involve improvements to an existing roadway. There are no existing residences within the Project alignment and no people or housing units would be displaced. No impact would occur.

4.14.2 Mitigation Measures:

No mitigation measures associated with impacts to Population and Housing apply to the proposed Project.

4.14.3 Conclusion

Potential impacts of the proposed Project associated with Population and Housing would be less than significant, and no mitigation would be required.

4.15 PUBLIC SERVICES

4.15.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. PUBLIC SERVICES: a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?				X
Recreation/Parks?				X
Other public facilities?				X

a) *Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:*

Fire Protection

Less Than Significant Impact. The closest fire station to the Project Site is Riverside County Fire Department Station 12, located at 28330 Mercedes Street, approximately 1.9 miles southeast of the Project site. This station would be the first to respond to calls for service from the site. During construction, fire protection may be required in the case of accident conditions, but these would be short-term demands and would not require increases in the level of service offered or affect these agencies' response times. No new fire stations or fire station alterations would be required as a result of the Project.

Police Protection

Less than Significant Impact. The proposed Project would not result in an increase in demand for police protection services beyond existing conditions, and therefore, would not have operational impacts to police protection or cause a need for new or altered police protection facilities. A police protection need could occur during Project construction if theft or crime associated with the construction equipment or construction site would occur;

however, these types of events would not trigger an increase above provided police protection levels. Therefore, the Project would result in less than significant impacts.

Schools

No Impact. The proposed Project would place no demand on school services because it would not involve the construction of facilities that would generate school-aged children and would not involve the introduction of a temporary or permanent population into this area. Therefore, the Project would have no impact on schools.

Recreational/Parks

No Impact. The proposed Project would place no demand on parks because it would not involve the introduction of a temporary or permanent population into the area that would use parks. Therefore, the Project would have no impact on parks.

Other public facilities

No Impact. The proposed project would not involve the introduction of a temporary or permanent human population into this area. Therefore, the project would have no impact on other public facilities.

4.15.2 Mitigation Measures:

No mitigation measures associated with impacts to Public Services apply to the proposed Project.

4.15.3 Conclusion

Potential impacts of the proposed Project associated with Public Services would be less than significant, and no mitigation would be required.

4.16 RECREATION

4.16.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

Discussion

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

No Impact. The proposed Project would not generate a population that would increase demand for parks or recreational facilities. Therefore, the proposed Project would not affect use of existing facilities. No impacts to recreation would occur.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed roadway improvements would not generate a population that would increase demand for parks or recreational facilities.

4.16.2 Mitigation Measures

No mitigation measures associated with impacts to Recreation apply to the proposed Project.

4.16.3 Conclusion

Potential impacts of the proposed Project associated with Recreation would be less than significant, and no mitigation would be required.

4.17 TRANSPORTATION

This analysis is based on technical studies that were prepared for the proposed Project, included as **Appendix G - *Ynez Road Widening Project Transportation Screening Assessment,* prepared by Ganddini Group, Inc., July 9, 2025**.

4.17.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. TRANSPORTATION: Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

a) Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?

Less Than Significant Impact.

The City's 2005 General Plan identifies Ynez Road as a six-lane, north-south Principal Arterial in the City of Temecula between Winchester Road (north) and Rancho Vista Road (south). Between Rancho California Road, south of Winchester Road, and Rancho Vista Road, it only accommodates four lanes with turn lanes. However, in the Project alignment between Tierra Vista (north) and Rancho Vista Road (south), the roadway is only striped for three lanes (one northbound lane and two southbound lanes) and provides for a turn lane at the intersections with Tierra Vista and Rancho Vista Road.

In the existing condition, the lane constriction of this three-lane segment creates a "bottleneck" between Tierra Vista Road and Rancho Vista Road due to the lane restriction. Therefore, the purpose of the Project is to provide for consistent traffic flow between Tierra Vista Road and Rancho Vista Road as envisioned by the City's General Plan.

Because the purpose of the Project is to match the existing conditions at each end of the Project alignment and includes bicycle lanes and pedestrian facilities, there would be no increase in traffic nor would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The impacts would be less than significant.

b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Less Than Significant Impact. CEQA Guidelines Section 15064.3 provides that transportation impacts of projects are, in general, best measured by evaluating the Project's vehicle miles traveled (VMT). Automobile delay (often called Level of Service) will no longer be considered to be an environmental impact under CEQA.

The Project VMT impact was assessed in Appendix G in accordance with guidance from the City of Temecula Traffic Impact Analysis Guidelines ["TIA Guidelines"]. The City TIA Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on recommendations provided in the Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (State of California, December 2018) and additional substantial evidence documented in the City's TIA guidelines.

The City's TIA Guidelines identifies transportation projects that "would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis," based on guidance from the OPR Technical Advisory.

Two categories applicable to the Project are as follows:

- Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety.

- Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit.

Northbound Ynez Road currently provides two lanes south of the project limits (Rancho Vista Road), one lane through the Project limits, and two lanes north of the project limits (Tierra Vista Road). There are currently no bicycle facilities or sidewalks provided on Ynez Road within the Project limits. The proposed Project would complete Ynez Road at its ultimate half-section width in accordance with the City's General Plan Circulation Element, including construction of a dedicated Class II bicycle lane with green rectangular markings at the intersection approach to Tierra Vista Road for enhanced safety and sidewalk improvements that would improve roadway safety.

Considering the relatively short distance (less than one mile), any potential near-term increase in VMT relating to additional vehicular capacity is expected to be minor and would be offset by the enhanced bike lane and sidewalk improvements. Furthermore, since the proposed Project is consistent with the City of Temecula General Plan Circulation Element, the Project would not increase VMT beyond long-range forecasts included in the Southern California Associations of Government (SCAG) Regional Transportation Plan (Connect SoCal 2024). Thus, the proposed Project aligns with the City-established screening criteria for transportation projects that may be presumed to result in a less than significant VMT impact.

Therefore, the Project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). Impacts are less than significant, and no mitigation is required.

c) *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?*

Less Than Significant Impact. During construction, a Traffic Control Plan would be implemented to maintain safe roadway conditions for travelers along Ynez Road. Upon completion of construction, the proposed median, streetlights, bike lanes, and sidewalks would minimize hazards to vehicular travelers, bicyclists, and pedestrians. Each of these improvements would be constructed in accordance with City standards and would not increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment). Therefore, the impact is less than significant, and no mitigation is required.

d) *Would the project result in inadequate emergency access?*

Less Than Significant Impact. During construction, certain lanes and/or parts of the roadway may be closed to vehicular traffic; however, a Traffic Control Plan would be implemented and would maintain adequate access to areas along portions of Ynez Road. Upon completion of construction, the improved roadway would include more lanes and would therefore allow for improved access to the surrounding areas. As such, impacts would be less than significant.

4.17.2 Mitigation Measures

No mitigation measures associated with impacts to Transportation apply to the proposed Project.

4.17.3 Conclusion

Potential impacts of the proposed Project associated with Transportation would be less than significant, and no mitigation would be required.

4.18 TRIBAL CULTURAL RESOURCES

A Cultural Resources Assessment for the proposed Project was performed to determine potential impacts to historic and archaeological resources (Appendix C). The assessment addressed the ethnographic and archaeology of the Native American occupation in the City of Temecula .

City of Temecula AB 52 Tribal Consultation

On July 24, 2025, the City of Temecula notified via email the following tribal entities of the Project and that the 30-day timeframe in which to request consultation would end within 30 days of receipt of the letter, in accordance with AB52. The following summarizes the results of the AB52 consultation.

- Agua Caliente Band of Cahuilla Indians. Result: The Project is outside of the Tribe's traditional use area; defer to other tribes. Consultation concluded.

- Pechanga Band of Indians. Result: Mitigation measures were identified and included in this document at CUL-1 through CUL-7 and TRC-1 through TRC-11.

- Rincon Band of Luiseño Indians. Result: No response. Consultation concluded.

- Soboba Band of Luiseño Indians. Result: The tribe defers the Project to the Pechanga Band of Indians. Consultation concluded.

- Torres-Martinez Desert Cahuilla Indians: Email received August 1, 2025 stating that the Project is not located in the Tribe's traditional area. Consultation concluded.

4.18.1 Environmental Setting

The Cultural Resources Report in Appendix C assessed the proposed Project for potentially important cultural resources as required under CEQA. The pedestrian survey identified no cultural resources within the Project area.

4.18.2 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. TRIBAL CULTURAL RESOURCES: Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or		X		
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		X		

Discussion

a) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?*

Less Than Significant Impact With Mitigation Incorporated. According to PRC Chapter 2.5, Section 21074, tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and items with cultural value to a California Native American tribe that are either included or determined to be eligible for inclusion in the California Register of Historical Resources or included in a local register of historical resources as defined in Section 5020.1.

There were no resources that were identified as eligible for listing to the California Register of Historic Places within or near the Project site during the cultural resources assessment included as Appendix C. Therefore, there would be no impact to known tribal cultural

resources. However, during AB52 consultation, Pechanga informed the City of Temecula that the proposed Project area exists within its ancestral territory and, therefore, is of interest to the Tribe. However, due to the nature and location of the proposed project, and given Pechanga's present state of knowledge, Pechanga did not have any concerns with the project's implementation, as planned, at this time. However, Pechanga requested that **Mitigation Measures TCR-1** through **TCR-11**, located at the end of this section, be made a part of the project/permit/plan conditions to protect for unidentified resources.

b) *Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?*

Less Than Significant Impact With Mitigation Incorporated. The Project has no resources that have been identified as significant within or near the Project site. Ground-disturbing activities, however, do have the potential to uncover unanticipated tribal cultural resources.

There are no resources that have been identified as eligible for listing to the California Register of Historic Places within or near the Project site. As discussed above, the Mitigation Measures TCR-1 through TCR-11 would be implemented to avoid potential impacts to tribal cultural resources that may be unearthed by Project construction activities. Mitigation Measure TCR-1 is consistent with CUL-1 through CUL-5.

4.18.3 Mitigation Measures

TCR-1 A Pechanga Tribal monitor will be present and will have the authority to stop and redirect grading activities, in consultation with the project archaeologist, in consultation with the Pechanga Band of Indians and their designated monitors, to evaluate the significance of any potential resources discovered on the property as required by the following:

A. At least 30 days prior to the start of any ground-disturbing activities, the City shall contact the Pechanga Tribe to develop an Agreement ("Agreement"). This Agreement will address the treatment and disposition of cultural resources, the designation, responsibilities, and participation of professional Pechanga Tribal monitors during grading, excavation and ground disturbing activities; project grading and development scheduling; terms of compensation for the monitors; and treatment and final disposition of any

cultural resources, sacred sites, and human remains discovered onsite. The Tribal Monitor(s) shall have the authority to temporarily divert, redirect, or halt the ground-disturbance activities to allow recovery of cultural resources, in coordination with the Project Archaeologist. Pechanga Tribal Monitors shall be allowed to monitor all grading, excavation and groundbreaking activities.

TCR-2 Prior to beginning project construction, the City of Temecula shall hire an archaeologist to monitor all ground disturbing activities in an effort to identify any unknown archaeological resources. Any newly discovered cultural resource deposits shall be subject to a cultural resource evaluation. The archaeological monitor shall have the authority to stop and redirect grading in consultation with the Pechanga Band of Indians in order to evaluate the significance of any potential resources discovered on the property. The archaeological monitors shall be allowed to monitor all grading, excavation and groundbreaking activities.

TCR-3 A qualified archaeologist and Pechanga tribal monitor shall attend a pre-construction meeting with City staff, the contractor, and appropriate subcontractors to discuss the monitoring program, including protocols to be followed in the event that cultural material is encountered.

TCR-4 If, during ground disturbance activities, unique cultural resources are discovered that were not assessed by the archaeological report(s) and/or environmental assessment conducted prior to Project approval, the following procedures shall be followed. Unique cultural resources are defined, for this Mitigation only, as being multiple artifacts in close association with each other, but may include fewer artifacts if the area of the find is determined to be of significance due to its sacred or cultural importance as determined in consultation with the Pechanga Band of Indians. Tribal cultural resources are excluded from the definition of unique cultural resources as those resources are defined by the tribal values ascribed to the them by their affiliated communities. Treatment of Tribal cultural resources inadvertently discovered during the project's ground-disturbing activities shall be subject to the consultation process required by state law and AB 52.

i. All ground disturbance activities within 50 feet of the discovered cultural resources shall be halted until a meeting is convened between the City, the Project Archaeologist, the Pechanga Band of Indians, and the Planning Director to discuss the significance of the find.

ii. Further ground disturbance, including but not limited to grading, trenching, vegetation clearing, etc., shall not resume within the area of the discovery until an agreement has been reached by all parties as to the appropriate mitigation. Work shall be allowed to continue outside of the buffer area and will be monitored by additional Tribal and archaeological Monitors if needed.

iii. At the meeting, the significance of the discoveries shall be discussed and after consultation with the Tribal Representative(s) and the Project Archaeologist, a decision shall be made, with the concurrence of the Planning Director, as to the appropriate mitigation (documentation, avoidance, recovery, etc.) for the cultural resources.

iv. Treatment and avoidance of the newly discovered resources shall be consistent with the Monitoring Agreement entered into with the Pechanga Band of Indians. This may include avoidance of the cultural resources through project design, in-place preservation of cultural resources located in native soils and/or re-burial of the resources on the Project property so they are not subject to further disturbance in perpetuity as identified in CUL –4.

v. Pursuant to Calif. Pub. Res. Code § 21083.2(b) avoidance is the preferred method of preservation for archaeological resources and cultural resources. If the Project Applicant and the Pechanga Band of Indians cannot agree on the significance or the mitigation for the cultural resources, these issues will be presented to the Planning Director for decision. The Planning Director shall make the determination based on the provisions of the California Environmental Quality Act with respect to Cultural and Tribal Cultural Resources, recommendations of the project archeologist and shall consider the cultural and religious principles and practices of the Pechanga Band of Indians. Notwithstanding any other rights available under the law, the decision of the Planning Director shall be appealable to the City Planning Commission and/or City Council.

vi. If the find is determined to be significant and avoidance of the site feasibly cannot be achieved, a Mitigation recovery plan shall be prepared by the Project Archeologist, in consultation with the Pechanga Band of Indians, and shall be submitted to the City for their review and approval prior to implementation of the said plan.

vii. Evidence of compliance with this mitigation measure, if a significant Cultural or Tribal Cultural Resource is found, shall be provided to City of Temecula upon the completion of a treatment plan and include a final report detailing the significance and treatment finding.

TCR-5 In the event that Tribal Cultural Resources are discovered during the course of grading, the following procedures shall be carried out for final disposition of the discoveries: One or more of the following treatments, in order of preference, shall be employed in consultation with the Pechanga Band of Indians.

i. Preservation-In-Place of the cultural resources, if feasible. Preservation in place means avoiding the resources, leaving them in the place where they were found with no development affecting the integrity of the resources.

ii. Reburial of the resources on the Project property. The measures for reburial shall include, at least, the following: Measures and provisions to protect the future reburial area from any future impacts in perpetuity. Reburial shall not occur until all legally required cataloging and basic recordation have been completed, with an exception that sacred items, burial goods, and Native American human remains are excluded. Any reburial process shall be culturally appropriate. Listing of contents and location of the reburial shall be included in the confidential Phase IV report. The Phase IV Report shall be filed with the City under a confidential cover and not subject to Public Records Request.

iii. If preservation in place and/or reburial is not feasible then the resources shall be curated in a culturally appropriate manner at a Riverside County curation facility that meets State Resources Department Office of Historic Preservation Guidelines for the Curation of Archaeological Resources ensuring access and use pursuant to the Guidelines. The collection and associated records shall be transferred, including title, and are to be accompanied by payment of the fees necessary for permanent curation. Evidence of curation in the form of a letter from the curation facility stating that subject archaeological materials have been received and that all fees have been paid.

There shall be no destructive or invasive testing on sacred items, burial goods, and Native American human remains. Results concerning finds of any inadvertent discoveries shall be included in the Phase IV monitoring report. Evidence of compliance with this mitigation measure, if a significant archaeological resource is found, shall be provided to the City of Temecula upon the completion of a treatment plan and final report detailing the significance and treatment finding.

TCR-6 The City shall relinquish ownership of all cultural resources, including sacred items, burial goods, and all archaeological artifacts that are found within the Project area, for proper treatment and disposition pursuant to the Agreement required in mitigation measure CUL-1 through CUL-5.

TCR-7 If human remains are encountered, California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Riverside County Coroner has made the necessary findings as to origin. Further, pursuant to California Public Resources Code Section 5097.98(b) remains shall be left in place and free from disturbance until a final decision as to the treatment and

disposition has been made. If the Riverside County Coroner determines the remains to be Native American, the NAHC must be contacted within 24 hours. The NAHC must then immediately identify the most likely descendant(s) for purposes of receiving notification of discovery. The most likely descendant(s) shall then make recommendations within 48 hours of being granted access to the site and engage in consultation concerning the treatment of the remains as provided in Public Resources Code Section 5097.98 and the agreement described in mitigation measure TCR-1.

TCR-8 The following shall be included on the notes for the grading plan:

Note 1: Archaeological Monitoring Grading Note: A qualified archaeological monitor will be present and will have the authority to stop and redirect grading activities, in consultation with the Pechanga Band of Indians and their designated monitors, to evaluate the significance of any archaeological resources discovered on the property as required by Note 1.

TCR-9 The following shall be included on the notes for the grading plan:

Note 2: Discovery of Cultural Resources Grading Note: If at any time during excavation/construction of the site, archaeological/cultural resources, or any artifacts or other objects which reasonably appears to be evidence of cultural or archaeological resource are discovered by the Tribal or Archaeological monitor, all work in the area of the find shall cease, and the Discovery of Cultural Resources mitigation measure shall be followed. Upon determining that the discovery is a cultural/Tribal Cultural resource, no further excavation or development may take place until a mitigation plan or other corrective measures have been approved by the Planning Director.

TCR-10 The following shall be included on the notes for the grading plan:

Note 3: Relinquishment of Cultural Resources Grading Note: The landowner agrees to relinquish ownership of all cultural resources, including all archaeological artifacts that are found on the project area, to the Pechanga Tribe for proper treatment and disposition as required by Note 1.

TCR-11 The following shall be included on the notes for the grading plan:

Note 4: Human Remains Grading Note: If Human Remains are encountered all work is to cease within 50 ft of the discovery in accordance with Note 1 and Health and Safety Code Section 7050.5, and California Public Resources Code Section 5097.98(b) are to be followed.

4.18.4 Conclusion

Implementation of **Mitigation Measures TCR-1, TCR-2, TCR-3, TCR-4, TCR-5, TCR-6, TCR-7, TCR-8**, **TCR-9, TCR-10,** and **TCR-11** would reduce potential impacts of the proposed Project associated with Tribal Cultural Resources to less than significant.

4.19 UTILITIES AND SERVICE SYSTEMS

4.19.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIX. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

Discussion

a) Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Less than Significant Impact. The proposed Project consists of the relocation of various existing underground utilities to accommodate the new Project limits. These facilities may be taken out of service temporarily during construction. However, all utility providers will re-route service to the area by use of other nearby facilities.

The proposed Project would not generate wastewater, require wastewater service, or result in the construction or expansion of wastewater treatment facilities. The Project would use a minimal amount of water required for dust control during the temporary construction period. The project would not require a substantial water supply that would require or result in the construction of new water treatment facilities or expansion of existing facilities. However, the proposed Project would include the construction of new storm drains within the Project alignment, however, these storm drains are designed to convey the flows of a 0.5 acre new drainage area as a result of the Project. The storm drains are designed in accordance with City standards. Impacts will be less than significant, and no mitigation is required.

b) *Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

Less than Significant Impact. The Project would use a minimal amount of water required for dust control during the temporary construction period. The Project would not require a substantial water supply, and sufficient water supplies would be available to serve the project in the reasonably foreseeable future during normal, dry and multiple dry years. Therefore, impacts would be less than significant, and no mitigation is required.

c) *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

No Impact. The proposed project would not require wastewater service. Therefore, the project would not exceed the wastewater capacity of the local wastewater treatment provider. No impact would occur.

d) *Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*

Less Than Significant. The proposed project would generate a minimal amount of construction waste. All nonrecyclable solid waste generated during construction would be taken to a landfill with sufficient permitted capacity. No solid waste is generated during Project operation of a roadway, other than litter from passing vehicles. As a result, the proposed Project would have a negligible effect on landfill capacity. Based on this small quantity of material, the proposed Project would not generate solid waste in excess of federal, state, and local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, impacts are less than significant, and no mitigation is required.

e) Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less Than Significant. The proposed project would generate a minimal amount of construction waste and no ongoing operational waste. Concrete and asphalt waste would be recycled and reused to the extent feasible to limit the volume of construction wastes requiring off-site disposal. Solid waste produced by the proposed Project would be disposed of at a properly permitted facility in accordance with federal, state, and local laws. Therefore, the impacts are less than significant, and no mitigation is required.

4.19.2 Mitigation Measures:

No mitigation measures associated with impacts to Utilities and Service Systems apply to the proposed Project.

4.19.3 Conclusion

Potential impacts of the proposed Project associated with Utilities and Service Systems would be less than significant, and no mitigation would be required.

4.20 WILDFIRE

A wildfire is a nonstructural fire that occurs in vegetative fuels, excluding prescribed fire. Wildfires can occur in undeveloped areas and spread to urban areas where the landscape and structures are not designed and maintained to be ignition resistant.

The Project alignment is not located within or near an area designated as a state responsibility area (CAL FIRE, 2007, 2011) nor is it classified as or located near a Very High Fire Hazard Zone (VHFHSZ, CAL FIRE 2007, 2011). The Project site is mapped as Non-VHFHSZ per the CALFIRE Fire Hazard Severity Zone Maps. According to the VHFHSZ Maps prepared by the City in collaboration with CAL FIRE, the nearest VHFHSZ is located approximately 1 mile west of the Project near the City's western boundary.

4.20.1 Impact Analysis

CEQA THRESHOLDS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XX. WILDFIRE: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, Would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?				X
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of wildfire?				X
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?				X
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?				X

Discussion

a) Substantially impair an adopted emergency response plan or emergency evacuation plan?

No Impact. The Project alignment is not located within or near an area designated as a VHFHZ. A Traffic Control Plan would be implemented during construction that would allow for emergency vehicles and evacuation procedures.

Operations associated with the widened roadway would be similar to existing conditions, but would provide incrementally increased traffic capacity that would also facilitate emergency response and evacuation activities in the Project area. As the Project is not located within a VHFHZ and Project safety controls are in place, implementation of the Project would not impair an emergency response or evacuation plan, and there would be no impact.

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

No Impact. The Project alignment is not located within or near an area designated as a VHFHZ.

The purpose of the Project is to widen a less than 0.5 mile segment of Ynez Road to match the lane conditions both north and south of the Project alignment. The Project would not result in an increase in the City's population which could potentially result in the exposure of additional people to wildfire. As the Project is not located within a VHFHZ and is a project type that does not involve increasing population, Project implementation would not exacerbate wildlife risk. No impact would occur.

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

No Impact. The Project alignment is not located within or near an area designated as a VHFHZ.

The Project would include road and utilities associated with lane widening in a 1,763 segment between Rancho Vista Road and Tierra Vista Road. And though the Project includes elements such as roads and utilities, because the Project alignment is not located within a VHFHZ, no impact would occur.

d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

No Impact. The Project alignment is not located within or near an area designated as a VHFHZ.

Beyond the road shoulder of the alignment, however, the topography slopes steeply (2:1) to between 15 and 20 feet below the edge of the unimproved raised shoulder. Approximately 40 feet beyond the slope to the east, a drainage parallels the Ynez Road alignment within the vacant parcels 944-290-017 and -016, outletting under Rancho Vista Road. The outlet at Rancho Visa Road is heavily vegetated and includes various oak trees. A cluster of oak trees also exists along the slope of the area of the proposed retaining wall.

Project improvements include a retaining wall along portions of the roadway to stabilize the slope. As the Project type is a road improvement that is not located within a VHFHZ, the Project would not people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. There would be no impact.

4.20.2 Mitigation Measures

No mitigation measures associated with impacts to Wildfire apply to the proposed Project.

4.20.3 Conclusion

The proposed Project would have no impact associated with Wildfire risk, and no mitigation would be required.

4.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL IMPACTS	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?		X		
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

Discussion

a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Less Than Significant With Mitigation Incorporated. As concluded in Section 4.4, *Biological Resources*, the Project Site is generally not going to impact sensitive resources except for a portion of the adjacent stream. However, the vegetation on site may attract birds and other mammal species that are protected by the MBTA. As such, implementation of **Mitigation Measure BIO-1** to perform a pre-construction nesting bird survey is required to reduce potential impacts to nesting birds protected by the MBTA. Additionally, no burrowing owls or recent sign (i.e., pellets, feathers, castings, or whitewash) was observed during the

field investigation. Based on the results of the field investigation, it was determined that the Project Site has a low potential to support burrowing owls and focused surveys are not recommended. However, to ensure burrowing owls have not moved into the site prior to construction, **Mitigation Measure BIO-2** to provide a site survey prior to construction is required to reduce potential impacts to less than significant.

Additionally, **Mitigation Measure BIO-3** requires that the City will mitigate impacts to 0.22 acre of riverine habitat through the management (removal of non-native plant species) of 0.66 acre of habitat within a City owned parcel along Temecula Creek.

As indicated in Section 4.5, *Cultural Resources*, and Section 4.18, *Tribal Cultural Resources*, no cultural or tribal resources are anticipated, although unanticipated discoveries may occur during Project construction. As such, implementation of **Mitigation Measures CUL-1, CUL-2, CUL-3, CUL-4, CUL-5, CUL-6,** and **CUL-7** as well as **TCR-1, TCR-2, TCR-3, TCR-4, TCR-5, TCR-6, TCR-7, TCR-8, TCR-9, TCR-10, and TCR-11** would reduce the Project's potential environmental impacts to cultural and tribal cultural resources to less than significant.

As indicated in Section 4.7 *Geology and Soils,* the Project Site exists in previously disturbed surface and near-surface soils in the Project Site which have a relatively low potential to contain significant paleontological resources. The undisturbed soils below the recent and disturbed soils, however, which consist of alluvial fan deposits of sand and gravel from the Pleistocene epoch, are considered to have a high potential to contain significant, nonrenewable paleontological resources. Thus, the Project's potential to impact significant, nonrenewable paleontological resources is high when construction activities extend into these older subsurface sediments. As such, implementation of **Mitigation Measure GEO-1** that requires a Paleontological Resources Management Plan (PRMP) to be prepared prior to grading is required to reduce impacts to less than significant.

Therefore, with mitigation incorporated, the proposed Project would not potentially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Impacts would be less than significant with mitigation incorporated.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

The proposed Project is being developed according to the General Plan Circulation Element.

As demonstrated by the analysis in this Initial Study, the proposed Project would not result in any significant and unavoidable environmental impacts in any environmental category with implementation of Project-specific mitigation measures. Implementation of mitigation measures at the Project-level would reduce the potential for incremental environmental effects of the proposed Project to be considered when viewed in conjunction with the effects of past projects, current projects, or probably future projects. Project impacts would be less than significant with mitigation incorporated.

c) *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

The Project is required to comply with a number of local, State and federal regulations that are identified throughout this document. Implementation of these regulations will ensure that Project-specific impacts will be less than significant. Project-specific impacts would be mitigated through **Mitigation Measure HAZ-1**, which requires a hazardous spill prevention plan, and **Mitigation Measure HAZ-2** which requires that all asphalt shall be disposed of in accordance with current regulatory standards, which would reduce potential substantial effects on human beings, either directly or indirectly, as identified in this analysis.

Therefore, the proposed Project would not directly or indirectly cause substantial adverse effects on human beings.

5 LIST OF PREPARERS

Contributors and Consultants

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City Staff

Various Staff, Public Works Engineering

6 REFERENCES

The following reports and/or studies are applicable to development of the Project site and are hereby incorporated by reference:

State of California, Department of Conservation, Farmland Mapping and Monitoring Program. https://maps.conservation.ca.gov/DLRP/CIFF.

United States Dept of Agriculture, Natural Resources Conservation Service (USDA), Web Soil Survey, https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

APPENDICES

Appendix A

Ynez Road Widening Project – Focused Air Quality, Greenhouse Gas, and Energy Impact Study, City of Temecula, CA

MD Acoustics

October 1, 2025

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October 1, 2025

Mr. Travis McGill
ELMT Consulting, Inc.
2201 N Grand Ave, Ste #10098
Santa Ana, CA 92711

Subject:
Ynez Road Widening Project – Focused Air Quality, Greenhouse Gas, and Energy Impact Study, City of Temecula, CA

Dear Mr. McGill:

MD Acoustics, LLC (MD) has completed a focused Air Quality, Greenhouse Gas, and Energy Impact Evaluation for the proposed Ynez Road Widening Project in the City of Temecula, CA. The purpose of this focused study is to evaluate the air quality, greenhouse gas, and energy construction emissions generated by the proposed project and to compare the project emissions to South Coast Air Quality Management District's (SCAQMD) thresholds of significance as it relates to residential and commercial uses and consistency to the City's General Plan. A list of definitions and terminology is located in Appendix A.

1.0 Project Description

The project proposes to widen the easterly side of Ynez Road, from Rancho Vista Road north roughly 1600 feet, to two lanes in each direction and complete missing segments of curb and gutter, sidewalk, and striped medians in coordination with adjacent development between Tierra Vista Road and Rancho Vista Road. The nearest sensitive receptors are the single-family residences located approximately 65 feet to the southwest.

2.0 AQ/GHG Thresholds of Significance

2.1 AQ Significance Thresholds

Project emissions were compared to both regional and localized SCAQMD's thresholds of significance for construction emissions[1,2].

2.2 GHG Significance Thresholds

The project emissions were compared to the SCAQMD's 3,000 $MTCO_2e$ draft threshold for all land uses[3].

3.0 Evaluation Procedure/Methodology

MD utilized the latest version of CalEEMod (2022.1.1.29) to calculate both the construction emissions from the project site[4]. Project construction is modeled to commence no earlier than January 2026 and be completed by September 2026. Construction assumes grubbing & land clearing; grading & excavation; drainage, utilities, & sub-grade; and paving. CalEEmod defaults were utilized. Assumptions and output calculations are provided in Appendix B.

[1] https://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf
[2] https://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds
[3] https://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds/page/2
[4] https://www.caleemod.com/

4.0 Local Ambient Conditions

The project site is located in South Coast Air Basin (SCAB) in the Temecula Valley Source Receptor Area (SRA 26)[5]. The nearest air monitoring station to the project site is the Pechanga Reservation Monitoring Station. Historical air quality data for the vicinity can be found both at CARB and SCAQMD's websites[6,7]. Temperature and historical precipitation data can be found at the WRCC[8].

5.0 Findings

The following outlines the emissions for the project:

5.1 Regional Construction Emissions

The construction emissions for the project would not exceed the SCAQMD's daily emission thresholds at the regional level as indicated in Table 1, and therefore the impact would be considered less than significant.

Table 1: Regional Significance – Construction Emissions (lbs/day)

Activity	Pollutant Emissions (pounds/day)					
	VOC	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Grubbing & Land Clearing						
On-Site[2]	0.46	4.04	4.49	0.01	0.42	0.22
Off-Site[3]	0.03	0.03	0.41	0.00	0.10	0.02
Total	**0.49**	**4.07**	**4.90**	**0.01**	**0.52**	**0.24**
Grading & Excavation						
On-Site[2]	3.50	29.90	36.60	0.07	2.76	1.36
Off-Site[3]	0.16	0.18	2.70	0.00	0.50	0.11
Total	**3.66**	**30.08**	**39.30**	**0.07**	**3.26**	**1.47**
Drainage, Utilities, & Sub-Grade						
On-Site[2]	1.79	16.00	19.70	0.04	1.24	0.64
Off-Site[3]	0.11	0.10	1.80	0.00	0.33	0.08
Total	**1.90**	**16.10**	**21.50**	**0.04**	**1.57**	**0.72**
Paving						
On-Site[2]	0.81	7.53	11.70	0.02	0.30	0.28
Off-Site[3]	0.08	0.39	1.36	0.00	0.32	0.08
Total	**0.89**	**7.92**	**13.06**	**0.02**	**0.62**	**0.36**
SCAQMD Thresholds	**75**	**100**	**550**	**150**	**150**	**55**
Exceeds Thresholds	No	No	No	No	No	No

Notes:
[1] Source: CalEEMod Version 2022.1.1.29
[2] On-site emissions from equipment operated on-site that is not operated on public roads.
[3] Off-site emissions from equipment operated on public roads.
[4] Architectural coatings and paving phases may overlap.

5.2 Localized Construction Emissions

Utilizing the construction equipment list and associated acreages per 8-hour day provided in the SCAQMD "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds" (South Coast Air Quality Management District 2011b), the maximum number of acres disturbed in a day would be 4.0 acres during

[5] https://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf?sfvrsn=6
[6] https://www.aqmd.gov/home/library/air-quality-data-studies/historical-data-by-year
[7] https://www.arb.ca.gov/adam/
[8] https://www.wrcc.dri.edu/summary/Climsmsca.html

grading & excavation (as shown in Table 2 below); therefore, the project emissions have been compared to the 2-acre per day localized significance threshold, the next conservative threshold.

Table 2: Maximum Number of Acres Disturbed Per Day[1]

Activity	Equipment	Number	Acres/8hr-day	Total Acres
Grading & Excavation	Graders	2	0.5	1.0
	Rubber Tired Dozers	1	0.5	0.5
	Scrapers	2	1.0	2.0
	Crawler Tractor	1	0.5	0.5
Total Per Phase				**4.0**

Notes:

[1.] Source: CalEEMod output and South Coast AQMD, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2

None of the analyzed criteria pollutants would exceed the LST emission thresholds at the nearest sensitive receptors as shown in Table 3. Therefore, the impact would be less than significant from construction.

Table 3: Localized Significance – Construction Emissions (lbs/day)

Phase	On-Site Pollutant Emissions (pounds/day)[1]			
	NOx	**CO**	**PM10**	**PM2.5**
Grubbing & Land Clearing	4.04	4.49	0.42	0.22
Grading & Excavation	29.90	36.60	2.76	1.36
Drainage, Utilities, & Sub-Grade	16.00	19.70	1.24	0.64
Paving	7.53	11.70	0.30	0.28
SCAQMD Threshold for 25 meters (82 feet) or less[2]	**234**	**1,100**	**7**	**4**
Exceeds Threshold?	No	No	No	No

Notes:
[1] Source: Calculated from CalEEMod and SCAQMD's Mass Rate Look-up Tables for two acres in the Temecula Valley Source Receptor Area (SRA 26). Project will disturb a maximum of 4.0 acres per day (see Table 7).
[2] The nearest sensitive receptor is located 20 meters southwest; therefore, the 25-meter threshold has been used.

5.3 GHG Emissions

Table 5 outlines the construction GHG emissions for the project. The project's emissions are below (444.36 $MTCO_2e$) the SCAQMD's draft screening threshold of 3,000 $MTCO_2e$ for all land uses and; therefore, the impact is less than significant.

Table 5: Opening Year Project-Related Greenhouse Gas Emissions

Activity	Emissions ($MTCO_2e$)[1]		
	Onsite	**Offsite**	**Total**
Grubbing & Land Clearing	5.18	0.80	5.98
Grading & Excavation	282.00	19.06	301.06
Drainage, Utilities, & Sub-Grade	101.00	7.97	108.97
Paving	21.70	6.65	28.35
Total	409.88	34.48	**444.36**
SCAQMD Draft Screening Threshold			**3,000**
Exceeds Threshold?			**No**

Notes:
[1.] $MTCO_2e$=metric tons of carbon dioxide equivalents (includes carbon dioxide, methane and nitrous oxide).

5.4 Consistency with Applicable Plans

Consistency with the City's General Plan

The project site is located in the City of Temecula. The proposed project consists of the widening of the existing Ynez Road. Therefore, the proposed project is consistent with the land use and zoning designations of the City's.

The project will be subject to the policies and ordinances pertaining to air quality and climate change in the City's General Plan. Although the project would generate greenhouse gas emissions, either directly or indirectly, these emissions are short-term and not considered to have a significant impact on the environment. Furthermore, project emissions have demonstrated that they will be below any significant thresholds as outlined by SCAQMD.

In addition, as shown below, the project's GHG impacts have been evaluated by assessing the project's consistency with applicable statewide, regional, and local GHG reduction plans and strategies.

Consistency with Executive Orders S-03-05 and B-30-15

Executive Orders S-3-05 and B-30-15 are orders from the State's Executive Branch for the purpose of reducing GHG emissions. These strategies call for developing more efficient land-use patterns to match population increases, workforce, and socioeconomic needs for the full spectrum of the population. The project includes elements of smart land use as it is well-served by transportation infrastructure and near public transit.

Although the project's emissions level in 2050 cannot be reliably quantified, statewide efforts are underway to facilitate the State's achievement of that goal and it is reasonable to expect the project's emissions profile to decline as the regulatory initiatives identified by ARB in the First Update are implemented, and other technological innovations occur. As such, given the reasonably anticipated decline in project emissions once fully constructed and operational, the project is consistent with the Executive Order's horizon-year goal. Therefore, the project is consistent with Executive Orders S-3-05 and B-30-15.

Consistency with AB32 Scoping Plan

The ARB Board approved a Climate Change Scoping Plan in December 2008. The Scoping Plan outlines the State's strategy to achieve the 2020 greenhouse gas emissions limit. The Scoping Plan "proposes a comprehensive set of actions designed to reduce overall greenhouse gas emissions in California, improve our environment, reduce our dependence on oil, diversify our energy sources, save energy, create new jobs, and enhance public health" (California Air Resources Board 2008). The measures in the Scoping Plan have been in place since 2012.

This Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 30 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14

tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

In May 2014, CARB released its *First Update to the Climate Change Scoping Plan* (CARB 2014). This *Update* identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

In November 2017, CARB release the 2017 Scoping Plan. This Scoping Plan incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the State's climate goals, and includes a description of a suite of specific actions to meet the State's 2030 GHG limit. In addition, Chapter 4 provides a broader description of the many actions and proposals being explored across the sectors, including the natural resources sector, to achieve the State's mid and long-term climate goals.

Guided by legislative direction, the actions identified in the 2017 Scoping Plan reduce overall GHG emissions in California and deliver policy signals that will continue to drive investment and certainty in a low carbon economy. The 2022 Scoping Plan builds upon the successful framework established by the Initial Scoping Plan and First Update, while identifying new, technologically feasible, and cost-effective strategies to ensure that California meets its GHG reduction targets in a way that promotes and rewards innovation, continues to foster economic growth, and delivers improvements to the environment and public health, including in disadvantaged communities. The Plan includes policies to require direct GHG reductions at some of the State's largest stationary sources and mobile sources. These policies include the use of lower GHG fuels, efficiency regulations, and the Cap-and Trade Program, which constrains and reduces emissions at covered sources.

As the latest, 2022 Scoping Plan builds upon previous versions, project consistency with applicable strategies of both the 2008 and 2017 Plan are assessed as well in Table 6. As shown in Table 6, the project is consistent with the applicable strategies and would result in a less than significant impact.

Table 6: Project Consistency with CARB Scoping Plan Policies and Measures[1]

2008 Scoping Plan Measures to Reduce Greenhouse Gas Emissions	Project Compliance with Measure
California Light-Duty Vehicle Greenhouse Gas Standards – Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Energy Efficiency – Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	Consistent. The project will be compliant with the current Title 24 standards.
Low Carbon Fuel Standard – Develop and adopt the Low Carbon Fuel Standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

Vehicle Efficiency Measures – Implement light-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Medium/Heavy-Duty Vehicles – Adopt medium and heavy-duty vehicle efficiency measures.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Green Building Strategy – Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	Consistent. The California Green Building Standards Code (proposed Part 11, Title 24) was adopted as part of the California Building Standards Code in the CCR. Part 11 establishes voluntary standards, that are mandatory in the 2019 edition of the Code, on planning and design for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The project will be subject to these mandatory standards.
High Global Warming Potential Gases – Adopt measures to reduce high global warming potential gases.	Consistent. CARB identified five measures that reduce HFC emissions from vehicular and commercial refrigeration systems; vehicles that access the project that are required to comply with the measures will comply with the strategy.
Recycling and Waste – Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	Consistent. The state is currently developing a regulation to reduce methane emissions from municipal solid waste landfills. The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
Water – Continue efficiency programs and use cleaner energy sources to move and treat water.	Consistent. The project will comply with all applicable City ordinances and CAL Green requirements.

2017 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	Project Compliance with Recommended Action
Implement Mobile Source Strategy: Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean Car regulations.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025 and at least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement Mobile Source Strategy: Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

Implement Mobile Source Strategy: Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Implement SB 350 by 2030: Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.	Consistent. The project will be compliant with the current Title 24 standards.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	Consistent. The project will be required to comply with City programs, such as City's recycling and waste reduction program, which comply, with the 75 percent reduction required by 2020 per AB 341.
2022 Scoping Plan Recommended Actions to Reduce Greenhouse Gas Emissions	**Project Compliance with Recommended Action**
Deploy ZEVs and reduce driving demand	Consistent. The project will be within an existing residential community.
Coordinate supply of liquid fossil fuels with declining California fuel demand	Consistent. The project will be compliant with the current Title 24 standards.
Generate clean electricity	Consistent. The project will be compliant with the current Title 24 standards and would not interfere with clean energy generation.
Decarbonize industrial energy supply	Consistent. The project will be compliant with the current Title 24 standards and would be commercial, therefore would not interfere with this goal.
Decarbonize buildings	Consistent. The project will be compliant with the current Title 24 standards.
Reduce non-combustion emissions	Consistent. The project will be compliant with the current Title 24 standards.
Source: CARB Scoping Plan (2008, 2017, and 2022)	

Consistency with SCAG's 2024-2050 RTP/SCS

At the regional level, the 2024-2050 RTP and Sustainable Communities Strategy represent the region's Climate Action Plan that defines strategies for reducing GHGs. In order to assess the project's potential to conflict with the RTP/SCS, this section analyzes the project's land use profile for consistency with those in the Sustainable Communities Strategy. Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as SCAG's Sustainable Communities Strategy, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals.

Table 7 demonstrates the project's consistency with the Actions and Strategies set forth in the 2024-2050 RTP/SCS. As shown in Table 7, the project would be consistent with the GHG reduction related actions and strategies contained in the 2024-2050 RTP/SCS.

Table 7: Project Consistency with SCAG 2024-2050 RTP/SCS[1]

Actions and Strategies	Responsible Party(ies)	Consistency Analysis
Land Use Strategies		
Reflect the changing population and demands, including combating gentrification and displacement, by increasing housing supply at a variety of affordability levels.	Local Jurisdictions	Consistent. The proposed project is a road widening project and will not displace existing housing.
Focus new growth around transit.	Local Jurisdictions	Consistent. The proposed project is a road widening project that would be consistent with the 2024 RTP/SCS focus on growing near transit facilities.
Plan for growth around livable corridors, including growth on the Livable Corridors network.	SCAG, Local Jurisdictions	Consistent. The proposed project is a road widening project that would be consistent with the 2024 RTP/SCS focus on growing along the 2,980 miles of Livable Corridors in the region.
Provide more options for short trips through Neighborhood Mobility Areas and Complete Communities.	SCAG, Local Jurisdictions	Consistent. The proposed project would help further jobs/housing balance objectives. The proposed project is also consistent with the Complete Communities initiative that focuses on creation of mixed-use districts in growth areas.
Support local sustainability planning, including developing sustainable planning and design policies, sustainable zoning codes, and Climate Action Plans.	Local Jurisdictions	Not Applicable. This strategy calls on local governments to adopt General Plan updates, zoning codes, and Climate Action Plans to further sustainable communities. The proposed project would not interfere with such policymaking and would be consistent with those policy objectives.
Protect natural and farmlands, including developing conservation strategies.	SCAG, Local Jurisdictions	Consistent. The proposed project is a road widening project that would help reduce demand for growth in urbanizing areas that threaten green fields and open spaces.
Transportation Strategies		
Preserve our existing transportation system.	SCAG, County Transportation Commissions, Local Jurisdictions	Not Applicable. This strategy calls on investing in the maintenance of our existing transportation system. The proposed project would not interfere with such policymaking.
Manage congestion through programs like the Congestion Management Program, Transportation Demand Management, and Transportation Systems Management strategies.	County Transportation Commissions, Local Jurisdictions	Consistent. The proposed project is a road widening project that will minimize congestion impacts on the region.
Promote safety and security in the transportation system.	SCAG, County Transportation Commissions, Local Jurisdictions	Not Applicable. This strategy aims to improve the safety of the transportation system and protect users from security threats. The proposed project would not interfere with such policymaking.
Complete our transit, passenger rail, active transportation, highways and arterials, regional express lanes goods movement, and airport ground transportation systems.	SCAG, County Transportation Commissions, Local Jurisdictions	Consistent. The proposed project would be a part of this larger goal of investing in the transportation system.
Technological Innovation and 21st Century Transportation		

Promote zero-emissions vehicles.	SCAG, Local Jurisdictions	Not Applicable. The project would be a road widening project and would not interfere with the goal of promoting zero-emission vehicles.
Promote neighborhood electric vehicles.	SCAG, Local Jurisdictions	Not Applicable. The project would be a road widening project and would not interfere with the goal of promoting electric vehicles.
Implement shared mobility programs.	SCAG, Local Jurisdictions	Not Applicable. This strategy is designed to integrate new technologies for last-mile and alternative transportation programs. The proposed project would not interfere with these emerging programs.

Notes:
[1] Source: Southern California Association of Governments; 2020–2045 RTP/SCS, May 2020.

5.5 Energy Analysis

Information from the CalEEMod 2022.1.1.29 Daily and Annual Outputs contained in the air quality and greenhouse gas analyses above was utilized for this analysis. The CalEEMod outputs detail project related construction equipment, transportation energy demands, and facility energy demands.

Construction Energy Demand

Construction Equipment Fuel Estimates

Using the CalEEMod data input, the project's construction phase would consume electricity and fossil fuels as a single energy demand, that is, once construction is completed their use would cease. CARB's 2017 Emissions Factors Tables show that on average aggregate fuel consumption (gasoline and diesel fuel) would be approximately 18.5 hp-hr-gal.[9] As presented in Table 8 below, project construction activities would consume an estimated 48,438 gallons of diesel fuel.

Table 8: Construction Equipment Fuel Consumption Estimates

Phase	Number of Days	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	HP hrs/day	Total Fuel Consumption (gal diesel fuel)[1]
Grubbing & Land	18	Crawler Tractors	1	8	87	0.43	299	291
	18	Excavators	2	8	36	0.38	219	213
Grading & Excavation	81	Crawler Tractors	1	8	87	0.43	299	1,310
	81	Excavators	3	8	36	0.38	328	1,438
	81	Graders	2	8	187	0.41	1,227	5,371
	81	Rollers	2	7	80	0.38	426	1,863
	81	Rubber Tired Dozers	1	8	247	0.40	790	3,461
	81	Scrapers	2	8	423	0.48	3,249	14,224
	81	Tractors/Loaders/Backhoes	4	8	97	0.37	1,148	5,028
Drainage,	54	Air Compressors	1	8	37	0.48	142	415

[9] Aggregate fuel consumption rate for all equipment was estimated at 18.5 hp-hr/day (from CARB's 2017 Emissions Factors Tables and fuel consumption rate factors as shown in Table D-21 of the Moyer Guidelines: (https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf).

Utilities, & Sub-Grade	54	Generator Sets	1	8	84	0.74	497	1,452
	54	Graders	1	8	187	0.41	613	1,790
	54	Plate Compactors	1	8	8	0.43	28	80
	54	Pumps	1	8	11	0.74	65	190
	54	Rough Terrain Forklifts	1	8	96	0.40	307	897
	54	Scrapers	1	8	423	0.48	1,624	4,741
	54	Tractors/Loaders/Backhoes	3	8	97	0.37	861	2,514
Paving	27	Pavers	1	8	130	0.42	437	637
	27	Paving Equipment	1	8	132	0.36	380	555
	27	Rollers	2	8	80	0.38	486	710
	27	Tractors/Loaders/Backhoes	3	8	97	0.37	861	1,257
CONSTRUCTION FUEL DEMAND (gallons of diesel fuel)								**48,438**

Notes:
[1]Using Carl Moyer Guidelines Table D-21 Fuel consumption rate factors (bhp-hr/gal) for engines less than 750 hp.
(Source: https://www.arb.ca.gov/msprog/moyer/guidelines/2017gl/2017_gl_appendix_d.pdf)

Construction Worker Fuel Estimates

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated 92,408 VMT, the construction worker trips would generate an estimated 92,408 VMT. Vehicle fuel efficiencies for construction workers were estimated in the air quality and greenhouse gas analysis using information generated using CARB's EMFAC model. Table 9 shows that an estimated 2,986 gallons of fuel would be consumed for construction worker trips.

Table 9: Construction Worker Fuel Consumption Estimates

Phase	Number of Days	Worker Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Grubbing & Land Clearing	18	7.5	18.5	2497.5	30.95	81
Grading & Excavation	81	37.5	18.5	56,194	30.95	1,816
Drainage, Utilities, & Sub-Grade	54	25	18.5	24,975	30.95	807
Paving	27	17.5	18.5	8,741	30.95	282
Total Construction Worker Fuel Consumption						**2,986**

Notes:
[1]Assumptions for the worker trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Construction Vendor/Hauling Fuel Estimates

Tables 10 and 11 show the estimated fuel consumption for vendor and hauling during building construction and architectural coating. With respect to estimated VMT, the vendor and hauling trips would generate an estimated 3,580 VMT. For the architectural coatings it is assumed that the contractors would be responsible for bringing coatings and equipment with them in their light duty vehicles.[10] Tables 10 and 11 show that an estimated 388 gallons of fuel would be consumed for vendor and hauling trips.

Table 10: Construction Vendor Fuel Consumption Estimates (MHD Trucks)[1]

[10] Vendors delivering construction material or hauling debris from the site during grading would use medium to heavy duty vehicles with an average fuel consumption of 9.22 mpg for medium heavy-duty trucks and 6.74 mpg for heavy heavy-duty trucks (see Appendix C for details).

Phase	Number of Days	Vendor Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Grubbing & Land Clearing	18	0	10.2	0	9.22	0
Grading & Excavation	81	1	10.2	826	9.22	90
Drainage, Utilities, & Sub-Grade	54	0	10.2	0	9.22	0
Paving	27	10	10.2	2,754	9.22	299
Total Vendor Fuel Consumption						**389**

Notes:
[1] Assumptions for the vendor trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Table 11: Construction Hauling Fuel Consumption Estimates (HHD Trucks)[1]

Phase	Number of Days	Hauling Trips/Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Grubbing & Land Clearing	18	0	20	0	6.74	0
Grading & Excavation	81	0.0	20	0	6.74	0
Drainage, Utilities, & Sub-Grade	54	0	20	0	6.74	0
Paving	27	0	20	0	6.74	0
Total Construction Hauling Fuel Consumption						**0**

Notes:
[1]Assumptions for the hauling trip length and vehicle miles traveled are consistent with CalEEMod 2022.1.1.29 defaults.

Construction Energy Efficiency/Conservation Measures

Construction equipment used over the approximately 9-month construction phase would conform to CARB regulations and California emissions standards and is evidence of related fuel efficiencies. In addition, the CARB Airborne Toxic Control Measure limits idling times of construction vehicles to no more than five minutes, thereby minimizing unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Furthermore, the project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards.

Construction of the proposed development would require the typical use of energy resources. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

6.0 Conclusions

Construction project emissions were evaluated and compared to both regional and localized SCAQMD's thresholds of significance. In addition, project GHG emissions were evaluated and compared to SCAQMD's draft threshold of 3,000 MTCO2e per year for all land uses. Project emissions are anticipated to be below SCAQMD's thresholds of significance with no mitigation. Therefore, the impact is less than significant.

Furthermore, construction of the project would not result in wasteful, inefficient, or unnecessary consumption of energy, or wasteful use of energy resources. The proposed project does not include any unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities and is a road widening project that is not proposing any additional features that would require a larger energy demand than other projects of similar scale and configuration. The energy demands of the project are anticipated to be accommodated within the context of available resources and energy delivery systems. The project would therefore not cause or result in the need for additional energy producing or transmission facilities. The project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California. The Project has been designed in compliance with California's Energy Efficiency Standards and 2022 CALGreen Standards. The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency; therefore, impacts would be less than significant.

MD is pleased to provide this focused Air Quality, Greenhouse Gas, and Energy Impact Evaluation. If you have any questions regarding this analysis, please don't hesitate to call us at (805) 426-4477.

Sincerely,
MD Acoustics, LLC

Tyler Klassen, EIT
Air Quality Specialist

Appendix A

Glossary of Terms

AQMP	Air Quality Management Plan
CAAQS	California Ambient Air Quality Standards
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
GHG	Greenhouse gas
HFCs	Hydrofluorocarbons
LST	Localized Significant Thresholds
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
SRA	Source/Receptor Area
TAC	Toxic air contaminants
VOC	Volatile organic compounds
WRCC	Western Regional Climate Center

Appendix B
Site Plan

CITY OF TEMECULA
STREET IMPROVEMENT PLAN
YNEZ ROAD IMPROVEMENTS-PHASE I, PW23-02

GENERAL NOTES

1. STANDARDS. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE CITY'S IMPROVEMENT STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION (AND SUBSEQUENT AMENDMENTS), THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL, CITY CODES AND REQUIREMENTS.
2. EMERGENCY TELEPHONE NUMBERS. (ANSWERING MACHINE IS NOT ACCEPTABLE):
   KIM BERRY REDTAIL ACQUISITIONS 949-433-5610
   (RESPONSIBLE PERSON/DEVELOPER) (COMPANY) (24-HR PHONE NUMBER)
   JAY SKJERVEN REDWOOD CONSTRUCTION 949-299-0875
   (RESPONSIBLE PERSON/CONTRACTOR) (COMPANY) (24-HR PHONE NUMBER)
3. LICENSE/PERMIT REQUIREMENT.
   a. PRIOR TO START OF ANY WORK, A BUSINESS LICENSE SHALL BE OBTAINED FROM THE CITY.
   b. A GRADING PERMIT SHALL BE OBTAINED, PRIOR TO ANY WORK ON PRIVATE DEVELOPMENT. THE PERMIT AND AN APPROVED SET OF IMPROVEMENT PLANS MUST BE PRESENT AT THE JOBSITE DURING CONSTRUCTION.
4. NOTIFICATIONS. PUBLIC WORKS INSPECTION SHALL BE NOTIFIED VIA EMAIL AT LDINSPECTIONS@TEMECULACA.GOV AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE OF BEGINNING ANY CONSTRUCTION/GRADING OPERATIONS.
5. ERRORS OR OMISSIONS. APPROVAL OF THESE PLANS BY THE CITY DOES NOT RELIEVE THE APPLICANT AND ENGINEER OF RECORD FROM THE RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION.
6. WORKING HOURS. CITY ORDINANCE NO. 94-25 STATES THAT NO PERSON SHALL ENGAGE IN OR CONDUCT CONSTRUCTION ACTIVITY, WHEN THE CONSTRUCTION SITE IS WITHIN ONE-QUARTER OF A MILE OF AN OCCUPIED RESIDENCE, BETWEEN THE HOURS OF 6:30 PM AND 6:30 AM, MONDAY THROUGH FRIDAY AND SHALL ONLY ENGAGE IN OR CONDUCT CONSTRUCTION ACTIVITY BETWEEN THE HOURS OF 7:00 AM AND 6:30 PM ON SATURDAY. NO CONSTRUCTION ACTIVITY SHALL BE UNDERTAKEN ON SUNDAY AND NATIONALLY RECOGNIZED HOLIDAYS.
7. REGULATORY AGENCY CLEARANCES. THE ISSUANCE OF A PERMIT BY THE CITY DOES NOT IMPLY OR PROVIDE ANY CLEARANCES FROM STATE OR FEDERAL AGENCIES REGULATING THE PROVISIONS OF STATE OR FEDERAL ENDANGERED SPECIES ACTS OR WATER QUALITY REGULATIONS. THE APPROPRIATE CLEARANCES FROM THESE AGENCIES SHALL BE OBTAINED PRIOR TO ANY SITE DISTURBANCE OR GRADING.
8. CONSTRUCTION CHANGE. ANY CONSTRUCTION CHANGE MUST BE FIRST SUBMITTED TO THE CITY AS A REDLINE REVISION FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTING THE CHANGE IN THE FIELD. REFER TO THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL.
9. PRE-CONSTRUCTION MEETING. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED TWO WORK DAYS PRIOR TO THE START OF CONSTRUCTION. DURING CONSTRUCTION, A DEPENDABLE AND RESPONSIVE CONTRACTOR'S REPRESENTATIVE SHALL BE AT THE JOB SITE AT ALL TIMES.
10. UTILITIES. APPROVAL OF THESE PLANS BY THE CITY DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF THE LOCATION, NOR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. ANY UTILITY DAMAGED DURING THE PERFORMANCE OF THE WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE GOVERNING AGENCY BY THE CONTRACTOR, AT HIS EXPENSE.
11. SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF RECORD AND TO INSTALL STREET CENTERLINE MONUMENTS, AS REQUIRED BY RIVERSIDE COUNTY ORDINANCE NO. 461. CENTERLINE TIES SHALL BE PROVIDED TO THE CITY ENGINEER, UPON COMPLETION OF THE PROJECT AND BEFORE ACCEPTANCE IS GRANTED. ALL EXISTING MONUMENTATION (DISTURBED OR DESTROYED DURING CONSTRUCTION) SHALL BE REPLACED TO CITY STANDARDS IN ACCORDANCE WITH THE LAND SURVEYORS ACT AND THE STREETS AND HIGHWAY CODE, AND AS APPROVED BY THE CITY ENGINEER. UPON REQUEST, SURVEY CUTS SHEETS SHALL BE PROVIDED TO THE CITY ENGINEER.
12. DUST CONTROL. DUST SHALL BE CONTROLLED BY WATERING OR OTHER METHODS, AS APPROVED BY THE CITY ENGINEER AND SHALL COMPLY WITH SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT'S (SCAQMD) RULE 403.
13. CONSTRUCTION FENCING. A SIX FOOT CHAIN LINK FENCE IS REQUIRED ON ALL INDUSTRIAL AND COMMERCIAL PROJECTS UNTIL ROOF SYSTEMS ARE COMPLETED OR AS DEEMED NECESSARY BY THE CITY ENGINEER FOR PUBLIC SAFETY. THE MAINTENANCE OF THE FENCE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
14. INSPECTIONS. ALL WORK PERFORMED WITHOUT PROPER INSPECTION FROM THE CITY MAY BE SUBJECT TO REJECTION.
15. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "GRADING," "EROSION AND SEDIMENT CONTROL," "PAVING" AND "TRAFFIC" REQUIREMENTS, IF APPLICABLE.
16. OTHER PERTINENT INFORMATION. REFER TO THE CITY OF TEMECULA MUNICIPAL CODE, TITLE 18, "CONSTRUCTION, GRADING AND ENCROACHMENTS".

CONTRACTORS NOTE

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS AND IS RESPONSIBLE FOR THE PROTECTION OF OR ANY DAMAGE TO THESE LINES OR STRUCTURES.

ALL RETAINING WALLS SHOWN ON THESE PLANS ARE SHOWN FOR REFERENCE ONLY AND ARE TO BE CONSTRUCTED PER SEPARATE PERMIT.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6860

UTILITY CONTACTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UTILITIES. FOR LOCATION OF UNDERGROUND UTILIZES, OR FOR EMERGENCY ASSISTANCE CALL:

TELEPHONE:
FRONTIER COMMUNICATIONS
PH. 800-921-8101

GAS:
SOCAL GAS COMPANY
527 NORTH SAN JACINTO STREET
HEMET, CA 92543
PH. 800-427-2200

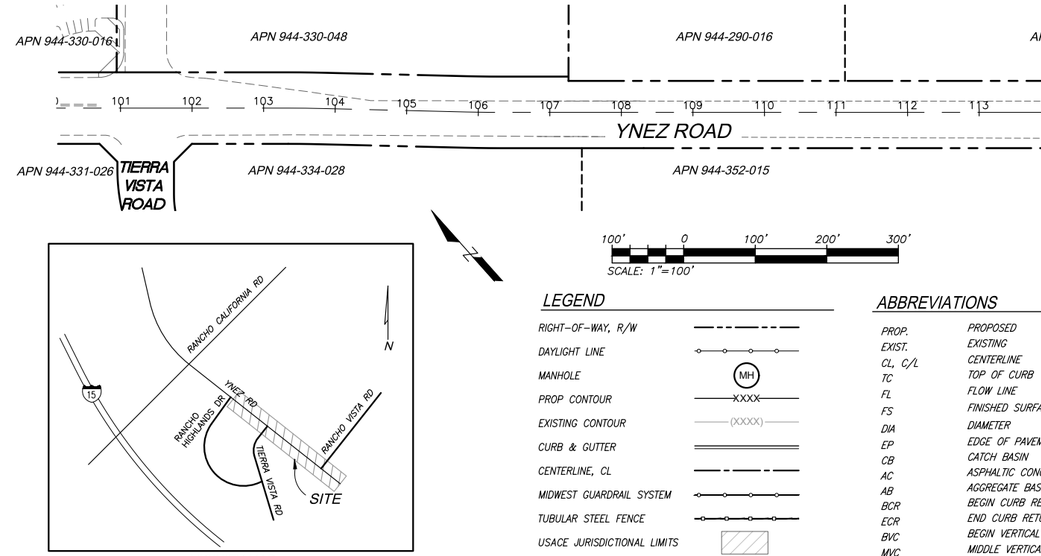
ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
24487 PRIELIPP ROAD
WILDOMAR, CA 92595
PH. 800-684-8123

CABLE:
TIME WARNER CABLE
26487 YNEZ ROAD, SUITE G
TEMECULA, CA 92591
PH. 888-892-2253

SEWER:
EASTERN MUNICIPAL WATER DISTRICT
2270 TRUMBLE ROAD
PERRIS, CA 92572
PH. 800-698-0400

WATER:
RANCHO CALIFORNIA WATER DISTRICT
42135 WINCHESTER ROAD
TEMECULA, CA 92590
PH. 951-296-6900

SOLID WASTE:
CR&R INCORPORATED
1706 GOETZ ROAD
PERRIS, CA 92570
PH. 800-755-8112



VICINITY MAP
N.T.S.

SHEET INDEX

TITLE	SHEET NO.	DRAWING NO.
TITLE SHEET,INDEX MAP & NOTES	1	T1
DEMOLITION PLAN, EXISTING UTILITIES AND NOTES	2	C1
ADDITIVE PLAN	3	C2
TYPICAL SECTIONS AND DETAILS	4	C3
PLAN AND PROFILES	5-6	C4-C5
MEDIAN PLAN AND PROFILE	7	C6
SIGNING AND STRIPING PLAN	8	C7
EROSION CONTROL PLAN	9-10	C8 & C9
STREET LIGHT PLAN	11	C10
SEWER AND CURB RAMP DETAILS	12	C11
RETAINING WALL DETAILS	13-14	S1-S2

DECLARATION OF RESPONSIBLE CHARGE

I, GEORGE LENFESTEY, HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS AND CITY OF TEMECULA.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF TEMECULA IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME OF RESPONSIBILITIES FOR PROJECT DESIGN.

SURVEY NOTE

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING OF NORTH 48° 15' 11" WEST PER TRACT NO. 23992, MB 231/9-12, ON FILE IN THE OFFICE OF THE RIVERSIDE COUNTY RECORDER.

LEGEND

RIGHT-OF-WAY, R/W
DAYLIGHT LINE
MANHOLE (MH)
PROP CONTOUR XXXX
EXISTING CONTOUR (XXXX)
CURB & GUTTER
CENTERLINE, CL
MIDWEST GUARDRAIL SYSTEM
TUBULAR STEEL FENCE
USACE JURISDICTIONAL LIMITS
CDFW JURISDICTIONAL LIMITS
CONCRETE
AC PAVING
COLD PLANE
REMOVE EX. AC PAVING
STREET LIGHT
FIRE HYDRANT
EXISTING FIRE HYDRANT
PROPOSED SIGN
EXISTING SIGN
TYPE E DETECTOR LOOP
TYPE F DETECTOR LOOP
TYPE Q DETECTOR LOOP (3'X6')
SECTION REFERENCE X / XX
SHEET REFERENCE

ABBREVIATIONS

PROP.	PROPOSED
EXIST.	EXISTING
CL, C/L	CENTERLINE
TC	TOP OF CURB
FL	FLOW LINE
FS	FINISHED SURFACE
DIA	DIAMETER
EP	EDGE OF PAVEMENT
CB	CATCH BASIN
AC	ASPHALTIC CONCRETE
AB	AGGREGATE BASE
BCR	BEGIN CURB RETURN
ECR	END CURB RETURN
BVC	BEGIN VERTICAL CURVE
MVC	MIDDLE VERTICAL CURVE
EVC	END VERTICAL CURVE
PRC	POINT OF REVERSE CURVE
PCC	POINT OF COMPOUND CURVE
PRVC	POINT OF REVERSE VERTICAL CURVE
(1329.02)	EXISTING ELEVATION
1479.70	PROPOSED ELEVATION
LT	LEFT
RT	RIGHT
FH	FIRE HYDRANT
ST	STREET
R/W	RIGHT OF WAY
D/W	DRIVEWAY
V.C.	VERTICAL CURVE
PI	POINT OF INTERSECTION
PVI	POINT OF VERTICAL INTERSECTION
PUE	PUBLIC UTILITY EASEMENT

DESIGN DATA

YNEZ ROAD
ROADWAY CALSSIFICATION:
DESIGN SPEED: 45 MPH

EARTHWORK VOLUMES

FILL..... 6,019.97 CY
CUT..... 9.71 CY
NET..... 6,010.26 CY FILL
NOTE VOLUMES ARE UNADJUSTED.

GRADING NOTES

SEE SHEET 2

BID ITEM TABLE

NO.	DESCRIPTION	QUANITY	UNIT
1	MOBILIZATION/DEMOBILIZATION	1	LS
2	CLEARING AND GRUBBING	1	LS
3	ENGINEERING/ CONSTRUCTION SURVEYING	1	LS
4	TRAFFIC CONTROL	1	LS
5	NPDES COMPLAINCE	1	LS
6	EARTHWORK	1	LS
7	CRUSHED AGGREGATE BASE (15-INCH)	2,500	C.Y.
8	ASPHALT CONCRETE PAVEMENT	1,944	TON
9	ASPHALT RUBBER HOT MIX	583	TON
10	SAWCUT AND REMOVE EXISTING BERM	1,579	L.F.
11	SAWCUT AND REMOVE EXISTING PAVEMENT	3,332	S.F.
12	REMOVE AC PAVEMENT	31,344	S.F.
13	CURB & GUTTER (TYPE A-6)	1,448	L.F.
14	CURB & GUTTER (TYPE A-8)	26	L.F.
15	CONCRETE SIDEWALK	9,701	S.F.
16	REMOVE EXISTING ADA ACCESS CURB RAMP	1	EA
17	ADA ACCESS CURB RAMP WITH TRUNCATED DOMES	1	EA
18	MEDIAN STAMPED CONCRETE	3,769	S.F.
19	MEDIAN CURB (TYPE D-8)	796	L.F.
20	MEDIAN CURB (TYPE D-6)	262	L.F.
21	MEDIAN ACCESS-SEWER MANHOLE	40	L.F.
22	V-DITCH	161	L.F.
23	RETAINING WALL	1	LS
24	RIPRAP (½ TON)	800	C.Y.
25	CONDUIT, WIRING, PULLBOXES, PULL ROPES, AND METER SERVICES PEDESTAL FOR STREET LIGHT	1	LS
26	STREETLIGHT	3	EA
27	RELOCATE TRAFFIC SIGNAL PULL BOX	5	EA
28	REMOVE AND SALVAGE PEDESTRIAN SIGNAL PEDESTAL	1	EA
29	INSTALL NEW PEDESTRIAN PUSH BOTTOM PEDESTAL	1	EA
30	TRAFFIC SIGNAL LOOP DETECTORS	22	EA
31	REMOVE EXISTING SIGN	1	LS
32	SIGNING AND STRIPING	1	LS
33a	RUBBERIZED EMULSION AGGREGATE SLURRY (REAS) - TYPE I	52,297	S.F.
33b	TIRE RUBBERIZED MODIFIED SLURRY SEAL (TRMSS) - TYPE II	52,297	S.F.
33c	RUBBER POLYMER MODIFIED SLURRY SEAL (RPMS) - TYPE II	52,297	S.F.
34	REMOVE AND REPLACE PAVEMENT DELINEATION	1	LS
35	REMOVE TREES PER ARBORIST RECOMMENDATIONS	9	EA
36	TREE PRUNING PER ARBORIST RECOMMENDATIONS	2	EA
37	MIDWEST GUARDRAIL SYSTEM	300	L.F.
38	TUBULAR STEEL FENCE	1,573	L.F.
39	ADJUST EXISTING MANHOLE TO GRADE (FRONTIER)	1	EA
40	ADJUST EXISTING VAULT TO GRADE (FRONTIER)	2	EA
41	ADJUST EXISTING VALVE TO GRADE (RCWD)	3	EA

CONSTRUCTION COORDINATION TABLE

AGENCY	IMPROVEMENT	DWG STD.	ESTIMATED DURATION	STATION	REMARKS
CHARTER	RELOCATE 2 VAULTS	-	2 WEEKS	107+65 & 111+90	CHARTER NEEDS 2 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER ULTIMATE PARKWAY IS GRADED. CHARTER TO COMPLETE WORK AND COVER CONSTRUCTION COST.
EMWD	CONSTRUCT 1 MEDIAN ROLLED CURB ACCESS MANHOLE CUT OUT	SB-53 , SB-61, SB-183	-	101+75 - 117+75	CONTRACTOR TO PERFORM WORK
FRONTIER	ADJUST 2 EXISTING VAULTS AND MANHOLE TO GRADE	-	2 DAYS	110+07 & 116+23	CONTRACTOR TO PERFORM WORK. FRONTIER NEEDS 2 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER A.C. 1st LIFT.
RCWD	RELOCATE 1 EXISTING FIRE HYDRANT, EXTEND LATERAL AND REPLACE BLOW OFF WITH HYDRANT	RW-8, RW-30	2 DAYS	108+55	RCWD NEEDS 4 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER ULTIMATE PARKWAY IS GRADED. CONSTRUCTION COST IS COVERED BY RCWD.
RCWD	ADJUST VALVE TO GRADE	-			CONTRACTOR TO PERFORM WORK

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

"AS BUILT"
DATE
RCE _____ EXP. _____
REVIEWED BY:
INSPECTOR DATE

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL AS SHOWN
VERTICAL AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFESTEY No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 02/19/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
AVLIN ODVIAR, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

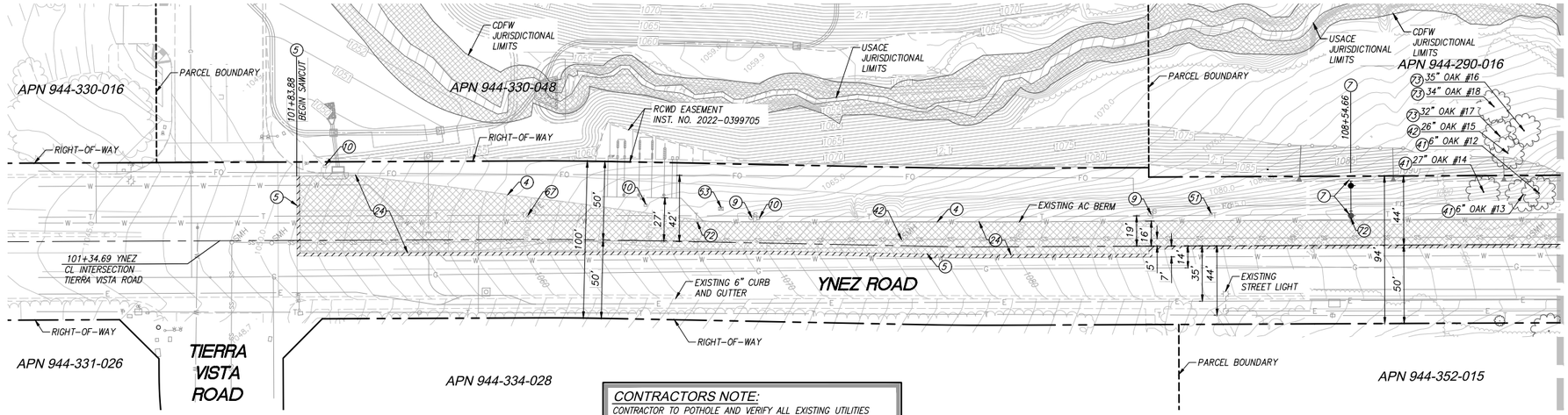
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS
YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
TITLE SHEET, INDEX MAP AND NOTES

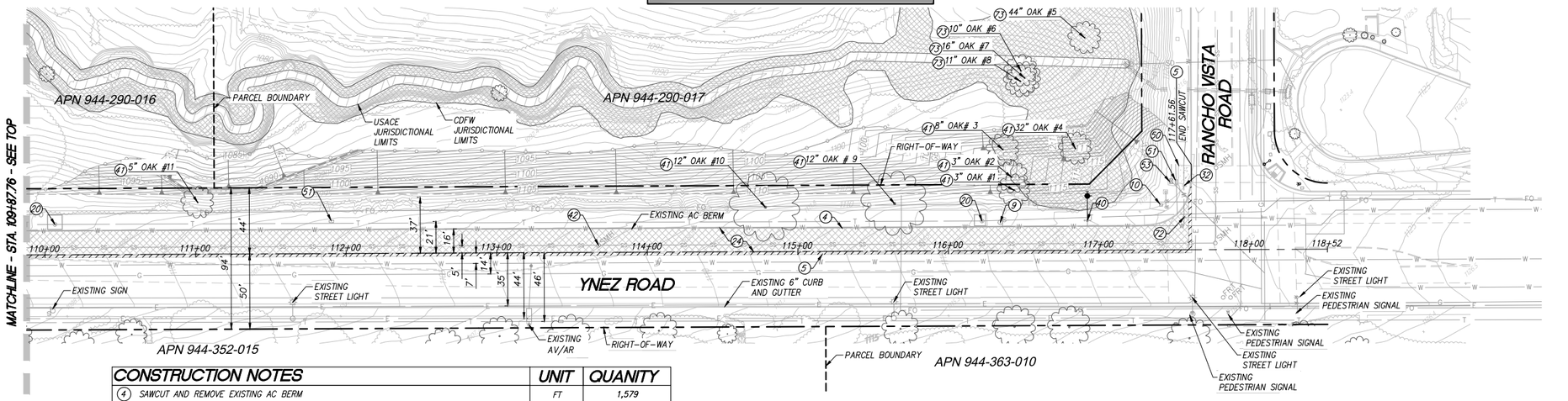
Drawing No. T-1
SHEET 1 OF 14

DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Street Improvements\ST01-Title Sheet.dwg
Plotted: Feb 19, 2025 - 8:25am By: dalsyv

GRADING NOTES

1. STANDARDS. ALL CONSTRUCTION AND GRADING RELATED ACTIVITIES (I.E., STOCKPILING, LAND CLEARING, EROSION & SEDIMENT CONTROL, ETC) SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 18 OF THE CITY OF TEMECULA MUNICIPAL CODE, THE ENGINEERING AND CONSTRUCTION MANUAL, ALL APPLICABLE STANDARDS, THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE (APPENDIX J) AND, IT'S APPLICABLE, THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES.
2. PERMIT REQUIREMENTS. A GRADING PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ANY WORK ON THE SITE.
3. NOTIFICATIONS. PUBLIC WORKS SHALL BE NOTIFIED VIA EMAIL AT LDINSPECTIONS@TEMECULACA.GOV AT LEAST TWO (2) DAYS IN ADVANCE OF BEGINNING ANY CONSTRUCTION/GRADING OPERATIONS.
4. SOILS. ALL CONSTRUCTION/GRADING ACTIVITIES SHALL BE DONE IN CONFORMANCE WITH RECOMMENDATIONS OF THE PRELIMINARY SOILS INVESTIGATION BY LGC VALLEY, INC GEOTECHNICAL CONSULTING DATED 10/17/24. SAID REPORT SHALL BE CONSIDERED A PART OF THIS GRADING PLAN.
5. CUT/FILL.
   A. MAXIMUM CUT AND FILL SLOPES SHALL BE 2:1; UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER; AND SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOILS REPORT. FILL SLOPES SHALL NOT HAVE LESS THAN 90% RELATIVE COMPACTION OUT TO THE FINISH SURFACE.
   B. FILL MATERIAL SHALL NOT BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL, VEGETATION AND OTHER DELETERIOUS MATERIAL. IF THE SLOPE RATIO EXCEEDS 5:1 AND IS GREATER THAN FIVE FEET, THE TERRAIN MUST BE KEYED AND BENCHED INTO EITHER BEDROCK OR NATIVE SOIL, AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
   C. STABILITY CALCULATIONS WITH A FACTOR-OF-SAFETY OF AT LEAST ONE AND FIVE TENTHS (1.5) SHALL BE SUBMITTED TO PUBLIC WORKS A REGISTERED CIVIL ENGINEER, SOILS ENGINEER OR GEOLOGIST FOR CUT AND FILL SLOPES OVER THIRTY FEET (30') IN VERTICAL HEIGHT.
   D. ALL GRADING SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED CIVIL ENGINEER, SOILS ENGINEER OR GEOLOGIST, WHO SHALL SUBMIT TWO SETS OF WRITTEN CERTIFICATION THAT ALL FILLS OVER ONE FOOT (1') IN DEPTH HAVE BEEN PROPERLY PLACED.
6. DRAINAGE.
   A. AS APPLICABLE, PROVIDE CONCRETE BROW DITCHES TO CONVEY 100-YEAR STORM FLOWS OR PROVIDE GRADED BERMS ALONG THE TOP OF ALL GRADED SLOPES OVER THREE FEET IN VERTICAL HEIGHT OR THAT ARE ADJACENT TO GRADED AREAS, TO DIRECT SURFACE RUNOFF AWAY FROM THE TOP OF SLOPES. ALL DRAINAGE DEVICES SHALL BE CONSTRUCTED PER THE APPROVED PLANS.
   B. EXISTING DRAINAGE COURSES SHALL CONTINUE TO FUNCTION AT ALL TIMES. NO OBSTRUCTION OF FLOOD PLAINS OR NATURAL WATER COURSES SHALL BE PERMITTED.
   C. TEMPORARY DRAINAGE SHALL BE PROVIDED UNTIL PERMANENT DRAINAGE STRUCTURES ARE INSTALLED. PROTECTIVE MEASURES SHALL BE IMPLEMENTED TO PROTECT ADJOINING AND DOWNSTREAM PROPERTIES FROM SILT DEPOSITION AND PONDING WATER DURING CONSTRUCTION/GRADING OPERATIONS.
   D. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING PROJECT.
   E. DRAINAGE EASEMENTS SHALL BE KEPT CLEAR OF ALL OBSTRUCTIONS; NO BUILDING OR WALLS SHALL BE PLACED WITHIN THE LIMITS OF EASEMENTS.
   F. THE MINIMUM GRADE FOR CONCRETE SURFACE DRAINAGE FACILITIES SHALL BE A ONE-HALF PERCENT (0.5%).
7. PROTECT CORNERS. ALL PROPERTY CORNERS SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION/GRADING ACTIVITY, AS DIRECTED BY THE CITY ENGINEER.
8. ROUGH GRADING INSPECTIONS PRIOR TO BUILDING PERMIT. INSPECTIONS SHALL BE REQUESTED VIA EMAIL TO THE PUBLIC WORKS INSPECTION LINE AT LDINSPECTIONS@TEMECULACA.GOV AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE (PLEASE INDLUDE YOUR PERMIT # IN THE SUBJECT LINE).
   SUBMIT THE FOLLOWING:
   A. ONE (1) PAD ELEVATION CERTIFICATION (I.E., ROUGH GRADE) TO INCLUDE A STATEMENT THAT THE PAD ELEVATION COMPLIES WITH THE APPROVED GRADING PLAN. CERTIFICATION SHALL BE TO LINE, GRADE, ELEVATION AND LOCATION OF CUT/FILL SLOPES.
   B. ONE (1) PAD COMPACTION CERTIFICATION (I.E., FINAL GEOTECHNICAL/SOILS REPORT) TO INCLUDE A STATEMENT THAT THE GRADING COMPLIES WITH RECOMMENDATIONS OF THE PRELIMINARY SOILS REPORT.
9. FINAL INSPECTION PRIOR TO OCCUPANCY. REFER TO THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL.
10. POST GRADING ACTIVITIES. POST GRADING ACTIVITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, INSTALLING WHERE APPLICABLE: GROUNDCOVER, TREES, SHRUBS OR A COMBINATION THEREOF IN ACCORDANCE WITH THE TEMECULA MUNICIPAL CODE PRIOR TO FINAL INSPECTION. SLOPES OVER FOUR FEET (4') IN VERTICAL HEIGHT SHALL HAVE PERMANENT IRRIGATION SYSTEMS WITH BACKFLOW PREVENTION DEVICES. BACKFLOW PREVENTION DEVICES MUST COMPLY WITH THE UNIFORM PLUMBING CODE (U.P.C).
11. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "PAVING," "GENERAL" AND "EROSION AND SEDIMENT CONTROL" REQUIREMENTS.





CONTRACTORS NOTE:

CONTRACTOR TO POTHOLE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.

CONSTRUCTION NOTES

		UNIT	QUANITY
(4)	SAWCUT AND REMOVE EXISTING AC BERM	FT	1,579
(5)	SAWCUT AND REMOVE 1' WIDE (MIN.) OF EXISTING AC PAVEMENT AND COLD PLANE (2' MIN.) PER DETAIL ON SHEET 4	S.F.	3,332
(7)	EXISTING FIRE HYDRANT PER RCWD RW-8 TO BE RELOCATED BY RCWD	EA.	1
(9)	REMOVE EXISTING STREET SIGN	EA.	3
(10)	EXISTING TRAFFIC SIGNAL PULL BOX TO BE RELOCATED	EA.	4
(20)	EXISTING FRONTIER VAULT TO BE ADJUSTED TO GRADE BY CONTRACTOR	EA.	2
(24)	REMOVE AC PAVEMENT	S.F.	31,344
(32)	EXISTING PEDESTRIAN SIGNAL PEDESTAL TO BE REMOVED AND SALVAGED	EA.	1
(40)	RCWD TO EXTEND LATERAL AND REPLACE BLOW OFF WITH HYDRANT. PROPOSED LOCATION TO BE STAKED BY CONTRACTOR.	EA.	1
(41)	REMOVE TREE PER ARBORIST REPORT	EA.	10
(42)	TREE PRUNING AND PROTECT IN PLACE PER TREE PROTECTION DETAIL ON SHEET 4 AND REFER TO ARBORIST REPORT FOR PROTECTION SPECIFICATIONS	EA.	1
(50)	REMOVE EXISTING RAMP	EA.	1
(51)	EXISTING ABOVE GROUND TELECOMMUNICATIONS BOX TO BE RELOCATED BY CHARTER	EA.	3
(53)	EXISTING CATV PULL BOX TO BE RELOCATED BY CHARTER	EA.	2
(67)	EXISTING FRONTIER MANHOLE TO BE ADJUSTED TO GRADE BY CONTRACTOR	EA.	1
(72)	ADJUST RCWD VALVES TO GRADE BY CONTRACTOR	EA.	3
(73)	PROTECT EXISTING TREE IN PLACE PER TREE PROTECTION DETAIL ON SHEET 4 AND REFER TO ARBORIST REPORT FOR PROTECTION SPECIFICATIONS	EA.	7

LEGEND

- COLD PLANE
- REMOVE EX. AC PAVING
- EXISTING STREET LIGHT
- EXISTING TRAFFIC SIGNAL PULL BOX
- EXISTING EMWD SEWER MANHOLE (SMH)
- EXISTING RCWD F.H.
- EXISTING RCWD AV/AR
- EXISTING SIGN
- EXISTING FRONTIER MANHOLE (FRT)
- EXISTING FRONTIER VAULT
- EXISTING SCE TRANSFORMER
- CATV PULL BOX
- EXISTING TELECOMMUNICATIONS (T)
- EXISTING FRONTIER FIBER OPTIC (FO)
- EXISTING GAS (G)
- EXISTING EMWD SEWER (SS)
- EXISTING RCWD WATER (W)
- EXISTING SCE CONDUIT (E)
- PROPOSED RCWD FIRE HYDRANT
- EXISTING TREE

40' 0 40' 80' 120'
SCALE: 1"=40'

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL: AS SHOWN
VERTICAL: AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFEST No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 02/18/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
AVLIN ODVIAR, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
DEMOLITION PLAN AND NOTES

Drawing No. C-1
SHEET 2 OF 14

Plotted: Feb 18, 2025 - 3:11pm By: dolyv
DWG: N:\01-204-000 Ynez Road Expansion\Drawings\Street Improvements\ST02-Demolition Plan.dwg

Appendix C
CalEEMod Output

Ynez Road Widening Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Ynez Road Widening
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	23.4
Location	33.50164468379312, -117.14695571841078
County	Riverside-South Coast
City	Temecula
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5554
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Road Widening	0.30	Mile	100	0.00	—	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.66	30.1	39.3	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,191	8,191	0.33	0.08	1.83	8,226
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.65	30.1	38.6	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,149	8,149	0.32	0.09	0.05	8,183
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.18	9.86	12.9	0.02	0.41	0.61	1.02	0.38	0.09	0.47	—	2,668	2,668	0.10	0.03	0.31	2,680
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.22	1.80	2.36	< 0.005	0.08	0.11	0.19	0.07	0.02	0.09	—	442	442	0.02	0.01	0.05	444

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.66	30.1	39.3	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,191	8,191	0.33	0.08	1.83	8,226

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.65	30.1	38.6	0.07	1.31	1.95	3.25	1.20	0.27	1.48	—	8,149	8,149	0.32	0.09	0.05	8,183
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.18	9.86	12.9	0.02	0.41	0.61	1.02	0.38	0.09	0.47	—	2,668	2,668	0.10	0.03	0.31	2,680
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.22	1.80	2.36	< 0.005	0.08	0.11	0.19	0.07	0.02	0.09	—	442	442	0.02	0.01	0.05	444

3. Construction Emissions Details

3.1. Linear, Grubbing & Land Clearing (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.46	4.04	4.49	0.01	0.21	—	0.21	0.20	—	0.20	—	632	632	0.03	0.01	—	634
Dust From Material Movement	—	—	—	—	—	0.21	0.21	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.20	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.2	31.2	< 0.005	< 0.005	—	31.3
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.16	5.16	< 0.005	< 0.005	—	5.18
Dust From Material Movement	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.41	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.1	95.1	< 0.005	< 0.005	0.01	96.3
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.75	4.75	< 0.005	< 0.005	0.01	4.81
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.79	0.79	< 0.005	< 0.005	< 0.005	0.80

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Linear, Grading & Excavation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.50	29.9	36.6	0.07	1.31	—	1.31	1.20	—	1.20	—	7,644	7,644	0.31	0.06	—	7,670
Dust From Material Movement	—	—	—	—	—	1.45	1.45	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.50	29.9	36.6	0.07	1.31	—	1.31	1.20	—	1.20	—	7,644	7,644	0.31	0.06	—	7,670
Dust From Material Movement	—	—	—	—	—	1.45	1.45	—	0.16	0.16	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.78	6.65	8.11	0.02	0.29	—	0.29	0.27	—	0.27	—	1,696	1,696	0.07	0.01	—	1,702

Dust From Material Movement	—	—	—	—	—	0.32	0.32	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.21	1.48	< 0.005	0.05	—	0.05	0.05	—	0.05	—	281	281	0.01	< 0.005	—	282
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.15	2.69	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	517	517	0.02	0.02	1.75	525
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.1	30.1	< 0.005	< 0.005	0.08	31.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.15	0.16	2.04	0.00	0.00	0.49	0.49	0.00	0.11	0.11	—	476	476	0.01	0.02	0.05	481
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.1	30.1	< 0.005	< 0.005	< 0.005	31.5
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.04	0.47	0.00	0.00	0.11	0.11	0.00	0.03	0.03	—	107	107	< 0.005	< 0.005	0.17	108
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.68	6.68	< 0.005	< 0.005	0.01	7.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	17.7	17.7	< 0.005	< 0.005	0.03	17.9
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.11	1.11	< 0.005	< 0.005	< 0.005	1.16
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Linear, Drainage, Utilities, & Sub-Grade (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.79	16.0	19.7	0.04	0.62	—	0.62	0.57	—	0.57	—	4,089	4,089	0.17	0.03	—	4,103
Dust From Material Movement	—	—	—	—	—	0.62	0.62	—	0.07	0.07	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	2.36	2.92	0.01	0.09	—	0.09	0.08	—	0.08	—	605	605	0.02	< 0.005	—	607
Dust From Material Movement	—	—	—	—	—	0.09	0.09	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.43	0.53	< 0.005	0.02	—	0.02	0.02	—	0.02	—	100	100	< 0.005	< 0.005	—	101
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	1.80	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	345	345	0.01	0.01	1.17	350
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.21	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	47.5	47.5	< 0.005	< 0.005	0.07	48.1
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.86	7.86	< 0.005	< 0.005	0.01	7.97
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Linear, Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.81	7.53	11.7	0.02	0.30	—	0.30	0.28	—	0.28	—	1,768	1,768	0.07	0.01	—	1,774
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.56	0.86	< 0.005	0.02	—	0.02	0.02	—	0.02	—	131	131	0.01	< 0.005	—	131
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.7	21.7	< 0.005	< 0.005	—	21.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	1.26	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	241	241	0.01	0.01	0.82	245
Vendor	0.01	0.32	0.10	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	301	301	0.01	0.05	0.82	316
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.6	16.6	< 0.005	< 0.005	0.03	16.8

Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.3	22.3	< 0.005	< 0.005	0.03	23.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.75	2.75	< 0.005	< 0.005	< 0.005	2.79
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.69	3.69	< 0.005	< 0.005	< 0.005	3.86
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Linear, Grubbing & Land Clearing	Linear, Grubbing & Land Clearing	1/1/2026	1/26/2026	5.00	18.0	—
Linear, Grading & Excavation	Linear, Grading & Excavation	1/27/2026	5/20/2026	5.00	81.0	—
Linear, Drainage, Utilities, & Sub-Grade	Linear, Drainage, Utilities, & Sub-Grade	5/21/2026	8/4/2026	5.00	54.0	—
Linear, Paving	Linear, Paving	8/5/2026	9/11/2026	5.00	27.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Linear, Grubbing & Land Clearing	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grubbing & Land Clearing	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grubbing & Land Clearing	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Linear, Grading & Excavation	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Linear, Grading & Excavation	Graders	Diesel	Average	2.00	8.00	148	0.41
Linear, Grading & Excavation	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Grading & Excavation	Rubber Tired Loaders	Diesel	Average	1.00	8.00	150	0.36
Linear, Grading & Excavation	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Linear, Grading & Excavation	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Grading & Excavation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Linear, Drainage, Utilities, & Sub-Grade	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48
Linear, Drainage, Utilities, & Sub-Grade	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Graders	Diesel	Average	1.00	8.00	148	0.41
Linear, Drainage, Utilities, & Sub-Grade	Plate Compactors	Diesel	Average	1.00	8.00	8.00	0.43

Linear, Drainage, Utilities, & Sub-Grade	Pumps	Diesel	Average	1.00	8.00	11.0	0.74
Linear, Drainage, Utilities, & Sub-Grade	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Linear, Drainage, Utilities, & Sub-Grade	Scrapers	Diesel	Average	1.00	8.00	423	0.48
Linear, Drainage, Utilities, & Sub-Grade	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Drainage, Utilities, & Sub-Grade	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Linear, Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Linear, Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Linear, Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Linear, Paving	Signal Boards	Electric	Average	0.00	8.00	6.00	0.82
Linear, Paving	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Linear, Grubbing & Land Clearing	—	—	—	—
Linear, Grubbing & Land Clearing	Worker	7.50	18.5	LDA,LDT1,LDT2
Linear, Grubbing & Land Clearing	Vendor	0.00	10.2	HHDT,MHDT
Linear, Grubbing & Land Clearing	Hauling	0.00	20.0	HHDT
Linear, Grubbing & Land Clearing	Onsite truck	—	—	HHDT
Linear, Grading & Excavation	—	—	—	—
Linear, Grading & Excavation	Worker	37.5	18.5	LDA,LDT1,LDT2
Linear, Grading & Excavation	Vendor	1.00	10.2	HHDT,MHDT
Linear, Grading & Excavation	Hauling	0.00	20.0	HHDT

Linear, Grading & Excavation	Onsite truck	—	—	HHDT
Linear, Drainage, Utilities, & Sub-Grade	—	—	—	—
Linear, Drainage, Utilities, & Sub-Grade	Worker	25.0	18.5	LDA,LDT1,LDT2
Linear, Drainage, Utilities, & Sub-Grade	Vendor	0.00	10.2	HHDT,MHDT
Linear, Drainage, Utilities, & Sub-Grade	Hauling	0.00	20.0	HHDT
Linear, Drainage, Utilities, & Sub-Grade	Onsite truck	—	—	HHDT
Linear, Paving	—	—	—	—
Linear, Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Linear, Paving	Vendor	10.0	10.2	HHDT,MHDT
Linear, Paving	Hauling	0.00	20.0	HHDT
Linear, Paving	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)

Linear, Grubbing & Land Clearing	—	—	100	0.00	—
Linear, Grading & Excavation	—	—	100	0.00	—
Linear, Drainage, Utilities, & Sub-Grade	—	—	100	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Road Widening	100	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	26.3	annual days of extreme heat
Extreme Precipitation	4.75	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	11.3	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	3	1	1	3
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	71.7
AQ-PM	28.9
AQ-DPM	71.4
Drinking Water	36.9
Lead Risk Housing	14.2
Pesticides	41.6
Toxic Releases	10.0
Traffic	74.2
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	0.00
Haz Waste Facilities/Generators	77.2
Impaired Water Bodies	83.0
Solid Waste	0.00
Sensitive Population	—
Asthma	20.8
Cardio-vascular	72.8
Low Birth Weights	57.1
Socioeconomic Factor Indicators	—

Education	25.1
Housing	53.1
Linguistic	15.6
Poverty	46.4
Unemployment	84.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	69.03631464
Employed	27.87116643
Median HI	78.53201591
Education	—
Bachelor's or higher	58.29590658
High school enrollment	20.74939048
Preschool enrollment	82.06082382
Transportation	—
Auto Access	92.6344155
Active commuting	4.876170923
Social	—
2-parent households	89.38791223
Voting	70.58899012
Neighborhood	—
Alcohol availability	88.33568587
Park access	24.1498781
Retail density	13.58911844
Supermarket access	21.27550366

Tree canopy	57.47465674
Housing	—
Homeownership	85.25599897
Housing habitability	58.96317208
Low-inc homeowner severe housing cost burden	12.47273194
Low-inc renter severe housing cost burden	38.95803927
Uncrowded housing	75.52932119
Health Outcomes	—
Insured adults	49.96791993
Arthritis	8.2
Asthma ER Admissions	89.6
High Blood Pressure	12.4
Cancer (excluding skin)	13.2
Asthma	34.7
Coronary Heart Disease	17.4
Chronic Obstructive Pulmonary Disease	22.0
Diagnosed Diabetes	54.0
Life Expectancy at Birth	38.3
Cognitively Disabled	50.3
Physically Disabled	45.1
Heart Attack ER Admissions	48.9
Mental Health Not Good	50.5
Chronic Kidney Disease	35.4
Obesity	39.2
Pedestrian Injuries	19.6
Physical Health Not Good	46.9
Stroke	34.3
Health Risk Behaviors	—

Binge Drinking	38.6
Current Smoker	47.6
No Leisure Time for Physical Activity	59.9
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	83.0
Elderly	43.3
English Speaking	75.1
Foreign-born	17.5
Outdoor Workers	63.0
Climate Change Adaptive Capacity	—
Impervious Surface Cover	87.5
Traffic Density	71.0
Traffic Access	23.0
Other Indices	—
Hardship	31.1
Other Decision Support	—
2016 Voting	78.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	47.0
Healthy Places Index Score for Project Location (b)	65.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Trips and VMT	Vendor trips included in paving for asphalt delivery

Appendix B-1

Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for the Ynez Road Improvements – Phase 1 Project Located in the City of Temecula, Riverside County, California

ELMT Consulting

(Updated) November 2025

Updated November 2025

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SUBJECT: Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Consistency Analysis for the Ynez Road Improvements – Phase 1 Project Located in the City of Temecula, Riverside County, California

Introduction

This report contains the findings of ELMT Consulting's (ELMT) habitat assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for the proposed Ynez Road Improvements – Phase 1 Project located in the City of Temecula, Riverside County, California. The field investigation was conducted by biologist Travis J. McGill on April 19, 2023 to document baseline conditions and assess the potential for special-status[1] plant and wildlife species to occur within the proposed project site that could pose a constraint to implementation of the proposed project. Special attention was given to the suitability of the on-site habitat to support burrowing owl (*Athene cunicularia*) and several other special-status species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring on or within the general vicinity of the project site.

In addition, the Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map was queried to determine if the MSHCP identifies any potential survey requirements for the project. Further, the project site was reviewed against the MSHCP to determine if the site is located within any MSHCP areas including Criteria Cells (core habitat and wildlife movement corridors) or areas proposed for conservation. Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined that the project site is located within the Southwest Area Plan of the MSHCP and is partially located within Criteria Cell 7079.

Project Location

The project site is generally located east of Interstate 15, south and north of State Route 79, and west of Margarita Road in the City of Temecula, Riverside County, California. The site is depicted on both the Murrieta and Temecula quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 12 of Township 8 South, Range 3 West. Specifically, the project site is located adjacent to, and encompassing a portion of Ynez Road between Rancho Vista Road and Tierra Vista Road. Refer to Exhibits 1-3 in Attachment A.

1 As used in this report, "special-status" refers to plant and wildlife species that are federally, State, and MSHCP listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

The project consists of approximately 1,763 linear feet of Ynez Road. The site is bounded to the northwest by Temecula Duck Pond and Park, to the southeast and southwest by residential development, and to the northeast by undeveloped vacant land with commercial development beyond.

Project Description

The City is proposing to improve 1,763 linear feet of the eastern half of Ynez Road between Tierra Vista Road to Rancho Vista Road in order to match the four-lane configuration and infrastructure that exists along Ynez Road north and south of this segment. Improvements will include the following and are depicted in Appendix B, *Site Plans*.

- Remove the existing asphalt curb and earthen shoulder, approximately 28 feet.
- Remove existing road striping in all lanes
- Sawcut and grind existing pavement on the north bound direction of the Ynez Road
- Grading the slope and installation of a retaining wall along the road slope (within APNs 944-290-017 and 944-290-016). The slope grading would occur along 927 linear feet, varying from 0 feet wide by 68 feet wide, and involve approximately 6,020 cubic yards.
- Removal of 10 trees and pruning of one tree. The trees to be removed and pruned are located along Ynez Road at the location of the proposed slope and retaining wall.
- Install the slope grading, retaining wall, and a maintenance access road at Rancho Vista Road/Ynez Road intersection, which would remove approximately 0.22 acre of riparian/riverine resources
- Install a guardrail and tubular steel fence along the north side of Ynez Road
- Add pavement section that would vary between 28 feet and 46 feet wide
- Construct a concrete raised median to delineate the turn pocket for Tierra Vista Road, and striped median for the turn pocket at Rancho Vista
- Stripe the new roadway for four lanes with turn pockets and Class II Bike Lanes on both the east and west sides of the road
- Installing new curbs and gutters and sidewalk along the east side of the road
- Install new streetlights on east side of the roadway
- Relocating utilities that conflict with the planned improvements
- Provide ADA compliant access ramp at the northeast corner of the Ynez Road and Rancho Vista Road Intersection.
- Slurry sealing the south bound direction.

The project will result in approximately 2.50 acres of permanent impacts. Since the side slopes will be graded rather than restored to existing site conditions (manufactured slope), all project-related impacts are considered permanent. No temporary or offsite impacts are proposed. Please refer to the table below for a breakdown of the permanent and temporary impacts within the Criteria Cell and outside of the Criteria Cell.

Table 1: Project Impacts

Project Impacts	Area (Acres)	Inside Criteria Cell	Outside Criteria Cell
Permanent Impacts	2.50	0.63	1.87
Total	**2.50**	**0.63**	**1.87**

Methodology

Literature Review

The first step in determining if a project is consistent with the above listed sections of the MSHCP is to conduct a literature review and records search for special-status biological resources potentially occurring on or within the vicinity of the project site. Previously recorded occurrences of special-status plant and wildlife species and their proximity to the project were determined through a query of the CDFWs CNDDB Rarefind 5, the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California, Calflora Database, compendia of special-status species published by CDFW, United States Fish and Wildlife Service (USFWS) species listings, and species covered within the MSHCP and associated technical documents.

All available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project site were reviewed to understand existing site conditions and note the extent of any disturbances that have occurred on the project site that would otherwise limit the distribution of special-status biological resources. Standard field guides and texts were reviewed for specific habitat requirements of special-status and non-special-status biological resources, as well as the following resources:

- Environmental Protection Agency (EPA) Water Program "My Waters" data layers
- Google Earth Pro historic aerial imagery (1984-2023);
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey[2];
- USFWS Critical Habitat designations for Threatened and Endangered Species;
- USFWS National Wetlands Inventory (NWI);
- Stephen's Kangaroo Rat Habitat Conservation Plan;
- Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map; and
- 2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project site. The CNDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project.

Field Investigation

Following the literature review, biologist Travis J. McGill initially inventoried and evaluated the condition of the habitat within the project site on April 19, 2023. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural corridors and linkages that may support the movement of

2 A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

wildlife through the area. These areas identified on aerial photography were then walked during the field survey.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Plant species observed during the field survey were identified by visual characteristics and morphology in the field. Unusual and less familiar plant species were photographed during the field survey and identified in the laboratory using taxonomical guides. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

Soil Series Assessment

On-site and adjoining soils were researched prior to the field survey using the USDA NRCS Soil Survey for Western Riverside Area, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes that the project site has undergone.

Plant Communities

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were delineated on an aerial photograph, classified in accordance with those described in the MSHCP, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

Plants

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less-familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

Wildlife

Wildlife species detected during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are fairly well standardized, scientific names are provided immediately following common names in this report (first reference only).

Jurisdictional Drainages and Wetlands

Aerial photography was reviewed prior to conducting a field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the United States Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional

Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program "My Waters" data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented on or within the vicinity of the project site.

Topography and Soils

The project site ranges in elevation from approximately 1,052 feet to 1,132 feet above mean sea level, and slopes generally from southeast to northwest. A drainage transverses the site from the southeast to the northwest and forms a depression within the topography of the project site. Based on the NRCS USDA Web Soil Survey, the project site is underlain by Arlington and Greenfield fine sandy loam (15 to 35 percent slopes, severely eroded), Hanford coarse sand loam (8 to 15 percent slopes, eroded), Hanford sandy loam (2 to 15 percent slopes), Ramona sandy loam (2 to 5 percent slopes, eroded), and Ramona and Buren sandy loams (15 to 25 percent slopes, severely eroded). Refer to Exhibit 4, *Soils*, in Attachment A. Soils on-site range from undisturbed, to severely disturbed and heavily compacted from historic and ongoing development.

Existing Site Condition

At present, the site is located within Ynez Road and along and adjacent to the northeastern shoulder, with vacant land beyond to the northeast, residential development to the southeast and southwest, and commercial development to the northwest. The site terrain is composed of paved asphalt, and compacted and graded soil which gives way to grassland and buckwheat scrub plant communities and a large unnamed drainage.

Vegetation

The project site, outside of the road right-of-way supports buckwheat scrub, non-native grassland, and riparian plant communities. Refer to Attachment C, *Site Photographs*, for representative site photographs.

Table 2: Vegetation/Land Use Types

Vegetation/Land Used Type	Inside Criteria Cells (Acres)		Outside Criteria Cells (Acres)		Total Area (Acres)
	Area	Impacts	Area	Impacts	
Riparian Scrub	0.00	0.00	0.21	0.21	0.21
Buckwheat Scrub	0.00	0.00	0.13	0.13	0.13
Non-Native Grassland	0.32	0.32	0.72	0.72	1.04
Disturbed	0.1	0.1	0.26	0.26	0.36
Developed	0.21	0.21	0.55	0.55	0.76
Total	**0.63**	**0.63**	**1.87**	**1.87**	**2.50**

The project site, outside of the existing paved road right-of-way supports one (3) plant communities: non-native grassland, buckwheat scrub, and riparian. In addition, the site supports two (2) land cover types that would be classified as developed and disturbed (refer to Exhibit 5, *Vegetation*). The majority of the project site, outside of the existing paved road right-of-way, supports a non-native grassland community. Species present within this community consist of non-native grasses and invasive and/or early successional weedy species such as ripgut brome (*Bromus diandrus*), fescue (*Festuca sp.*), Bermuda grass (*Cynodon dactylon*), shortpod mustard (*Hirschfeldia incana*), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).

The non-native grassland community transitions into a buckwheat scrub community moving east from Ynez Road. This area of the project site is composed almost entirely of a monoculture of California buckwheat (*Eriogonum fasciculatum*). Additionally, the project site supports a riparian plant community associated with the unnamed drainage which transverses the eastern boundary of the site. Species present within the riparian plant community include canyon live oak (*Quercus chrysolepis*), sycamore (*Platanus occidentalis*), black willow (*Salix nigra*), mulefat (*Baccharis salicifolia*), and coyotebrush (*Baccharis pilularis*).

Developed areas primarily include the existing paved road right-of-way, and disturbed areas are areas along the road shoulder that are primarily composed of compacted soil.

Wildlife

Plant communities provide foraging habitat, nesting/denning sites, and shelter from adverse weather or predation. This section provides a discussion of those wildlife species that were observed or are expected to occur within the project site. The discussion is to be used a general reference and is limited by the season, time of day, and weather conditions in which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

Fish

The MSHCP does not identify any covered or special-status fish species as potentially occurring within the project site. Further, no fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed on or within the vicinity of the site. Therefore, no fish are expected to occur and are presumed absent.

Amphibians

The MSHCP does not identify any covered or special-status amphibian species as potentially occurring within the project site. Further, no amphibians or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for amphibian species were observed on or within the vicinity of the site. Therefore, no amphibians are expected to occur.

Reptiles

The MSHCP does not identify any covered or special-status reptilian species as potentially occurring within the project site. The site provides a limited amount of habitat for reptile species adapted to a high degree of human disturbance. The only reptilian species observed on site was Great Basin fence lizard (*Sceloporus occidentalis longipes*). Additional common reptilian species that could be expected to occur on-site include

common side-blotched lizard (*Uta stansburiana elegans*). Due to the high level of anthropogenic disturbances and surrounding development, no special-status reptilian species are expected to occur within project site.

Birds

The project site provides limited foraging habitat for bird species adapted to a high degree of human disturbance. Additionally, the unnamed drainage within the project site provides suitable habitat for foraging and nesting. Bird species detected during the field survey include white-crowned sparrow (*Zonotrichia leucophrys*), Ana's hummingbird (*Calypte anna*), ruby crowned kinglet (*Regulus calendula*), yellow rumped warbler (*Setophaga coronata*), red-winged blackbird (*Agelaius phoeniceus*), American crow (*Corvus brachyrhynchos*), red tailed hawk (*Buteo jamaicensis*), house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), Cassin's kingbird (*Tyrannus vociferans*), California towhee (*Melozone crissalis*), and black phoebe (*Sayornis nigricans*).

Mammals

The MSHCP does not identify any covered or special-status mammalian species as potentially occurring within the project site. The site provides limited foraging and cover habitat for mammalian species adapted to a high degree of human disturbance. Mammalian species detected during the field investigation include domestic dog (*Canis lupus familiaris*), racoon (*Procyon lotor*), coyote (*Canis latrans*), and pocket gopher (*Geomyidae* sp.). No bat species are expected to occur due to a lack of suitable roosting habitat (i.e., trees, crevices).

Nesting Birds and Raptors

No active nests or birds displaying nesting behavior were observed during the field survey, which was conducted outside of the breeding season. The vegetation present within the drainage onsite has the potential to provide suitable nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area and are adapted to urban environments. Additionally, the disturbed portions of the site have to potential to support ground-nesting birds such as killdeer.

Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

Migratory Corridors and Linkages

Habitat linkages provide connections between larger habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet still inadequate for others. Wildlife corridors are features that allow for the dispersal, seasonal migration, breeding, and foraging of a variety of wildlife species. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The project site has not been identified as occurring in a wildlife corridor or linkage by the MSHCP.

However, Murietta Creek, which occurs approximately 0.5 miles to the west of the project site, provides local wildlife movement opportunities through the area. The project site is separate from Murrieta Creek by existing residential and commercial developments and Interstate 15. The project will primarily be confined to existing areas that have been heavily disturbed and or developed and is not expected to impact wildlife movement opportunities.

Jurisdictional Areas

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge or fill materials into "waters of the United States" pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

One (1) unnamed ephemeral drainage occurs within the proposed limits of disturbance. Refer to Exhibit 6, *Jurisdictional Areas and Impacts*. This drainage runs from southeast to northwest along the northeastern side of Ynez Road and is fed largely by a culvert which runs beneath Rancho Vista Road to the southeast and serves to divert storm water away from the surrounding residential communities. This drainage features will eventually flow into Murrieta Creek west of the project site after flowing through several culverts and flood control channels.

The onsite ephemeral drainage feature is not relatively permanent, standing, or a continuously flowing body of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage feature will qualify was waters of the State and fall under the regulatory authority of the Regional Board and CDFW. The table below identifies the on-site jurisdictional including the total acreage of jurisdiction and anticipated impacts for each regulatory agency within the boundaries of the project site. Based on the proposed site plan approximately 0.22 acre of impacts to CDFW jurisdiction will occur from project implementation.

Table 3: Jurisdictional Area and Impact Analysis

Jurisdictional Feature	Regional Board Jurisdiction		CDFW Jurisdictional Streambed/Riparian Habitat	
	Jurisdictional Area Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)	Jurisdictional Area Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	0.27 (1,970)	0	1.62 (1,970)	0.22
TOTAL	**0.27 (1,970)**	**0**	**1.62 (1,970)**	**0.22**

Special-Status Biological Resources

The CNDDB was queried for reported locations of special-status plant and wildlife species as well as natural communities of special concern in the Temecula and Murietta USGS 7.5-minute quadrangles. A search of published records within this quadrangle was conducted using the CNDDB Rarefind 5 online software and the CDFW BIOS database and the CNPS Inventory of Rare and Endangered Plants of California that

supplied information regarding the distribution and habitats of vascular plants in the vicinity of the project site. The habitat assessment evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified forty-five (45) special-status plant species, forty-five (45) special-status wildlife species, and four (4) special-status plant communities as having potential to occur within the Temecula and Murrieta quadrangles. Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability, and quality of suitable habitat, and known distributions.

Special-Status Plants

According to the CNDDB and CNPS, forty-five (45) special-status plant species have been recorded in the Temecula and Murrieta quadrangles. No special-status plants were observed on the project site during the field investigation. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a low potential to support smooth tarplant (*Centromadia pungens* ssp. *laevis*) and paniculate tarplant (*Deinandra paniculate*). It was further determined that the project site does not have potential to support any of the other special-status plant species known to occur in the vicinity of the site and all are presumed absent.

The proposed project will primarily be confined to existing developed and heavily disturbed areas that have been subject to anthropogenic disturbances and development, and the site is isolated from known occupied areas. As such, if smooth tarplant and/or paniculate tarplant were to be observed onsite, their small populations are not expected to make a meaningful contribution to the conservation of the species, if present. No additional surveys are recommended. Therefore, no impacts to any special-status plant species will occur from implementation of the proposed project and mitigation will not be required.

Special-Status Wildlife

According to the CNDDB, forty-five (45) special-status wildlife species have been reported in the Temecula and Murietta quadrangles. No special-status wildlife species were observed on the project site during the field investigation. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a moderate potential to support Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Costa's hummingbird (*Calypte costae*); and a low potential to support Lawrence's goldfinch (*Spinus lawrencei*). It was further determined that the project site does not have potential to support any of the other special-status wildlife species known to occur in the vicinity of the site and all are presumed absent.

None of the aforementioned special-status wildlife species are state or federally listed as threatened or endangered. In order to ensure impacts to these avian species do not occur from implementation of the proposed project, a pre-construction nesting bird clearance survey shall be conducted prior to ground disturbance. With implementation of the pre-construction nesting bird clearance survey, impacts to special-status avian species will be less than significant and no mitigation will be required.

Special-Status Plant Communities

The CNDDB lists four (4) special-status habitats as being identified within the Temecula and Murrieta quadrangles: Southern Coast Live Oak Riparian Forest, Southern Interior Basalt Flow Vernal Pool, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland. No CDFW special-status plant communities occur within the boundaries of the project site.

Critical Habitat

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the United States Fish and Wildlife Service (USFWS) regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located with federally designated Critical Habitat. The nearest designated Critical Habitat is located approximately 0.73 miles southwest of the site for San Diego ambrosia (*Ambrosia pumila*) and 2 miles south of the site for coastal California gnatcatcher (*Polioptila californica californica*). Refer to Exhibit 7, *Critical Habitat*, in Attachment A. Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of implementation of the proposed project and consultation with the USFWS will not be required.

Western Riverside County MSHCP

The project site is located within the Southwest Area Plan of the MSHCP and is partially located within Criteria Cell 7079 (refer to Exhibit 8, *MSHCP Criteria Area*, in Attachment A). Additionally, the project site is partially located within designated road right-of-way and is also located within the MSHCP designated species survey area for burrowing owl (*Athene cunicularia*).

- Amphibian — Not in an amphibian survey area
- Burrowing Owls — In burrowing owl survey area
- Criteria Area Species — Not in a criteria area species survey area
- Mammals — Not in a mammal survey area
- Narrow Endemic Plants — Not in a narrow endemic plant survey area

The City of Temecula is a permittee under the MSHCP and, while the project is not specifically identified as a Covered Activity in the MSHCP, under Section 7.3.1, *Public and Private Development Consistent with MSHCP Criteria*, public and private development within the Criteria Area that is determined to be consistent with the Criteria is considered a Covered Activity. As such, to achieve coverage, the project must be consistent with the following policies of the MSHCP:

Since the City is a permittee under the MSHCP and, while the project is not specifically identified as a Covered Activity under Section 7.1 of the MSHCP, public and private development that are outside of Criteria Areas and Public/Quasi-Public (PQP) Lands are permitted under the MSHCP, subject to consistency with MSHCP policies that apply to area outside of Criteria Areas. As such, to achieve coverage, the project must be consistent with the following policies of the MSHCP:

- The policies for the protection of species associated with Riparian/Riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP;
- The policies for the protection of Narrow Endemic Plant Species as set forth in Section 6.1.3 of the MSHCP;
- Guidelines pertaining to the Urban/Wildlands Interface intended to address indirect effects associated with locating Development in proximity to the MSHCP Conservation Area as detailed in Section 6.1.4 of the MSHCP;
- The requirements for conducting additional surveys as set forth in Section 6.3.2 of the MSHCP; and
- A Habitat Evaluation Acquisition Negotiation Strategy (HANS) as set forth in Section 6.1.1 of the MSHCP.

Riparian/Riverine Areas and Vernal Pools

The MSHCP requires that an assessment be completed if impacts to riparian/riverine areas and vernal pools could occur from construction of the proposed project. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*.

A field assessment was conducted to identify and evaluate potential riparian/riverine resources pursuant to MSHCP Section 6.1.2. The evaluation included both vegetated and unvegetated drainages, as well as features that may have been historically natural but are now altered or partially human-made. Field mapping was completed using aerial imagery, topographic data, and on-site verification to delineate any linear or depressional features that may support riparian/riverine functions or values.

Riparian/Riverine Areas

As identified in Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, riparian/riverine areas are defined as areas dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens which occur close to or are dependent upon nearby freshwater, or areas with freshwater flowing during all or a portion of the year. Conservation of these areas is intended to protect habitat that is essential to a number of listed or special-status water-dependent fish, amphibian, avian, and plant species. If impacts to riparian/riverine habitat cannot be avoided, a Determination of Biologically Equivalent or Superior Preservation (DBESP) must be developed to address the replacement of lost functions of habitats in regard to the listed species. This assessment is independent from considerations given to “waters of the U.S.” and “waters of the State” under the CWA and the California Fish and Game Code.
An unnamed ephemeral drainage occurs within the proposed limits of disturbance. Although the feature has been modified by historic grading and adjacent development, it retains the hydrologic and geomorphic

characteristics that meet the definition of an MSHCP riparian/riverine resource. As such, the drainage has been delineated and its extent quantified. The on-site portion of the drainage encompasses approximately 1.62 acre (1,970 linear feet) of earthen channel within the survey area. A DBESP was prepared under separate cover to address the loss of riparian/riverine habitat from development of the proposed project.

During the field survey, one unnamed ephemeral drainage was identified within the proposed limits of disturbance. This feature exhibits evidence of ephemeral flows following precipitation events, defined bed and bank characteristics, and a discernible flow path supporting limited riparian vegetation, including mulefat. Adjacent areas consist primarily of unvegetated sandy substrate and disturbed upland vegetation. The drainage provides limited hydrologic connectivity and marginal habitat value for common wildlife species, though it does not support listed or sensitive riparian obligate species. The function of this resource is primarily ephemeral flow conveyance and limited sediment transport. The drainage feature enters the southeastern portion of the site via a culvert and conveys storm flows and urban runoff from the surrounding developed area in a northwest direction where the feature eventually connects into an underground storm drain system on the northwestern portion of the site.

The widening of Ynez road is not expected to have any impacts to the function or values of the drainage feature. The drainage feature will continue to function the same way it has been functioning, and no impacts to downstream riparian/riverine resources are expected to occur since the drainage flows into an underground storm drain system.

Proposed project activities would result in direct impacts to approximately 0.22 acre of MSHCP Section 6.1.2 riparian/riverine resources. Impacts will only occur to riparian plant species on the slopes of the drainage feature. No impacts to the bottom or low flow portion of the channel will occur. The feature is depicted on Exhibit 6 (the mapped riparian/riverine habitat is synonymous with CDFW jurisdiction). Impacts and mitigation are described below and the DBESP Analysis.

> The applicant will mitigate impacts to 0.22 acre of riverine habitat through the management (removal of non-native plant species) of 0.66 acre of habitat within a City owned parcel along Temecula Creek. The 0.66 acre of offsite mitigation area was established using a 3:1 mitigation ratio for permanent impacts to riparian/riverine habitat along the bank of Drainage 1. The City of Temecula will be responsible for implementing the proposed mitigation program at the 0.66-acre offsite mitigation area. The offsite mitigation site is located immediately adjacent to Temecula Creek in the City of Temecula to the southeast of the project site within Assessor Parcel Number (APN) 961-440-012.
>
> The 0.66 acre of riverine/riparian habitat offsite currently supports invasive plant species (i.e., tacolote mustard, prickly lettuce, etc.) that will be removed to enhance the riparian/riverine habitat. The overall habitat functions and values provided by existing habitat areas within the offsite conservation area would be enhanced by removing invasive, non-native plant species (Temecula Creek).
>
> A conservation easement will be placed over the 0.66 acre of offsite riparian/riverine habitat in favor of a qualified habitat maintenance organization (an approved third party that both CDFW and the USFWS will get to review and approve), and the City will condition the project to submit a

HMMP for review by the Wildlife agencies at least 60 days before construction begins and will provide long-term funding (an endowment) for the maintenance for the selected organization to conduct ongoing maintenance in the conserved area. Additionally, a Long-term Management Plan will be prepared and approved by the aforementioned agencies.

Riparian Obligate Species

The composition of the riparian scrub supported on-site has been degraded and does not have a contiguous willow canopy. Due to incomplete canopy, limited acreage, and lack of riparian plant species diversity of the riparian scrub supported on-site, the habitat associated with the on-site drainages features does not provide suitable habitat for any of the riparian obligate species listed under the MSHCP that may occur within the regional vicinity, including the State- and federally-listed as endangered least Bell's Vireo (*Vireo bellii pusillus* [LBVI]), southwestern willow flycatcher (*Empidonax traillii extimus*), or yellow-billed cuckoo (*Coccyzus americanus*).

The highly degraded and inconsistent canopy of the disturbed southern willow scrub precludes nesting by LBVI, southwestern willow flycatcher, and yellow-billed cuckoo, as these species require dense, sprawling canopies to obscure nests from predators. Further, LBVI and southwestern willow flycatcher each require minimum nesting territories of 0.5 acres, which exceeds the available riparian habitats supported on-site. In addition, the lack of native plant diversity reduces the availability of insect prey for these species. As a result, no focused surveys were conducted or are recommended, and no impacts to this species will occur from project implementation.

Vernal Pools

One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should be considered the length of time the areas exhibit upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual "flood and drought" habitat conditions to which certain plant and wildlife

species have specifically adapted as well as invertebrate species such as fairy shrimp.

The MSHCP lists two general classes of soils known to be associated with listed and special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with listed and special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status plant or wildlife species associated with vernal pools can occur on the project site.

The project site has not been mapped within any vernal pool-type soils. A review of recent and historic aerial photographs (1938-2023) of the project site did not provide visual evidence of an astatic or vernal pool conditions within the project site. No ponding was observed, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regimes needed for vernal pools. From this review of historic aerial photographs and observations during the field investigations, it can be concluded that there is no indication of vernal pools or suitable fairy shrimp habitat occurring within the proposed project site. Therefore, the project is consistent with Section 6.1.2 of the MSHCP.

Fairy Shrimp

Below is a summary of the fairy shrimp known to occur in Western Riverside County and their potential to occur on-site.

Riverside fairy shrimp (*Streptocephalus woottoni*)

Riverside fairy shrimp are restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human modified depressions The prefer warm-water pools that have low to moderate dissolved solids, are less predictable, and remained filled for extended periods of time. Basins that support Riverside fairy shrimp are typically dry a portion of the year, but usually are filled by late fall, winter or spring rains, and may persist through May. Known habitat occur within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation. In Riverside County, Riverside fairy shrimp have been found in pools formed over the following soils: Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils.

No soils that are known to support Riverside fairy shrimp occur on the project site. No ponding was observed during the field investigation. Therefore, the site was determined to provide suitable habitat for Riverside fairy shrimp and focused surveys were warranted.

Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*)

Santa Rosa Plateau fairy shrimp are restricted to seasonal southern basalt flow vernal pools with cool clear to milky waters that are moderately predictable and remain filled for extended periods of time and are known only from vernal pool on the Santa Rosa Plateau. Since the project site and off-site street improvement areas are not located within the known area where Santa Rosa Plateau fairy shrimp have been documented, and no indicators of historic water ponding or astatic water conditions were observed on site, Santa Rosa Plateau fairy shrimp are not expected to occur on-site. Therefore, the site was determined not to provide suitable habitat for Santa Rosa Plateau fairy shrimp.

Vernal pool fairy shrimp (*Branchinecta lynchi*)

Vernal pool fairy shrimp are restricted to seasonal vernal pools (vernal pools and alkali vernal pools) and prefer cool-water pools that have low to moderate dissolved solids, are unpredictable, and often short lived. The vernal pool fairy shrimp is known from four locations in Western Riverside County MSHCP Plan Area: Skunk Hollow, the Santa Rosa Plateau, Salt Creek, and the vicinity of the Pechanga Indian Reservation. Since the project site and off-site street improvement areas are not located within or adjacent to the four known populations, and no indicators of historic water ponding or astatic water conditions were observed on site. Therefore, the site was determined not to provide suitable habitat for vernal pool fairy shrimp.

Narrow Endemic Plant Species

Section 6.1.3 of the MSHCP, *Protection of Narrow Endemic Plant Species*, states that the MSHCP database does not provide sufficient detail to determine the extent of the presence/distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Additional surveys may be needed to gather information to determine the presence/absence of these species to ensure that appropriate conservation of these species occurs. Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined that the project site is not located within the designated survey area for Narrow Endemic Plant Species. Due to previous disturbance, the project site does not provide suitable habitat for Narrow Endemic Plant Species. Therefore, no additional surveys or analysis are required.

Additional Survey Needs and Procedures

In accordance with Section 6.3.2 of the MSHCP, *Additional Survey Needs and Procedures*, additional surveys may be needed for certain species in order to achieve coverage for these species. The query of the RCA MSHCP Information Map and review of the MSHCP determined that the project site is located within the designated survey area for burrowing owl as depicted in Figure 6-4 within Section 6.3.2 of the MSHCP. The project site is not located within any other MSHCP designated species survey areas. Since burrowing owl are known to occur within the surrounding area, a burrowing owl suitability assessment was conducted.

Burrowing Owl

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently-sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels, coyotes, and badgers) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

Under the MSHCP burrowing owl is considered an adequately conserved covered species that may still

require focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The project site occurs within the MSHCP burrowing owl survey area and a habitat assessment was conducted for the species to ensure compliance with MSHCP guidelines for the species. In accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. The following section describes the methodology followed during the burrowing owl habitat assessment conducted for this project.

- Step I – Habitat Assessment: Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present onsite. The habitat assessment was conducted on April 19, 2023. Upon arrival at the project site, and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats on and adjacent to the property, including perch locations, to establish owl presence.

  All suitable areas of the project site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, wood debris piles, openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

  According to the MSHCP guidelines, if suitable habitat is present, the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the project site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars. In addition to surveying the entire Project Site all bordering natural habitats located immediately adjacent to the Project Site were assessed. Accordingly, if suitable habitat is documented onsite or within adjacent habitats, both Step II, focused surveys and the 30-day preconstruction surveys are required in order to comply with the MSHCP guidelines.

- Step II – Locating Burrows and Burrowing Owls: Concurrent with the initial habitat assessment, a detailed focused burrow survey was conducted and included documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl - as part of the MSHCP protocol, which is described below under Part A, Focused Burrow Survey. The MSHCP protocol indicates that no more than 100 acres should be surveyed per day/per biologist.

  - Part A – Focused Burrow Survey: A systematic survey for burrows, including burrowing owl sign, was conducted by walking across all suitable habitats mapped within the project site on April 19, 2023. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 30 meters (approximately 100 feet) apart, and owing to the terrain, often much smaller. Transect routes were also adjusted to account for topography and in general ground surface visibility. Areas providing potential habitat for burrowing owls were surveyed for suitable

burrows, consisting of natural and non-natural substrates in areas with low, open vegetation. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence.

Despite a systematic search of the project site, no burrowing owls or signs (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Portions of the project site are vegetated with a variety of low-growing plant species that allow for minimal line-of-sight observation favored by burrowing owls. Further, no small mammal burrows that have the potential to provide suitable burrowing owl nesting habitat (>4 inches in diameter) were observed within the boundaries of the site. Further, the project site does not provide suitable burrows/sites, including rock piles and non-natural substrates that could be used as burrow surrogates. Additionally, the site is surrounded by tall trees and poles that provide perching opportunities for large raptors (i.e., red-tailed hawk) that can prey on burrowing owls. Based on this information, and as a result of current and historic on-site disturbances, and surrounding development, it was determined that burrowing owls do not have potential to occur on-site, and no focused surveys are recommended.

Being that no appropriate burrows or burrowing owl habitat was found, Part B-Focused Burrowing Owl surveys were not required. Therefore, the project is consistent with Section 6.3.2. However, out of an abundance of caution a pre-construction burrowing owl clearance survey shall be conducted prior to ground disturbing activities.

Urban/Wildlands Interface Guidelines

Section 6.1.4 of the MSHCP, *Guidelines Pertaining to Urban/Wildlands Interface*, is intended to address indirect effects associated with development in proximity to MSHCP Conservation Areas. The Urban/Wildlife Interface Guidelines are intended to ensure that indirect project-related impacts to the MSHCP Conservation Area, including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized. Portions of the project site are located within Criteria Cell 7079. As a result, the Urban/Wildlife Interface Guidelines, as discussed below, will be incorporated into the project to ensure that indirect project-related impacts, including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized.

Drainage

During project construction, the project's stormwater should be directed away from the unnamed drainage which transverses the project site from the southeast to the northwest and lies to the northeast of Ynez Road. These measures will ensure that the project stormwater discharges are no greater in volume and velocity than current undeveloped conditions and that the water leaving the site complies with all applicable water quality standards. No drainage/runoff from the site shall flow into this drainage.

Toxics

According to the MSHCP, measures shall be incorporated to ensure that application of chemicals does not result in discharge to the MSHCP Conservation Area. During the construction of the project, construction activities have the potential to cause release of toxins that could impact areas downstream of the unnamed drainage located onsite. To address these potential short-term impacts, the project is required to stage

construction operations as far away from mapped drainages to the maximum extent feasible.

Lighting

The proposed project is not anticipated to significantly increase lighting and glare. However, if light sources are installed, they should be designed with internal baffles to direct the lighting towards the ground and the developed areas and have a zero-side angle cut off to the horizon.

Noise

Under the MSHCP, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards. The proposed project is a road expansion that is not expected to increase noise levels beyond existing levels. However, the project site is located in a highly-trafficked area and is surrounded by a mix of residential and commercial development, including Interstate 15. Therefore, project implementation are not likely to impact wildlife within an MSHCP conservation area.

Invasive Plant Species

No landscaping is proposed as part of the project.

Barriers

Barriers would restrict direct access to the adjacent undeveloped open space from the project site by unauthorized public access. Under the MSHCP, suitable barriers include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms. No barriers are anticipated to be needed.

Grading/Land Development

No manufactured slopes are anticipated to be constructed within the MSHCP Conservation Area. Should manufactured slopes be necessary, they will be kept within the boundaries of the development footprint and not encroach into the drainage.

Best Management Practices

The project is located within Criteria Cell 7079; therefore, applicable best management practices specified in Appendix C of the MSHCP will be followed. These measures are as follows:

a. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.

b. Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.

c. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.

d. The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.

e. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.

f. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian species identified in MSHCP Global Species Objective No. 7.

g. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.

h. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, USFWS, CDFW, and RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

i. Erodible fill material shall not be deposited into watercourses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.

j. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.

k. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. The manufacture slopes will either be hydroseeded or seeded by hand broadcasting of native seeds to stabilize the slopes above Drainage 1.

l. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.

m. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).

n. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

o. The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs

Reserve Assembly Analysis

Proposed development within a Criteria Cell is subject to review under the HANS process under Section 6.1.1 of the MSHCP. Project applicants whose site's fall within Criteria Areas are required to file a habitat assessment of their project site to determine if all or part of the property is necessary for inclusion in any MSHCP Conservation Areas.

If it is determined by the Western Riverside County RCA and/or the Joint Project Review, the County, Cities, or various State and Federal Agencies that all or part of the property is needed for inclusion in the MSHCP Conservation Area, the property owner will enter into negotiations with such agencies to determine the extent of development allowed within the project site that will not significantly impact the function of the conservation areas in question.

Relationship of the Proposed Project to the MSHCP Conservation Criteria

The project site is located within the Southwest Area Plan of the MSHCP and is partially located within Criteria Cell 7079 (refer to Exhibit 8, *MSHCP Criteria Area*, in Attachment A), that contributes to the assembly of Proposed Constrained Linkage 13.

Proposed Constrained Linkage 13

Proposed Constrained Linkage 13 consists of Murrieta Creek, located in the southwestern region of the Plan Area. This Constrained Linkage connects Existing Core F (Santa Rosa Plateau Ecological Reserve) in the north to Proposed Linkage 10 in the south. This Linkage is constrained along most of its length by existing urban Development and agricultural use and the planned land use surrounding the Linkage consists of city (Murrieta and Temecula). Therefore, care must be taken to maintain high quality riparian Habitat within the Linkage and along the edges for species such as yellow warbler, yellow-breasted chat, and least Bell's vireo, which have key populations located in or along the creek. Maintenance of existing floodplain processes and water quality along the creek is also important to western pond turtle and arroyo chub in this area. Guidelines Pertaining to Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators must be adhered to.

Criteria Cell 7079

Conservation within this Cell will contribute to assembly of Proposed Constrained Linkage 13. Conservation within this Cell will focus on riparian scrub, woodland and forest habitat along Murrieta Creek. Areas conserved within this Cell will be connected to riparian scrub, woodland and forest habitat

proposed for conservation in Cell 7078 to the west and to grassland, riparian scrub, woodland and forest habitat proposed for conservation in Cell 7166 to the south. Conservation within this Cell will range from 5%-15% of the Cell focusing on the southwestern portion of the Cell.

Covered Road

Under Section the MSHCP, Ynez Road is considered a Major Road with a 118 foot right-of-way, and Rancho Vista Road is considered a Secondary Road with 100 foot right-of-way.

Table 4: Covered Roads

Covered Roads	MSHCP Road Type	MSHCP Road Width
Ynez Road	Major Road	118’
Rancho Vista Road	Secondary Road	100’

Based on the proposed project footprint, approximately 0.26 acre of impacts from grading of the slopes east of the existing roadway, above and outside of Drainage 1, will occur outside of the covered road right-of-way associated with the access ramp.

The proposed Covered Road impact footprint accounts for all project components (e.g., landscaping, safety requirements, curb and gutter, manufactured slopes, fuel modification zones, etc.). Permanent impacts associated with the roadway, shoulders, and median are required to remain within the allowable width. Cut and fill slopes or other construction activities required for the roadway construction do not need to be confined to the allowable width.

All road improvements will occur within the respective road rights-of-way for the aforementioned roads. Further, off-site improvements will be consistent with Sections 7.5.1 and 7.5.3 of the MSHCP as discussed below:

Section 7.5.1 – Guidelines for Siting and Design of Planned Roads Within Criteria Area and Public/Quasi Public Lands

Section 7.5.1 of the MSHCP only refers to the northern portion of the project site within Criteria Cell 7079. The following guidelines for planned roadways that are Covered Activities within the Criteria Area and Public/Quasi-Public Lands provide suggestions to avoid and minimize impacts to sensitive species and Habitats known to occur in the vicinity of the planned roadway. The alignment and design followed the following design, siting and construction guidelines:

- The proposed project is located in the least environmentally sensitive location within the disturbed road shoulder. The widening will follow existing roads, easements, right-of-ways, and disturbed areas, which will minimize habitat fragmentation.
- The proposed project was designed to avoid, to the greatest extent feasible, impacts to covered species and wetlands. No impacts to covered species will occur. Additionally, no impact to wetlands will occur. However, approximately 0.22 acre of impact will occur to riparian/riverine habitat associated with Drainage 1 as previously discussed.

- The proposed project will not impact wildlife movement.
- The project site is not located within the designated survey area for Narrow Endemic Plant Species. Due to previous disturbance, the project site does not provide suitable habitat for Narrow Endemic Plant Species. Therefore, no additional surveys or analysis are required and not mitigation is required.
- To the extent feasible, construction, maintenance and operation activities that involves clearing of natural vegetation will be conducted outside the active breeding season (March 1 through June 30). If the active breeding season cannot be avoided, a pre-construction clearance survey will be conducted.
- This report was prepared to analyze biological resources within the project site.

Section 7.5.3 – Construction Guidelines

The following guidelines will be followed for project construction:

- Plans for water pollution and erosion control will be prepared for all Discretionary Projects involving the movement of earth in excess of 50 cubic yards. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, use of plant material for erosion control. Plans will be reviewed and approved by the County of Riverside and participating jurisdiction prior to construction.
- Timing of construction activities will consider seasonal requirements for breeding birds and migratory non-resident species. Habitat clearing will be avoided during species active breeding season defined as March 1 to June 30.
- Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.
- Short-term stream diversions will be accomplished by use of sand bags or other methods that will result in minimal instream impacts. Short-term diversions will consider effects on wildlife.
- Silt fencing or other sediment trapping materials will be installed at the downstream end of construction activities to minimize the transport of sediments off-site.
- Settling ponds where sediment is collected will be cleaned in a manner that prevents sediment from re-entering the stream or damaging/disturbing adjacent areas. Sediment from settling ponds will be removed to a location where sediment cannot re-enter the stream or surrounding drainage area. Care will be exercised during removal of silt fencing to minimize release of debris or sediment into streams.
- No erodible materials will be deposited into water courses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.
- The footprint of disturbance will be minimized to the maximum extent Feasible. Access to sites will occur on pre-existing access routes to the greatest extent possible.
- Equipment storage, fueling and staging areas will be sited on non-sensitive upland Habitat types with minimal risk of direct discharge into riparian areas or other sensitive Habitat types.
- The limits of disturbance, including the upstream, downstream and lateral extents, will be clearly defined and marked in the field. Monitoring personnel will review the limits of disturbance prior to initiation of construction activities.
- During construction, the placement of equipment within the stream or on adjacent banks or adjacent upland Habitats occupied by Covered Species that are outside of the project footprint will be avoided.

- Exotic species removed during construction will be properly handled to prevent sprouting or regrowth.
- Training of construction personnel will be provided.
- Ongoing monitoring and reporting will occur for the duration of the construction activity to ensure implementation of best management practices.
- When work is conducted during the fire season (as identified by the Riverside County Fire Department) adjacent to coastal sage scrub or chaparral vegetation, appropriate fire-fighting equipment (e.g., extinguishers, shovels, water tankers) shall be available on the site during all phases of project construction to help minimize the chance of human-caused wildfires. Shields, protective mats, and/or other fire preventative methods shall be used during grinding, welding, and other spark-inducing activities. Personnel trained in fire hazards, preventative actions, and responses to fires shall advise contractors regarding fire risk from all construction-related activities.
- Active construction areas shall be watered regularly to control dust and minimize impacts to adjacent vegetation.
- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances shall occur only in designated areas within the proposed grading limits of the project site. These designated areas shall be clearly marked and located in such a manner as to contain run-off.
- Waste, dirt, rubble, or trash shall not be deposited in the Conservation Area or on native habitat.

Anticipated Impacts

Based on the graphic depiction shown in Exhibit 8, the proposed project site is not located within the targeted conservation area and project implementation would not conflict with the conservation goals for Criteria Cell 7079 or the assembly of Proposed Constrained Linkage 13.

Stephen's Kangaroo Rat Habitat Conservation Plan

Separate from the consistency review against the policies of the MSHCP, Riverside County established a boundary in 1996 for protecting the Stephens' kangaroo rat (*Dipodomys stephensi*), a federally endangered and state threatened species. The Stephens' kangaroo rat is protected under the Stephens' Kangaroo Rat Habitat Conservation Plan (County Ordinance No. 663.10; SKR HCP). As described in the MSHCP Implementation Agreement, a Section 10(a) Permit, and California Fish and Game Code Section 2081 Management Authorization were issued to the Riverside County Habitat Conservation Agency (RCHCA) for the Long-Term SKR HCP and was approved by the USFWS and CDFW in August 1990 (RCHCA 1996). Relevant terms of the SKR HCP have been incorporated into the MSHCP and its Implementation Agreement. The SKR HCP will continue to be implemented as a separate HCP; however, to provide the greatest conservation for the largest number of Covered Species, the Core Reserves established by the SKR HCP are managed as part of the MSHCP Conservation Area consistent with the SKR HCP. Actions shall not be taken as part of the implementation of the SKR HCP that will significantly affect other Covered Species. Take of Stephens' kangaroo rat outside of the boundaries but within the MSHCP area is authorized under the MSHCP and the associated permits.

The project site is located within the Mitigation Fee Area of the SKR HCP. Therefore, the applicant will be required to pay the SKR HCP Mitigation Fee prior to development of the project site.

Tree Ordinance

Trees subject to City Heritage Tree permit requirements include those defined by Section 8.48.160 (Designation of Heritage Trees) of the City's Heritage Tree Ordinance: Designated Species. Any specimen of the following species that has been identified in a tree inventory in connection with the submittal of an application for a discretionary permit and has reached the required diameter is a Heritage Tree:

- Oak trees of the genus Quercus including, but not limited to, California or Coast Live Oak (Quercus agrifolia), Coastal Sage Scrub Oak (Quercus dumosa), Engelman Oak (Quercus engelmannii), Scrub Oak (Quercus berberidifolia), and Valley Oak (Quercus lobata) more than eighteen inches in diameter when measured at a point four feet above the natural grade at the base of the tree;
- Platanus racemosa, (California Sycamore) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree;
- Umbellularia californica, (California Bay Laurel) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree;
- Juglans californica, (California Black Walnut) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree;
- Heteromeles (Photinia) arbutafolia, (California Holly) or (Toyon) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree.
- Trees of the above listed species with multiple trunks are deemed to have reached the required diameter if the sum of the diameters of the multiple trunks exceeds the diameter required for a single trunk tree by two inches.

Based on the location of each of the trees and their position within the landscape, ten trees will require removal to accommodate the proposed project. Of the ten trees, four are considered Heritage Trees. Furthermore, one tree will require pruning to minimize construction-related damage and meet California Department of Transportation (Caltrans) clearance standards. The single tree requiring pruning is considered a Heritage Trees. The remaining trees, including four heritage trees, will be preserved in place.

Based on Section 8.48.210 of the city ordinance, a tree permit will not be required since the City is exempt per Section 8.48.210 B6, B7, and B8.

Consistent with the requirements of the city's Heritage Tree Ordinance, it is recommended that the four removed Heritage Trees be replaced, on site, with six 48-inch box coast live oak trees and two 48-inch California sycamore trees. Should it be found that the eight trees cannot be accommodated on site, it is recommended that the City identify alternative planting locations.

Conclusion

Based on the literature review and field survey, implementation of the project will have no significant impacts on federally, State, or MSHCP listed species known to occur in the general vicinity of the project site. Additionally, the project will have no effect on designated Critical Habitat because none exists within the area. A single unnamed drainage was observed on the project site during the field investigation. No further surveys are recommended.

With completion of the recommendations provided below and listed in the Urban/Wildlands Interface

Guidelines above, and payment of the SKR HCP mitigation fee and MSHCP mitigation fee, development of the project site is fully consistent with the Western Riverside County MSHCP.

Recommendations

Migratory Bird Treaty Act and Fish and Game Code Compliance

Vegetation within and surrounding the project site has the potential to provide refuge cover from predators, perching sites and favorable conditions for avian nesting that could be impacted by construction activities associated with the project. Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3, 3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" and is potentially punishable by fines and/or imprisonment.

If construction occurs between February 1st and August 31st, a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

Burrowing Owl Pre-Construction Clearance Survey

A 30-day pre-construction burrowing owl survey shall be conducted prior to any ground disturbing activities to avoid direct take of burrowing owls, in accordance Objectives 6 of the Species Account for the Burrowing Owl included in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

Regulatory Approvals

It should be noted that a CDFW Section 1602 Permit was previously prepared and processed (EPIMS-RIV-49479-R6). However, design changes to the project resulted in an access road being installed near the intersection of Ynez Road and Rancho Vista Road, which resulted in an increase in impacts to CDFW jurisdiction. As a result, the project applicant will need to prepare and process a new CDFW Section 1602 permit for impacts to CDFW jurisdictional areas and new mitigation approach.

The proposed project will not impact Corps or Regional Board jurisdictional areas.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions.

Sincerely,

Thomas J. McGill, Ph.D.
Managing Director

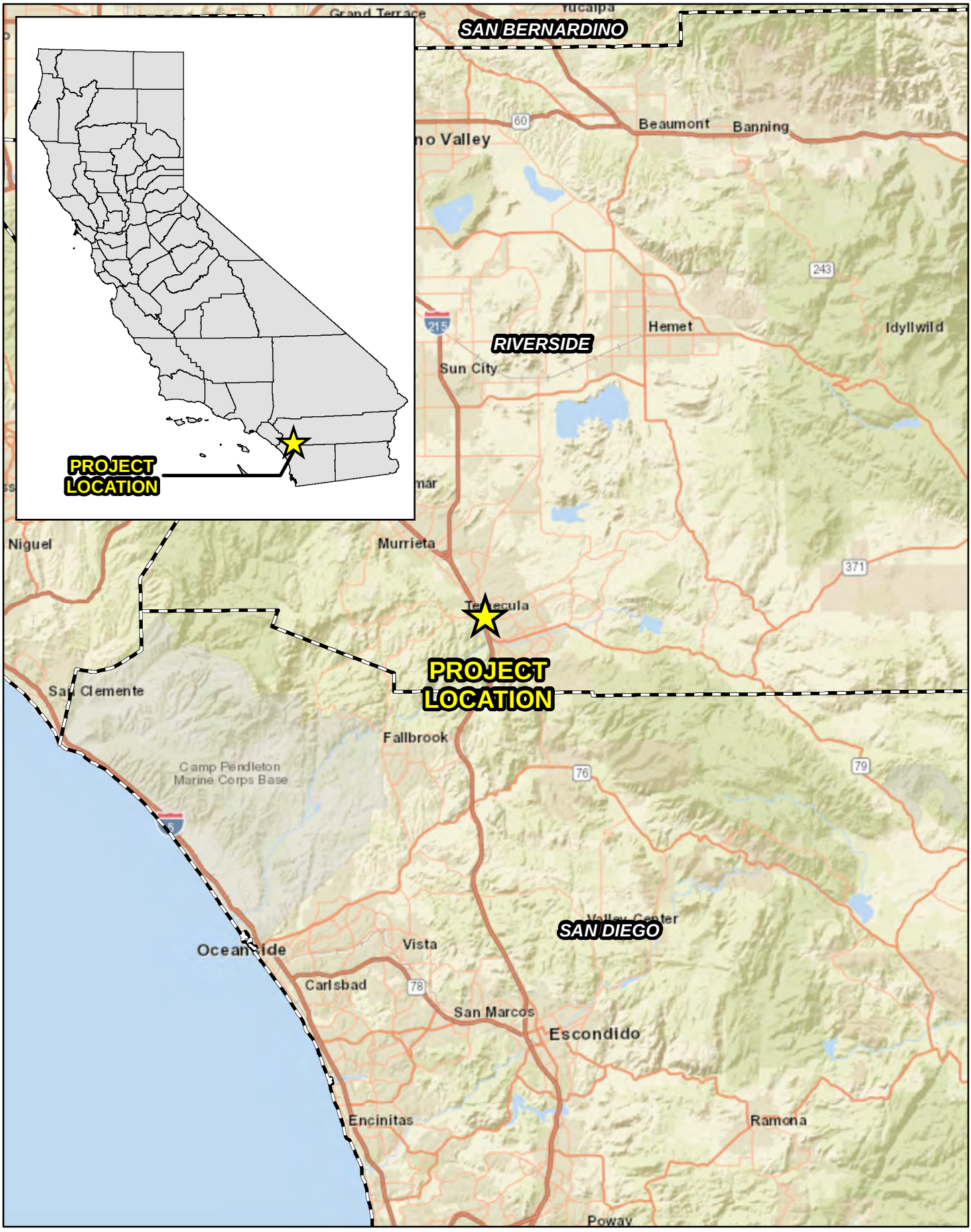
Travis J. McGill
Director

Attachments:

A. *Project Exhibits*
B. *Site Plan*
C. *Site Photographs*
D. *Potentially Occurring Special-Status Biological Resources*
E. *Regulations*

Attachment A

Project Exhibits



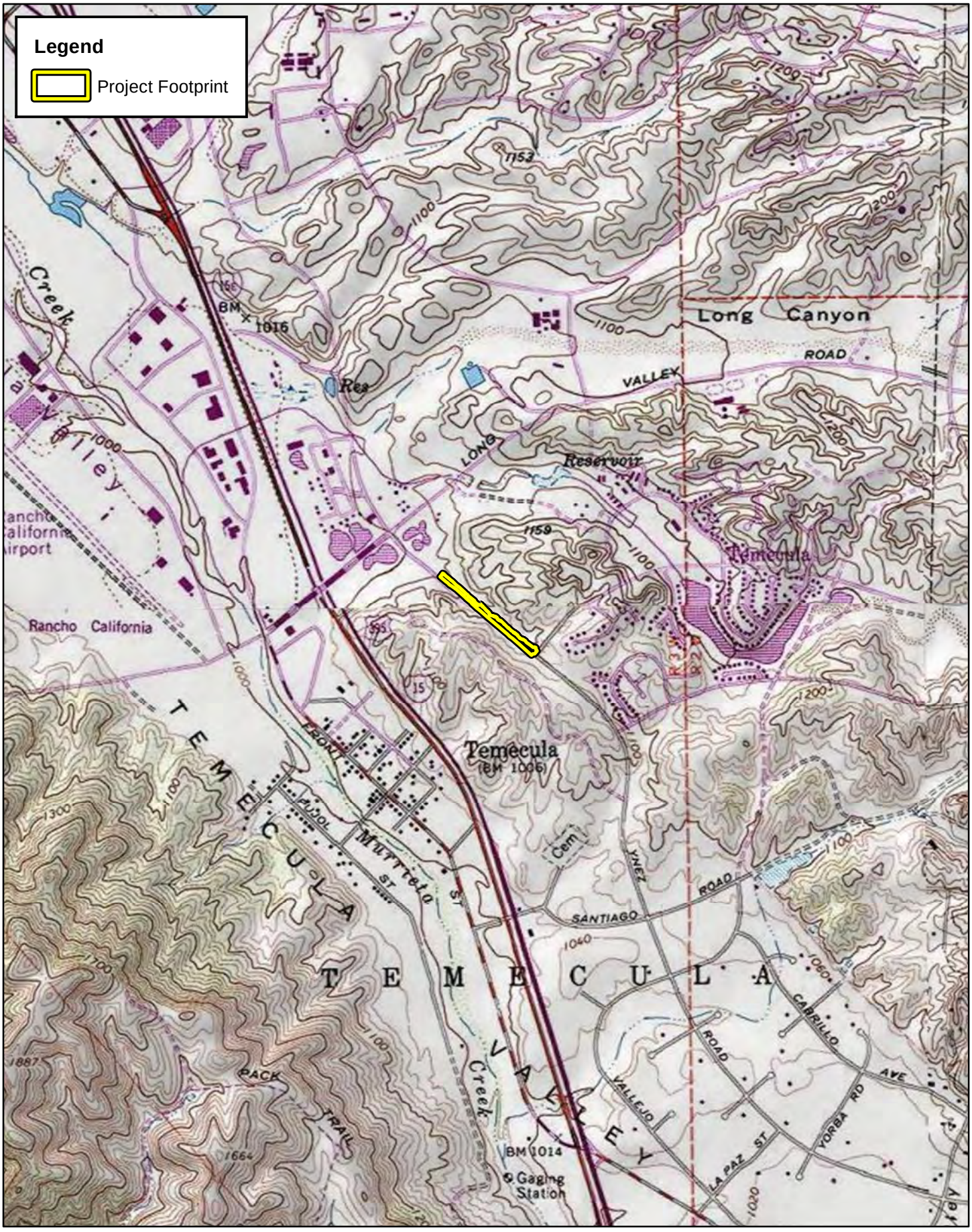
ELMT CONSULTING

Source: World Street Map, Riverside County

YNEZ ROAD IMPROVEMENTS

Regional Vicinity

Exhibit 1



ELMT CONSULTING

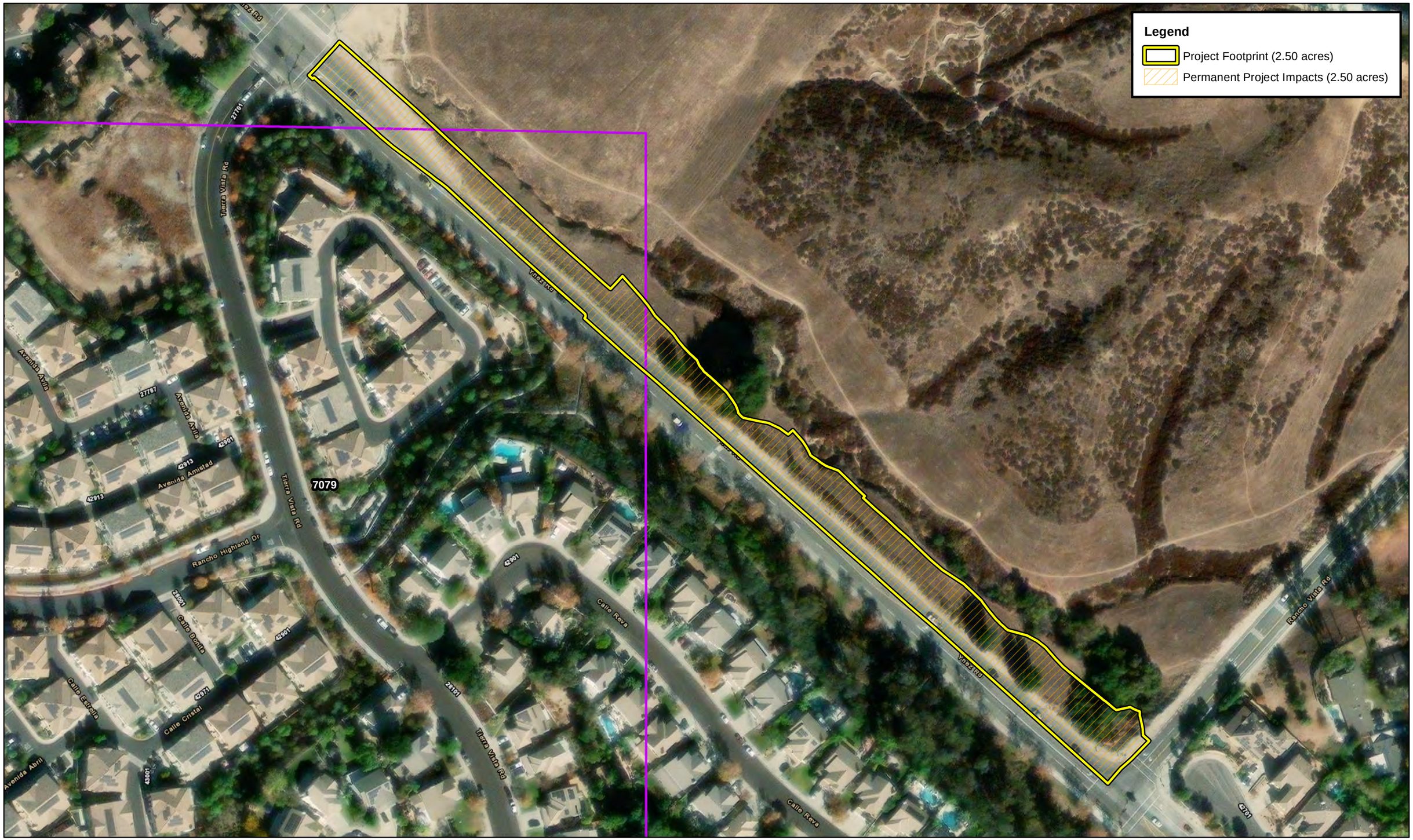
0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

YNEZ ROAD IMPROVEMENTS

Site Vicinity

Exhibit 2



ELMT CONSULTING

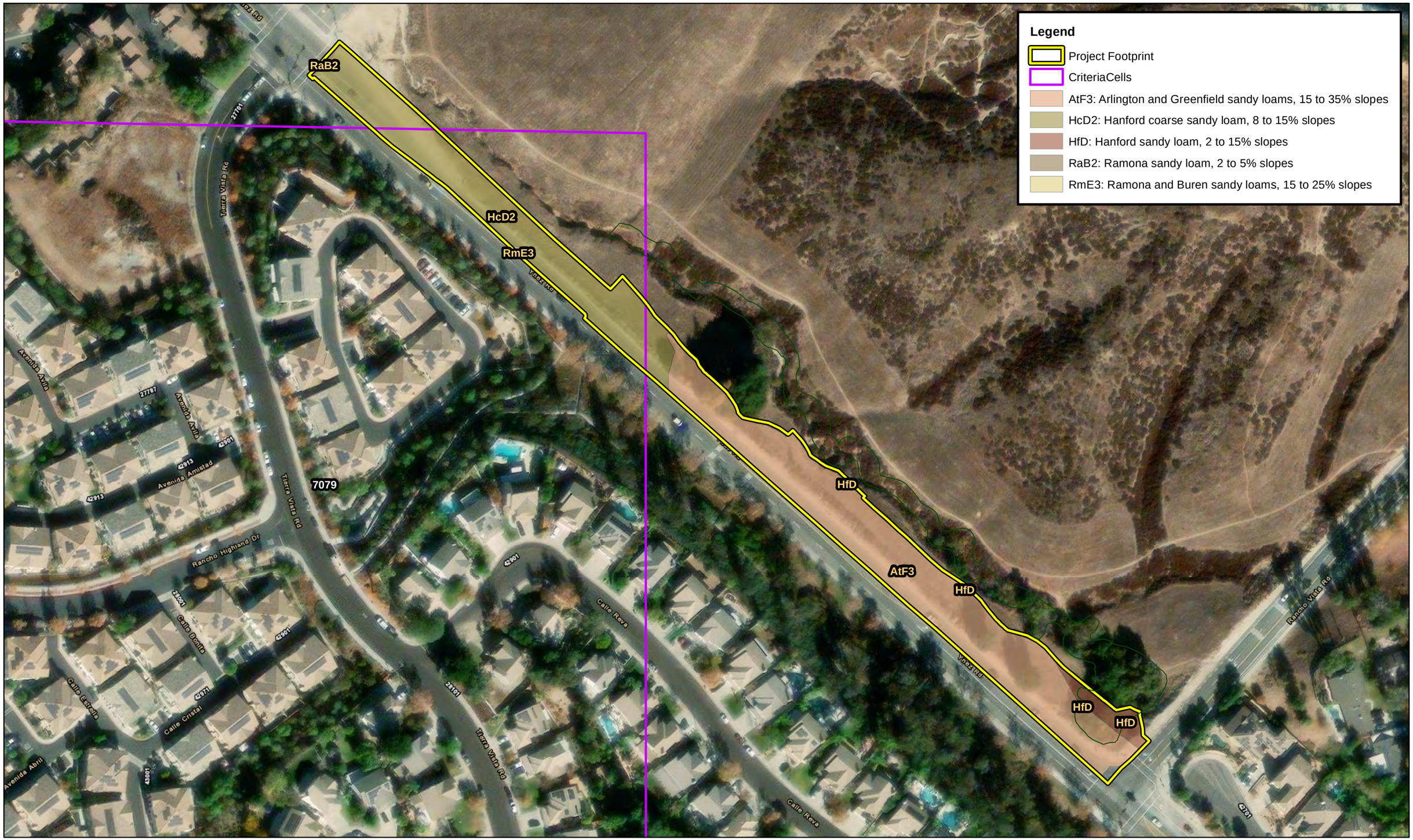
0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

YNEZ ROAD IMPROVEMENTS

Project Site

Exhibit 3



YNEZ ROAD IMPROVEMENTS

Soils

Exhibit 4

ELMT CONSULTING

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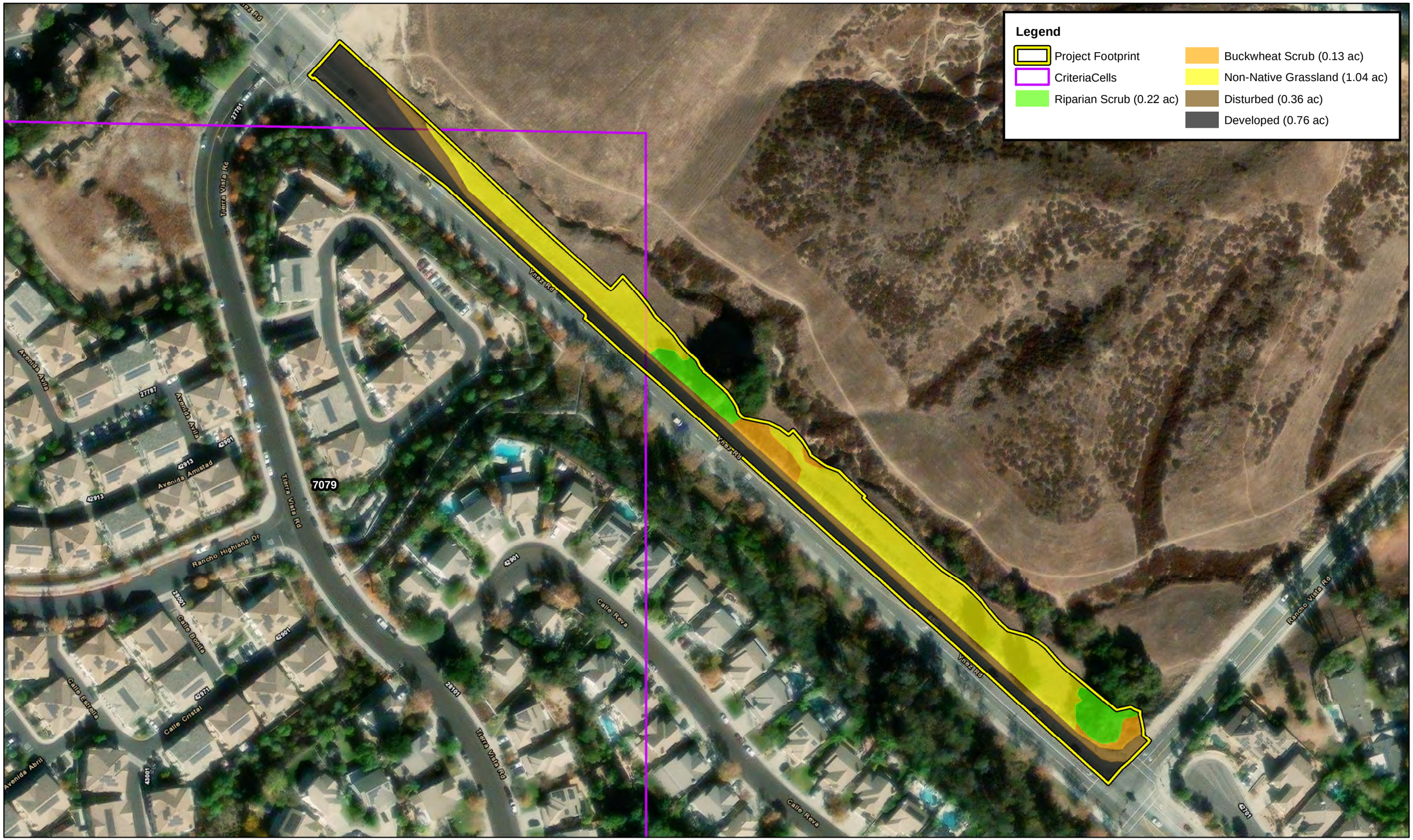
Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County



ELMT CONSULTING

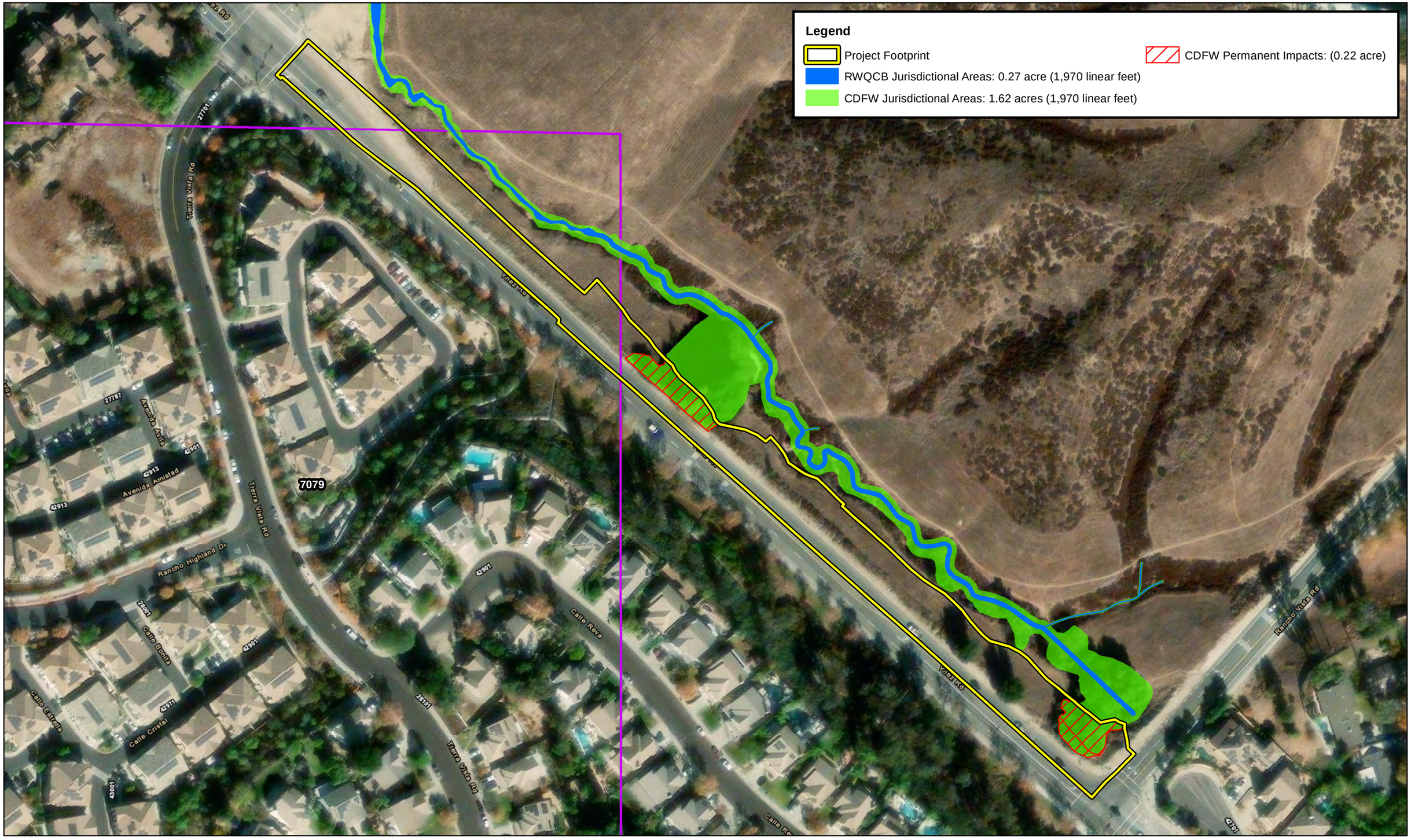
0 125 250 500 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

YNEZ ROAD IMPROVEMENTS

Vegetation

Exhibit 5



0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

YNEZ ROAD IMPROVEMENTS

Jurisdictional Areas and Impacts

Exhibit 6

Legend
Project Footprint
San Diego ambrosia
Temecula Valley Fwy
Rancho California Rd
Ynez Rd
Margarita Rd
Long Valley Dr
Tuscany Rdg
Rancho Vista Rd
Pauba Rd
Santiago Rd
Temecula Pkwy
Camino Gallito
Camino Estrito
Via Corrion
Ridgeline Ct
Via Puesta del Sol
Avenida Cima del Sol
Monte Verde Rd
Los Nogales Rd
Del Rey Rd
Margarita Rd
Humber Dr
Yukon Rd
Iron Bark Ct
Rancho California Rd
Via Valle Vida
Via Sevilla
Avenida Vista Lucero
Corte Tolano
Corte Cantara
Avenida Sonoma
Avenida Cerca
San Pasqual Rd
Solana Way
Mamill Cir
Skywood Dr
Vail Brook Dr
Carleton Way
Promenade Way
Cole Ln
Motor Car Pkwy
Enterprise Cir S
Enterprise Cir W
Commerce Center Dr
Overland Dr
Jefferson Ave
Sandy Way
Via Montezuma
Las Mesuradas St
Calle Contez
DLR Dr
Del Rio Rd
Vista Pl
Diaz Rd
Rancho Way
Business Park Dr
Single Oak Dr
Ridge Park Dr
Vizcaino Moraga Ave
Pala Verde Ave
Molino Rd
Rancho West
Old Town Front St
Pujol St
1st St
2nd St
3rd St
4th St
5th St
6th St
Mercedes St
Main St
Calle Nacido
Via Mirador
Calle Fresca
Corte Rialto
Buzzard Rd
Calle Halcon
Via Brisa
Ynez Rd
Calle Ravel
Camino del Sol
Villa Alluvas Dr
Santa Suzanna Pl
Mira Loma Dr
Rancho Vista Pl
Levante
Cielo Pl
Santa Cecilia Dr
Agena St
Canadian Pl
Ramona St
Spica Ct
Moontide Ct
Sky Terrace Dr
Borealis Dr
Agarose Way
Mary Way Dr
Cosmic Dr
Lyndie Ln
Rancho California Rd
Valle Colinas
Tuscany Rdg
Long Valley Dr
Margarita Rd
Rosemate St
Trade Water Ct
Calabria Vernal Dr
Acacia Way
Chestnut Dr
Yukon Rd
Iron Bark Ct
Kalli Doom Ct
Medinah Way
Horonis Dr
Links Ct
Yankee Run Ct
Big Sage Ct
Calle Pina Colada
Bravos Ct
Del Rey Rd
Avenida del Sol
Via Norte
Avenida Verde
Corte Cantara
Via Valle Vida
Via Sevilla
Dahlia Ct
Palmas Ct
Ramsey Ct
Deal Ct
Courtney Pl
Stockwood Rd
Yucca Ct
Way Ct
Via Puesta del Sol
Margarita Rd
Avenida Cima del Sol
Lolita Rd
Paulina Rd
Johnni Warner Rd
Jaramillo Dr
Cabo St
Flores Dr
Corrales Dr
Cabrillo Ave
Yorba Ave
Via Lomitas
Via Arroyo
Via Rio Vista
Via Rio Del Oro
Via Rio Del Sol
Via Rio Del Mar
Via Rio Del Norte
Via Rio Del Este
Via Rio Del Oeste
Via Rio Del Sur
Via Rio Del Centro
Via Rio Del Valle
Via Rio Del Monte
Via Rio Del Campo
Via Rio Del Lago
Via Rio Del Bosque
Via Rio Del Arroyo
Via Rio Del Prado
Via Rio Del Pueblo
Via Rio Del Rancho
Via Rio Del Cielo
Via Rio Del Mundo
Via Rio Del Universo
Via Rio Del Infinito
Via Rio Del Eterno
Via Rio Del Perpetuo
Via Rio Del Siempre
Via Rio Del Nunca
Via Rio Del Jamas
Via Rio Del Olvido
Via Rio Del Recuerdo
Via Rio Del Pasado
Via Rio Del Presente
Via Rio Del Futuro
Via Rio Del Mañana
Via Rio Del Ayer
Via Rio Del Hoy
Via Rio Del Ahora
Via Rio Del Entonces
Via Rio Del Cuando
Via Rio Del Donde
Via Rio Del Como
Via Rio Del Porque
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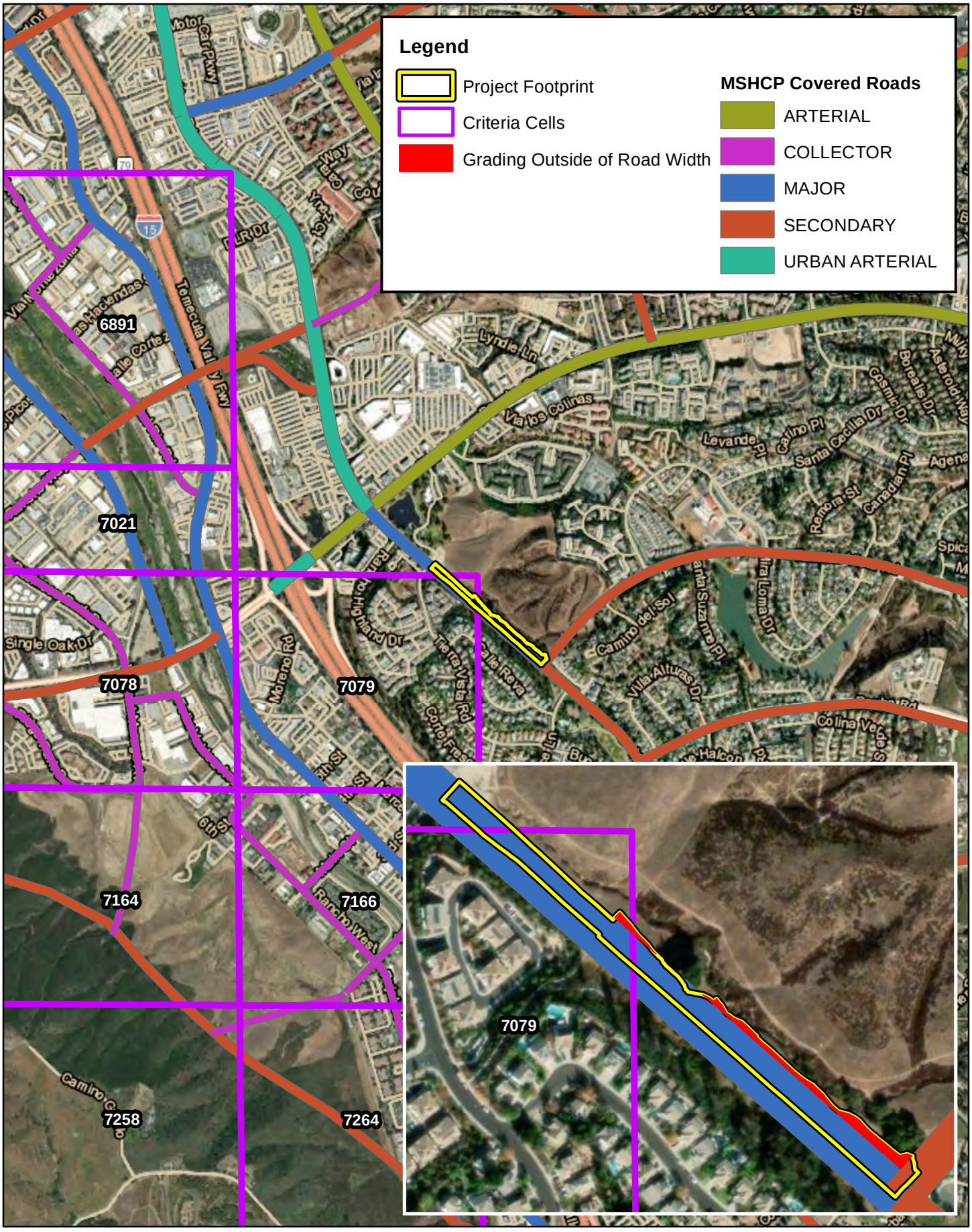
Via Rio Del Cuya
Via Rio Del Cuyos
Via Rio Del Cuyas



ELMT CONSULTING

Source: ESRI Aerial Imagery, Riverside County

YNEZ ROAD IMPROVEMENTS

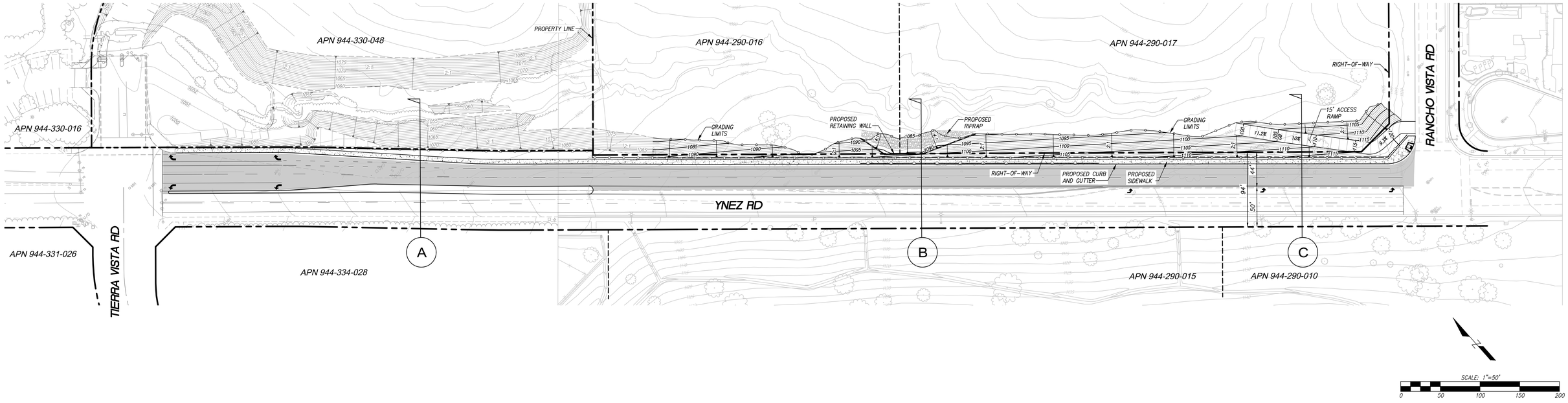
MSHCP Criteria Area

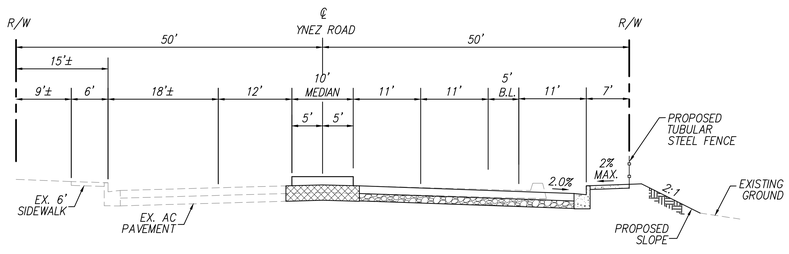
Exhibit 8

Attachment B

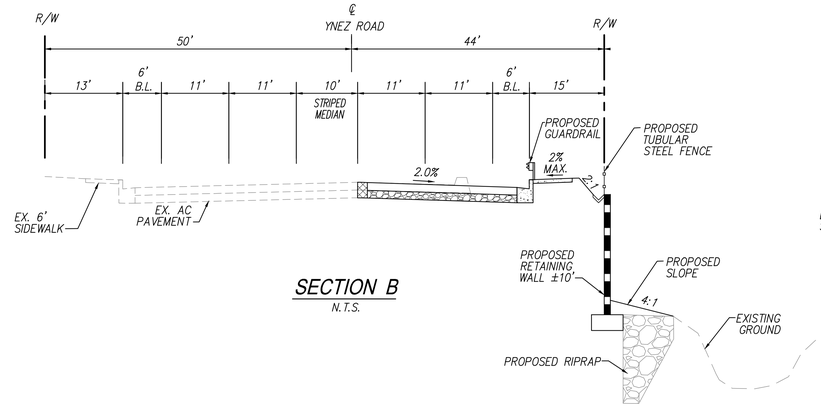
Site Plan

YNEZ ROAD PHASE 1 STREET IMPROVEMENTS EXHIBIT

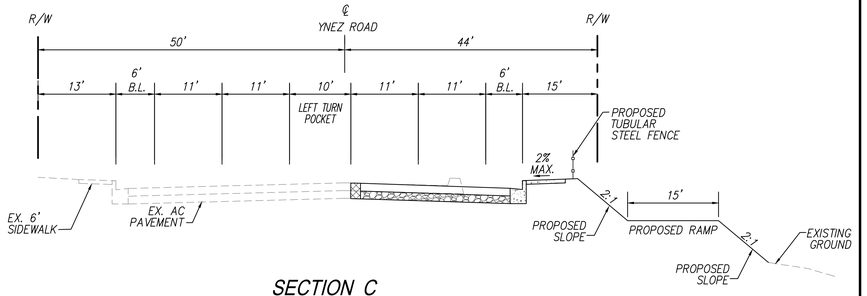




SECTION A
N.T.S.



SECTION B
N.T.S.



SECTION C
N.T.S.

LEGEND

- PUBLIC RIGHT-OF-WAY
- PROPOSED GRADING LIMITS
- PROPOSED STREET IMPROVEMENTS

PROACTIVE ENGINEERING CONSULTANTS WEST
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

Plotted: Sep 16, 2025 - 9:58am By: gilberta DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Exhibits\Ynez Road Improvements Exhibit.dwg

Attachment C

Site Photographs

Photograph 1: From the southern boundary of the proposed project site at the northeast corner of the intersection of Ynez Road and Rancho Vista Road, looking northwest along Ynez Road.

Photograph 2: From Rancho Vista Road, looking southwest at the intersection of Rancho Vista Road and Ynez Road and the southern boundary of the proposed project site.

Photograph 3: From the eastern shoulder of Ynez Road looking southeast along the proposed project site through existing vegetation.

Photograph 4: Adjacent to the eastern boundary of the project site, looking northwest along Ynez Road and existing vegetation.

Photograph 5: Depicting a drainage (and associated vegetation) which runs parallel to the eastern boundary of the proposed project site.

Photograph 6: From the middle of the eastern boundary of the project site, looking southeast along the eastern shoulder of Ynez Road.

Photograph 7: From the middle of the eastern boundary of the project site, looking northwest along the eastern shoulder of Ynez Road.

Photograph 8: From inside the drainage which runs parallel to the eastern boundary of the project site, looking southeast.

Photograph 9: From the eastern boundary of the project site, looking northwest through an area of active construction.

Photograph 10: From an area of active construction adjacent to the project site, looking northwest at the northern boundary of the project site at the intersection of Ynez Road and Tierra Vista Road.

Attachment D

Potentially Occurring Special-Status Biological Resources

Table D-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
SPECIAL-STATUS WILDLIFE SPECIES					
Accipiter cooperii Cooper's hawk	Fed: None CA: WL	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	Yes	No	**Moderate** Suitable foraging habitat is present on-site. This species is adapted to urban environments and occurs commonly.
Accipiter striatus sharp-shinned hawk	Fed: None CA: WL	Found in pine, fir and aspen forests. They can be found hunting in forest interior and edges from sea level to near alpine areas. Can also be found in rural, suburban and agricultural areas, where they often hunt at bird feeders. Typically found in southern California in the winter months.	Yes	No	**Moderate** Suitable foraging habitat is present on-site. This species does not nest in southern California. This species is adapted to urban environments and occurs commonly.
Aimophila ruficeps canescens southern California rufous-crowned sparrow	Fed: None CA: WL	Breed in sparsely vegetated scrubland on hillsides and canyons. Prefers coastal sage scrub dominated by California sagebrush (*Artemisia californica*), but they can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Anaxyrus californicus arroyo toad	Fed: **END** CA: SSC	Typically found in sandy and/or gravelly washes and creeks with moderate in-stream vegetation dominated by willows (*Salix* sp.) and mulefat (*Baccharis salicifolia*). Will forage along the bases of in-stream vegetation or at the bases of trees, including California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), or oaks (*Quercus* spp.). Typically breeds in waters that are still or slowly moving, generally around six to eight inches in depth. Burrows along sandy terraces but may in some cases burrow directly in streambeds.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Aquila chrysaetos golden eagle	Fed: None CA: FP; WL	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Ardea alba great egret	Fed: None CA: None	Yearlong resident throughout California, except for the high mountains and deserts. Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Ardea herodias great blue heron	Fed: None CA: None	Forages along streams, marshes, lakes, and meadows. Nests colonially in tall trees (typically Eucalyptus sp.), on cliffsides, or in isolated spots in marshes.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Arizona elegans occidentalis California glossy snake	Fed: None CA: None	Inhabits arid scrub, rocky washes, grasslands, and chaparral habitats.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Artemisiospiza belli belli Bell's sparrow	Fed: None CA: WL	Generally, prefers semi-open habitats with evenly spaced shrubs 1 – 2 meters in height. Dry chaparral and coastal sage scrub. Less common in tall dense, old chaparral.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Asio flammeus short-eared owl	Fed: None CA: SSC	Suitable habitats include salt and freshwater marshes, irrigated alfalfa, or grain fields, and ungrazed grasslands and old pastures. Tule marsh or tall grasslands with cover 30 to 50 cm in height can support nesting pairs.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Aspidoscelis hyperythra orangethroat whiptail	Fed: None CA: WL	Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: None CA: SCC	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Athene cunicularia burrowing owl	Fed: None CA: SSC	Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon fossorial mammals for burrows, most notable ground squirrels.	Yes (c)	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Bombus crotchii Crotch's bumble bee	Fed: None CA: None	Colonial species that lives almost exclusively from coastal California east towards the Sierra-Cascade Crest and can be found uncommonly in western Nevada and south through Baja California. Inhabits grassland and scrub habitats in hotter and drier climates than most other bumblebee species and is only capable of tolerating a narrow range of climatic conditions. Feeds on a variety of annual and perennial plant species, classifying it as a dietary generalist. This species usually nests underground, often in abandoned rodent dens	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Bombus pensylvanicus American bumblebee	Fed: None CA: None	Historically present in most of the lower 48 states, but more common in the south from Florida, west to Colorado, Texas, and New Mexico. Found in open habitat like farmland. Nests on surface of ground and forages in a variety of large open fields with prominent vetch (*Vicia* sp.), clover (*Trefoilium* sp.), and goldenrod (*Solidago* sp.) populations.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Buteo regalis ferruginous hawk	Fed: None CA: WL	Occurs primarily in open grasslands and fields, but may be found in sagebrush flats, desert scrub, low foothills, or along the edges of pinyon-juniper woodland. Feeds primarily on small mammals and typically found in agricultural or open fields.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Buteo swainsoni Swainson's hawk	Fed: None CA: **THR**	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grassland or suitable grain or alfalfa fields or livestock pastures.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Calypte costae Costa's hummingbird	Fed: None CA: None	Desert and semi-desert, arid brushy foothills and chaparral. A desert hummingbird that breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	No	No	**Moderate** Suitable nesting and foraging habitat observed within and adjacent to the project site.
Chaetodipus californicus femoralis Dulzura pocket mouse	Fed: None CA: SSC	Found most often in grass-chaparral edges but may also be found in coastal scrub or other habitats, primarily in San Diego County.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: None CA: SSC	Occurs in desert and coastal habitats in southern California, Mexico, and northern Baja California, from sea level to at least 1,400 meters. Found in a variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. Requires low growing vegetation or rocky outcroppings, as well as sandy soils for burrowing.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Crotalus ruber red-diamond rattlesnake	Fed: None CA: SSC	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Dipodomys stephensi Stephens' kangaroo rat	Fed: **END** CA: **THR**	Occur in arid and semi-arid habitats with some grass or brush. Prefer open habitats with less than 50% protective cover. Require soft, well-drained substrate for building burrows and are typically found in areas with sandy soil.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Elanus leucurus white-tailed kite	Fed: None CA: FP	Occurs in low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Uses trees with dense canopies for cover.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Empidonax traillii willow flycatcher	Fed: None CA: **END**	Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water or are at least moist.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Emys marmorata western pond turtle	Fed: None CA: SSC	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater. Found at elevations from sea level to over 5,900 feet (1,800 m).	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Eremophila alpestris actia California horned lark	Fed: None CA: WL	Generally found in shortgrass prairies, grasslands, disturbed fields, or similar habitat types along the coast or in deserts. Trees are shrubs are usually scarce or absent. Generally rare in montane, coniferous, or chaparral habitats. Forms large flocks outside of the breeding season.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Eumops perotis californicus western mastiff bat	Fed: None CA: SSC	Primarily a cliff-dwelling species, roost generally under exfoliating rock slabs. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3 meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Gila orcuttii arroyo chub	Fed: None CA: SSC	Warm streams of the Los Angeles Plain, which are typically muddy torrents during the winter, and clear quiet brooks in the summer, possibly drying up in places. They are found both in slow-moving and fast-moving sections, but generally deeper than 40 cm.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Icteria virens yellow-breasted chat	Fed: None CA: SSC	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Lynx rufus pallescens pallid bobcat	Fed: None CA: None	Most abundant in foothills, canyons, mesas, and plateaus, where brush and woodland provide suitable habitat. Have also been found in semidesert, urban edge, and swampland environments.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Neotoma lepida intermedia San Diego desert woodrat	Fed: None CA: SSC	Occupies a variety of shrub and desert habitats, including Joshua tree, pinyon-juniper, mixed and chamise-redshank chaparral, and sagebrush. Prefers large cactus patches, rock outcroppings and areas with Joshua trees. Elevation range is from sea level to approximately 8500 ft.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Nycticorax nycticorax black-crowned night heron	Fed: None CA: None	Fairly common, yearlong resident in lowlands and foothills throughout most of California, including the Salton Sea and Colorado River areas, and very common locally in large nesting colonies. Feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats and rarely, on kelp beds in marine sub tidal habitats. Nests and roosts in dense-foliaged trees and dense emergent wetlands.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Pandion haliaetus osprey	Fed: None CA: WL	Remain close to still or slow-moving bodies of water including oceans, rivers, lakes, mangroves, coastal wetlands, lagoons, reefs, estuaries and marshes. Generally, nest in high places, such as trees, power poles, or cliffs.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: None CA: SSC	Occurs in lower elevation grasslands and coastal sage scrub communities in and around the Los Angeles Basin. Prefers open ground with fine sandy soils. May not dig extensive burrows, but instead will seek refuge under weeds and dead leaves instead.	Yes (c)	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Phrynosoma blainvillii coast horned lizard	Fed: None CA: SSC	Occurs in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (i.e. fire, floods, roads, grazing, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Plegadis chihi white-faced ibis	Fed: None CA: WL	Frequently found in marshes, swamps, ponds, rivers and irrigated land such as wet agricultural fields. Prefers to forage in very shallow water. Prefers freshwater marsh habitat, but can sometimes be found in saltwater.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Polioptila californica californica coastal California gnatcatcher	Fed: **THR** CA: SSC	Obligate resident of sage scrub habitats that are dominated by California sagebrush (*Artemisia californica*). This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. Ranges from the Ventura County, south to San Diego County and northern Baja California and it is less common in sage scrub with a high percentage of tall shrubs. Prefers habitat with more low-growing vegetation.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Setophaga petechia yellow warbler	Fed: None CA: SSC	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Spea hammondii western spadefoot	Fed: None CA: SSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washed, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Spinus lawrencei Lawrence's goldfinch	Fed: None CA: None	Breeds locally in a variety of habitats including streamside trees, oak woodland, open pine woods, pinyon-juniper woods, chaparral. Often found close to water in fairly dry country. In migration and winter, occurs in weedy fields, farmland, brushy areas, stream sides.	No	No	**Low** Some foraging and nesting habitat available onsite. Species has been observed nearby.
Streptocephalus woottoni Riverside fairy shrimp	Fed: **END** CA: None	Restricted to deep, long-lived vernal pools, ephemeral ponds, and human-derived depressions such as drainage ditches. All known habitat lies within annual grasslands which may be interspersed with chaparral or coastal sage scrub vegetation.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Taxidea taxus American badger	Fed: None CA: SSC	Generally found in grassland, shrubsteppe, desert, dry forest, parkland, and agricultural areas. Prefers open areas like plains, prairies, and farmland, as well as the edges of woods. They require soils that allow the excavation of den sites and support burrowing prey species (such as ground squirrels).	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Thamnophis hammondii two-striped gartersnake	Fed: None CA: SSC	Inhabits streams and ponds in chaparral, oak woodland, and forest habitats up to 8,000 feet elevation. Semi-aquatic in nature, but can occur in a variety of habitats-including urban areas-where there is water present.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Vireo bellii pusillus least Bell's vireo	Fed: **END** CA: **END**	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	Yes (a)	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Xanthocephalus xanthocephalus yellow-headed blackbird	Fed: None CA: SSC	Uncommon yearlong resident of southern California throughout freshwater emergent wetlands, and moist, open areas along agricultural areas, and mudflats of lacustrine habitats. Prefers to nest in dense wetland vegetation characterized by cattails, tules, or other similar plant species along the border of lakes and ponds.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
SPECIAL-STATUS PLANT SPECIES					
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: None CA: None CNPS: 1B.1	Grows in sandy soils in coastal sage scrub and in chaparral habitats. Grows in elevation from 262 to 5,249 feet. Blooming period ranges from January to September.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Almutaster pauciflorus alkali marsh aster	Fed: None CA: None CNPS: 2B.1	Grows in alkaline soils within meadows and seeps habitats. Found at elevations ranging from 785 to 2,625 feet. Blooming period is from June to October.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Ambrosia pumila San Diego ambrosia	Fed: **END** CA: None CNPS: 1B.1	Occurs in freshwater wetland, coastal sage scrub, chaparral, and valley grassland communities. Can be found growing on the upper terraces of rivers and drainages, and in more open areas of a variety of communities. Occasionally found in areas adjacent to vernal-pools. Found at elevations ranging from 65 to 1,360 feet. Blooming period is from April to October.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Amsinckia douglasiana Douglas' fiddleneck	Fed: None CA: None CNPS: 4.2	Endemic to coastal Santa Monica Mountains and Santa Ynez Mountains of southern California. Found in foothill woodland and valley grassland communities. May be restricted to Monterey shale substrates generally on sloping sites. Blooms from March to May.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Arctostaphylos rainbowensis Rainbow manzanita	Fed: **END** CA: **END** CNPS: 1B.1	Grows within chaparral habitats. Found at elevations ranging from 675 to 2,200 feet. Blooming period is from December to March.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Astragalus pachypus* var. *jaegeri Jaeger's milk-vetch	Fed: **END** CA: None CNPS: 1B.1	Found in only a few places in Riverside County and within the Cleveland and San Bernadino National Forests. Grows in rocky (sometimes), sandy (sometimes) areas within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Found at elevations ranging from 1,200 to 3,200 feet. Blooming period is from December to June.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site. The project site lies outside of the known elevation range for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Atriplex parishii Parish's brittlescale	Fed: None CA: None CNPS: 1B.1	Habitat types include chenopod scrub, playas, and vernal pools. Found at elevations ranging from 82 to 6,234 feet. Blooming period is from June to October.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Brodiaea orcuttii Orcutt's brodiaea	Fed: None CA: None CNPS: 1B.1	Occurs mostly on mesic, clay habitats and sometimes in serpentine soils. Usually found in vernal pools, valley and foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows and seeps, and other small drainages. Found at elevations ranging from 98 to 5,561 feet. Blooming period ranges from May to July.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Brodiaea santarosae Santa Rosa Basalt brodiaea	Fed: None CA: None CNPS: 1B.2	Can be found in the Santa Rosa basalt area of the Santa Ana mountains in southern California. Grows in open grassland communities, sometimes in areas with abundant, tall, non-native grasses in soils derived from the Santa Rosa basalt rock formation. Grows in a range of moisture conditions, from vernal pool edges to relatively dry soils, and even disturbed roadside areas. Blooms from May to June.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Calochortus catalinae Catalina mariposa-lily	Fed: None CA: None CNPS: 4.2	Grows in chaparral, cismontane woodland, coastal scrub, valley and foothill grassland. Found at elevations ranging from 49 to 2,297 feet. Blooming period is from February to June.	No	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Calochortus weedii* var. *intermedius intermediate mariposa-lily	Fed: None CA: None CNPS: 1B.2	Found in coastal and peninsular ranges, Grows in heavy rocky soils from sea level to 6,200 feet. Blooms from June to July.	Yes	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Caulanthus simulans Payson's jewelflower	Fed: None CA: None CNPS: 4.2	Occurs on granitic sandy soils in chaparral and coastal scrub habitats. Found at elevations ranging from 295 to 7,218 feet. Blooming period is from February to June.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Centromadia pungens ssp. laevis smooth tarplant	Fed: None CA: None CNPS: 1B.1	Found in alkaline soils within chenopod scrub, meadows and seeps, playas, riparian woodland, valley and foothill grassland habitats. Found at elevations ranging from 0 to 2,100 feet. Blooming period is from April to September.	Yes (d)	No	**Low** Marginal habitat present within and adjacent to the project site. Species has been observed nearby.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Chaenactis glabriuscula* var. *orcuttiana Orcutt's pincushion	Fed: None CA: None CNPS: 1B.1	Grows in cracks in limestone or rocky soils of broken mountainous terrain in desert scrub, grassland, and oak woodland communities at elevations ranging from 5,200 to 6,000 feet. Blooms from January to August.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site. The project site lies outside of the known elevation range for this species.
Chorizanthe parryi* var. *parryi Parry's spineflower	Fed: None CA: None CNPS: 1B.1	Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet. Blooming period is from April to June.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Chorizanthe polygonoides* var. *longispina long-spined spineflower	Fed: None CA: None CNPS: 1B.2	Typically found on clay lenses which are largely devoid of shrubs. Can be found on the periphery of vernal pool habitat and even on the periphery of montane meadows near vernal seeps. Grows in elevation from 98 to 5,020 feet. Blooming period ranges from April to July.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Clinopodium chandleri San Miguel savory	Fed: None CA: None CNPS: 1B.2	Known to grow in shady areas of riparian habitat, but can also be found in coastal sage scrub, foothill woodland, chaparral, and valley grassland communities. Blooms from May to July.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Convulvus simulans small-flowered morning glory	Fed: None CA: None CNPS: 4.2	Grows in clay soils within serpentinite seeps, chaparral, coastal scrub, valley and foothill grassland habitats. Found at elevations ranging from 98 to 2,297 feet. Blooming period is from March to July.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Deinandra paniculata paniculate tarplant	Fed: None CA: None CNPS: 4.2	Typically found in vernally mesic, sometimes sandy soils in coastal scrub, valley and foothill grasslands, and vernal pools. Found at elevations ranging from 82 to 3,084 feet. Blooming period is from April to November.	No	No	**Low** Marginal habitat present within and adjacent to the project site.
Dudleya viscida sticky dudleya	Fed: None CA: None CNPS: 1B.2	Grows in rocky areas within chaparral, cismontane woodland, coastal bluff scrub, and coastal scrub habitats. Fount at elevations ranging from 35 to 1,805 feet. Blooming period is from May to June.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Eryngium aristulatum var. parishii San Diego button-celery	Fed: **END** CA: **END** CNPS: 1B.1	Grows in clay soils and surface and non-surface hard pan. Restricted to vernal pools and areas adjacent to and around vernal pools. Blooms from April to June.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Erythranthe diffusa Palomar monkeyflower	Fed: None CA: None CNPS: 4.3	Grows in sandy or gravelly soils in chaparral and lower montane coniferous forest habitats. Found at elevations ranging from 4,003 to 6,004 feet. Blooming period ranges from April to June.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site. Project site lies outside the known elevation range for this species.
Harpagonella palmeri Palmer's grapplinghook	Fed: None CA: None CNPS: 4.2	Occurs on clay soils in chaparral, coastal scrub, and valley and foothill grasslands habitats. Grows in elevation from 66 to 3,133 feet. Blooming period ranges from March to May.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Holocarpha virgata* ssp. *elongata curving tarplant	Fed: None CA: None CNPS: 4.2	Grows within chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Found at elevations ranging from 195 to 3,610 feet. Blooming period is from May to November.	No	No	**Presumed absent** Project site is highly fragmented and isolated from areas of known occurrence.
Hordeum intercedens bobtail barley	Fed: None CA: None CNPS: 3.2	Found in coastal dunes, coastal scrub, vernal pools, and valley and foothill grassland habitats. Found at elevations ranging from 16 to 3,281 feet. Blooming period is from March to June.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Juglans californica southern California black walnut	Fed: None CA: None CNPS: 4.2	Occurs in alluvial soils in chaparral, cismontane woodland, coastal scrub, and riparian woodlands. From 15 to 5,875 feet in elevation. Blooming period is from May to June.	Yes	No	**Presumed absent** Project site is highly fragmented and isolated from areas of known occurrence.
Juncus acutus ssp. leopoldii southwestern spiny rush	Fed: None CA: None CNPS: 4.2	Found in coastal dunes (mesic), meadows and seeps (alkaline seeps), and marshes and swamps (coastal salt). Found at elevations ranging from 0 to 3,115 feet. Blooming period is from May to July.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Juncus luciensis Santa Lucia dwarf rush	Fed: None CA: None CNPS: 1B.2	Occurs in wetland habitats within wetland and riparian communities. Can be found in vernal pools, depressions in meadows, wet sandy soil of seepage areas on sandstone, and stream banks at elevations ranging from 984 to 6,234 feet. Blooms from April to July.	No	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Lasthenia glabrata* ssp. *coulteri Coulter's goldfields	Fed: None CA: None CNPS: 1B.1	Prefers playas, vernal pools, and coastal salt marshes and swamps. Found at elevations ranging from 3 to 4,003 feet. Blooming period is from February to June.	Yes (d)	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Lathyrus splendens pride-of-California	Fed: None CA: None CNPS: 4.3	Occurs in highly vegetated chaparral. Found at elevations to 3,444 feet. Blooming period is from March to June.	No	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Lepidium virginicum var. robinsonii Robinson's pepper-grass	Fed: None CA: None CNPS: 4.3	Dry soils on chaparral and coastal sage scrub. Found at elevations ranging from 300 to 2,904 feet. Blooming period is from January to July.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Lilium humboldtii* ssp. *ocellatum ocellated Humboldt lily	Fed: None CA: None CNPS: 4.2	Occurs in openings within chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, and riparian woodland. Found at elevations ranging from 98 to 5,906 feet. Blooming period is from March to August.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Microseris douglasii* ssp. *platycarpha small-flowered microseris	Fed: None CA: None CNPS: 4.2	Found in clay soils within cismontane woodland, coastal scrub, valley and foothill grassland, and vernal pools. Found at elevations ranging from 49 to 3,511 feet. Blooming period ranges from March to May.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Mielichhoferia shevockii Shevock's copper moss	Fed: None CA: None CNPS: 1B.2	Generally found in cismontane woodland habitats in mesic, metamorphic, and rocky soils. Can also be found growing on rocks along roadsides. Elevation ranges from 2,460 to 4,595 feet.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site. The project site lies outside the known elevation range for this species.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Myosurus minimus* ssp. *apus little mousetail	Fed: None CA: None CNPS: 3.1	Occurs in alkaline soils in valley and foothill grassland and vernal pools. Found at elevations ranging from 66 to 2,100 feet. Blooming period is from March to June.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Navarretia fossalis spreading navarretia	Fed: **THR** CA: None CNPS: 1B.1	Found in chenopod scrub, shallow freshwater marshes and swamps, playas, and vernal pools. Grows in elevation from 98 to 2,149 feet in elevation. Blooming period ranges from April to June.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Orcuttia californica California Orcutt grass	Fed: **END** CA: **END** CNPS: 1B.1	Primarily restricted to the southern basaltic claypan vernal pools at the Santa Rosa Plateau, and alkali vernal pools at Skunk Hollow, and at Salt Creek. Grows in elevations ranging from 45 to 2,165 feet above msl. Blooming period is from April to August.	Yes	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Polygala cornuta* var. *fishiae Fish's milkwort	Fed: None CA: None CNPS: 4.3	Occurs in chaparral, cismontane woodland, and riparian woodland. Found at elevations ranging from 328 to 3,281 feet. Blooming period is from May to August.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Pseudognaphalium leucocephalum white rabbit-tobacco	Fed: None CA: None CNPS: 2B.2	Grows in sandy, gravelly soils within chaparral, cismontane woodland, coastal scrub, and riparian woodlands habitats. Grows in elevation from 0 to 6,890 feet in elevation. Blooming period ranges from (July) August to November (December).	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Quercus engelmannii Engelmann oak	Fed: None CA: None CNPS: 4.2	Occurs in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. Found at elevations ranging from 164 to 4,265 feet. Blooming period is from March to June.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Scutellaria bolanderi ssp. austromontana southern mountains skullcap	Fed: None CA: None CNPS: 1B.2	Found mostly in wetland habitats within yellow forest, foothill woodland, chaparral, and wetland-riparian communities. Blooms from June to August.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Sphaerocarpos drewiae bottle liverwort	Fed: None CA: None CNPS: 1B.1	Endemic to San Diego and Riverside Counties. Grows in shady spots in coastal sage scrub communities. Prefers bare ground on hillsides.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Symphyotrichum defoliatum San Bernadino aster	Fed: None CA: None CNPS: 1B.2	Grows in grassland and meadow habitats, as well as disturbed areas. Prefers freshwater-marsh habitat in freshwater wetland, coastal sage scrub, or southern oak woodland communities. Blooms from July to November.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Tetracoccus dioicus Parry's tetracoccus	Fed: None CA: None CNPS: 1B.2	Grows within chaparral and coastal scrub habitats. Found at elevations ranging from 492 to 3,281 feet. Blooming period is from April to May.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
Tortula californica California screw moss	Fed: None CA: None CNPS: 1B.2	Grows in sandy soils within chenopod scrub and valley and foothill grassland habitats. Found at elevations ranging from 35 to 4,790 feet.	No	No	**Presumed absent** No suitable habitat is present within or adjacent to the project site.
SPECIAL-STATUS HABITATS					
Southern Coast Live Oak Riparian Forest	CDFW Sensitive Habitat	Open to locally dense evergreen riparian woodlands dominated by *Quercus agrifolia*. This type appears to be richer in herbs and poorer in understory shrubs than other riparian communities. Bottomlands and outer floodplains along larger streams, on fine-grained, rich alluvium. Canyons and valleys of coastal southern California.	N/A	No	**Absent** Habitat not observed within or adjacent to the project site.
Southern Interior Basalt Flow Vernal Pool	CDFW Sensitive Habitat	Generally shallow depressions that hold water seasonally. This type is characterized by their position on top of massive basalt flows, where soils are very thin over solid bedrock.	N/A	No	**Absent** Habitat not observed within or adjacent to the project site.
Southern Sycamore Alder Riparian Woodland	CDFW Sensitive Habitat	Occurs below 2,000 meters in elevation, sycamore and alder often occur along seasonally-flooded banks; cottonwoods and willows are also often present. Poison oak, mugwort, elderberry and wild raspberry may be present in understory.	N/A	No	**Absent** Habitat not observed within or adjacent to the project site.
Valley Needlegrass Grassland	CDFW Sensitive Habitat	Characterized by continuous vegetative cover of common needlegrass species (*Nasella* spp.). Occurs over a wide variety of topographies, in deep soils with high clay content, loamy, sandy, or silty derived mudstone, sandstone, or serpentine substrates.	N/A	No	**Absent** Habitat not observed within or adjacent to the project site.

U.S. Fish and Wildlife Service (Fed) - Federal
END- Federal Endangered

California Department of Fish and Wildlife (CA) - California
END- California Endangered
THR- California Threatened

California Native Plant Society (CNPS)
California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and Elsewhere

CNPS Threat Ranks
0.1- Seriously threatened in California

Western Riverside County MSHCP
Yes- Fully covered
No- Not covered
Yes (a)- May require surveys under

THR- Federal Threatened	Candidate- Candidate for listing under the California Endangered Species Act FP- California Fully Protected SSC- Species of Special Concern WL- Watch List	2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere 3 Plants About Which More Information is Needed – A Review List 4 Plants of Limited Distribution – A Watch List	0.2- Moderately threatened in California 0.3- Not very threatened in California	MSHCP Section 6.1.2 Yes (b)- May require surveys under MSHCP Section 6.1.3 Yes (c)- May require surveys under MSHCP Section 6.3.2 Yes (d)- May require surveys under MSHCP Section 6.3.2 Yes (e)- Conditionally covered pending the achievement of species-specific conservation measures

Attachment E

Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

Western Riverside County MSHCP

The MSHCP is a comprehensive, multi-jurisdictional HCP focusing on conservation of species and their associated habitats in western Riverside County. The goal of the MSHCP is to maintain biological and ecological diversity within a rapidly urbanizing region.

The approval of the MSHCP and execution of the Implementing Agreement (IA) by the wildlife agencies allows signatories of the IA to issue "take" authorizations for all species covered by the MSHCP, including state- and federal-listed species as well as other identified sensitive species and/or their habitats. Each city or local jurisdiction will impose a Development Mitigation Fee for projects within their jurisdiction. With payment of the mitigation fee to the County and compliance with the survey requirements of the MSHCP where required, full mitigation in compliance with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), CESA, and FESA will be granted. The Development Mitigation Fee varies according to project size and project description. The fee for industrial development is $7,382 per acre (County Ordinance 810.2). Payment of the mitigation fee and compliance with the requirements of Section 6.0 of the MSHCP are intended to provide full mitigation under CEQA, NEPA, CESA, and FESA for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the USFWS, the CDFW, and/or any other appropriate participating regulatory agencies and as set forth in the IA for the MSHCP.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) *Waters of the United States* means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted

cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.*, gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) *Wetlands* means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) *Adjacent* means having a continuous surface connection

(3) *High tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

(4) *Ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) *Tidal waters* means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

Appendix B-2

Determination of Biologically Equivalent or Superior Preservation Report

ELMT Consulting

November 2025

Determination of Biologically Equivalent or Superior Preservation Report

Ynez Road Improvements – Phase 1

Permittee Name

City of Temecula
41000 Main Street
Temecula, CA 92590

Consultant Name

ELMT Consulting, Inc.
2201 N. Grand Avenue #10098
Santa Ana, California 92711

November 2025

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APPENDIX

Appendix A Project Exhibits
Appendix B Site Plan

1 EXECUTIVE SUMMARY

This report contains the results of the Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis to demonstrate compliance with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) for impacts to riparian/riverine resources. The proposed project would expand Ynez Road, extending from the existing northeastern shoulder of the road in the City of Temecula, Riverside County, California.

It should be noted that an approved DBESP was originally prepared in October of 2023 for the proposed project and a California Department of Fish and Wildlife (CDFW) Section 1602 Permit was prepared and processed. However, design changes to the project resulted in an access road being installed near the intersection of Ynez Road and Rancho Vista Road, which resulted in an increase in impacts to riparian/riverine habitat. This DBESP covers the updates to the project design and increased impacts to riparian/riverine habitat, and new mitigation approach to compensate for the impacts.

One (1) unnamed drainage occurs within the boundaries of the proposed project site. This drainage is fed by a culvert leading from under Rancho Vista Road to a storm drain within a residential community to the southeast of the project site. The stormwaters conveyed by this drainage flow northwest through the project site and are directed to a box culvert in the northwest portion of the site leading under Tierra Vista Road. In general, this drainage only conveys surface flow in direct response to precipitation or urban runoff.

Approximately 1.62 acres (1,970 linear feet) of riparian/riverine habitat was mapped within Drainage 1 in proximity to the project site. The riparian/riverine habitat is synonymous with the jurisdiction of CDFW. Based on the proposed site plan approximately 0.22 acre of permanent impacts to riparian/riverine habitat will occur from project implementation. Since the side slopes will be graded rather than restored to existing site conditions (manufactured slope), all project-related impacts are considered permanent. No temporary or offsite impacts are proposed. No impacts to riparian/riverine habitat will occur within the Criteria Cell on the northern portion of the site.

The project was designed to avoid impacts to Drainage 1 to the greatest extent possible, with impacts only occurring to vegetation on the periphery of the drainage feature outside the bottom or low flow channel of Drainage 1. The table below provides a summary of the mapped riparian/riverine resources onsite and impacts.

Table 1: Summary of Riparian/Riverine Areas and Impacts

Jurisdictional Feature	**Riparian Riverine Habitat**	
	Riparian/Riverine Area (Acreage)	**Riparian/Riverine Impacts** (Permanent)
Drainage 1	1.62	0.22
TOTAL	**1.62**	**0.22**

The applicant will mitigate impacts to 0.22 acre of riverine habitat through the management (removal of non-native plant species) of 0.66 acre of habitat within a City owned parcel along Temecula Creek. The 0.66 acre of offsite mitigation area was established using a 3:1 mitigation ratio for permanent impacts to riparian/riverine habitat along the bank of Drainage 1. The City of Temecula will be responsible for implementing the proposed mitigation program at the 0.66 acre offsite mitigation area. The offsite mitigation site is located immediately adjacent to Temecula Creek in the City of Temecula to the southeast of the project site within Assessor Parcel Number (APN) 961-440-012.

A conservation easement will be placed over the 0.66 acre of offsite riparian/riverine habitat in favor of a qualified habitat maintenance organization (an approved third party that both CDFW and the USFWS will get to review and approve), and the City will condition the project to submit a Habitat Mitigation Monitoring Plan for review by the Wildlife agencies at least 60 days before construction begins and will provide long-term funding (an endowment) for the maintenance for the selected organization to conduct ongoing maintenance in the conservation area. Additionally, a Long-term Management Plan will be prepared and approved by the aforementioned agencies.

The 0.66 acre of riverine/riparian habitat offsite currently supports invasive plant species (i.e., tacolote mustard, prickly lettuce, etc.) that will be removed to enhance the riparian/riverine habitat. The overall habitat functions and values provided by existing habitat areas within the offsite conservation area would be enhanced by removing invasive, non-native plant species (Temecula Creek). Additionally, the manufacture slopes will either be hydroseeded or seeded by hand broadcasting of native seeds to stabilize the slopes above Drainage 1.

The above actions would result in a net increase in the function and ecological value of riparian/riverine habitat within the region by the preservation and enhancement of higher quality habitat within the same watershed through the uplift and establishment of a conservation easement by preserving/enhancing high quality habitat offsite within Temecula Creek on a parcel owned by the City.

2 INTRODUCTION

2.1 Project Area

The project site is generally located east of Interstate 15, south and north of State Route 79, and west of Margarita Road in the City of Temecula, Riverside County, California. The site is depicted on both the Murrieta and Temecula quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 12 of Township 8 South, Range 3 West. Specifically, the project site is located adjacent to, and encompassing a portion of Ynez Road between Rancho Vista Road and Tierra Vista Road. Refer to Exhibits 1-3 in Appendix A.

2.2 Project Description

The City is proposing to improve 1,763 linear feet of the eastern half of Ynez Road between Tierra Vista Road to Rancho Vista Road in order to match the four-lane configuration and infrastructure that exists along Ynez Road north and south of this segment. Improvements will include the following and are depicted in Appendix B, *Site Plans*.

- Remove the existing asphalt curb and earthen shoulder, approximately 28 feet.
- Remove existing road striping in all lanes
- Sawcut and grind existing pavement on the north bound direction of the Ynez Road
- Grading the slope and installation of a retaining wall along the road slope (within APNs 944-290-017 and 944-290-016). The slope grading would occur along 927 linear feet, varying from 0 feet wide by 68 feet wide, and involve approximately 6,020 cubic yards.
- Removal of 10 trees and pruning of one tree. The trees to be removed and pruned are located along Ynez Road at the location of the proposed slope and retaining wall.
- Install the slope grading, retaining wall, and a maintenance access road at Rancho Vista Road/Ynez Road intersection, which would remove approximately 0.22 acre of riparian/riverine resources
- Install a guardrail and tubular steel fence along the north side of Ynez Road
- Add pavement section that would vary between 28 feet and 46 feet wide
- Construct a concrete raised median to delineate the turn pocket for Tierra Vista Road, and striped median for the turn pocket at Rancho Vista
- Stripe the new roadway for four lanes with turn pockets and Class II Bike Lanes on both the east and west sides of the road
- Installing new curbs and gutters and sidewalk along the east side of the road
- Install new streetlights on east side of the roadway
- Relocating utilities that conflict with the planned improvements
- Provide ADA compliant access ramp at the northeast corner of the Ynez Road and Rancho Vista Road Intersection.
- Slurry sealing the south bound direction.

The project will result in approximately 2.50 acres of permanent impacts. Since the side slopes will be graded rather than restored to existing site conditions (manufactured slope), all project-related impacts are considered permanent. No temporary or offsite impacts are proposed. Please refer to the table below for a breakdown of the permanent and temporary impacts within the Criteria Cell and outside of the Criteria Cell.

Table 2: Project Impacts

Project Impacts	Area (Acres)	Inside Criteria Cell	Outside Criteria Cell
Permanent Impacts	2.50	0.63	1.87
Total	**2.50**	**0.63**	**1.87**

2.3 Existing Conditions

At present, the site is located within Ynez Road and along and adjacent to the northeastern shoulder, with vacant land beyond to the northeast, residential development to the southeast and southwest, and commercial development to the northwest. The site terrain is composed of paved asphalt, and compacted and graded soil which gives way to grassland and buckwheat scrub plant communities and a large unnamed drainage.

The project site, outside of the road right-of-way supports buckwheat scrub, non-native grassland, and riparian plant communities.

Table 3: Vegetation/Land Use Types

Vegetation/Land Used Type	Inside Criteria Cells (Acres)		Outside Criteria Cells (Acres)		Total Area (Acres)
	Area	Impacts	Area	Impacts	
Riparian Scrub	0.00	0.00	0.21	0.21	0.21
Buckwheat Scrub	0.00	0.00	0.13	0.13	0.13
Non-Native Grassland	0.32	0.32	0.72	0.72	1.04
Disturbed	0.1	0.1	0.26	0.26	0.36
Developed	0.21	0.21	0.55	0.55	0.76
Total	**0.63**	**0.63**	**1.87**	**1.87**	**2.50**

The project site, outside of the existing paved road right-of-way supports one (3) plant communities: non-native grassland, buckwheat scrub, and riparian. In addition, the site supports two (2) land cover types that would be classified as developed and disturbed (refer to Exhibit 5, *Vegetation*). The majority of the project site, outside of the existing paved road right-of-way, supports a non-native grassland community. Species present within this community consist of non-native grasses and invasive and/or early successional weedy species such as ripgut brome (*Bromus diandrus*), fescue (*Festuca sp.*), Bermuda grass (*Cynodon dactylon*), shortpod mustard (*Hirschfeldia incana*), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).

The non-native grassland community transitions into a buckwheat scrub community moving east from Ynez Road. This area of the project site is composed almost entirely of a monoculture of California buckwheat (*Eriogonum fasciculatum*). Additionally, the project site supports a riparian plant community associated with the unnamed drainage which transverses the eastern boundary of the site. Species present within the riparian plant community include canyon live oak (*Quercus chrysolepis*), sycamore (*Platanus occidentalis*), black willow (*Salix nigra*), mulefat (*Baccharis salicifolia*), and coyotebrush (*Baccharis pilularis*).

Developed areas primarily include the existing paved road right-of-way, and disturbed areas are areas along the road shoulder that are primarily composed of compacted soil.

Jurisdictional Resources

Drainage 1

An unnamed ephemeral drainage occurs within the proposed limits of disturbance. This drainage runs from southeast to northwest along the northeastern side of Ynez Road and is fed largely by a culvert which runs beneath Rancho Vista Road to the southeast and serves to divert storm water away from the surrounding residential communities. This drainage features will eventually flow into Murrieta Creek west of the project site after flowing through several culverts and flood control channels.

Although the feature has been modified by historic grading and adjacent development, it retains the hydrologic and geomorphic characteristics that meet the definition of an MSHCP riparian/riverine resource. This feature exhibits evidence of ephemeral flows following precipitation events, defined bed and bank characteristics, and a discernible flow path supporting limited riparian vegetation, including mulefat. Adjacent areas consist primarily of unvegetated sandy substrate and disturbed upland vegetation.

The on-site portion of the drainage encompasses approximately 1.62 acre (1,970 linear feet) of earthen channel within the survey area. Based on the proposed site plan approximately 0.22 acre of permanent impacts to riparian/riverine habitat will occur from project implementation (refer to Table 1).

The drainage provides limited hydrologic connectivity and marginal habitat value for common wildlife species, though it does not support listed or sensitive riparian obligate species. The function of this resource is primarily ephemeral flow conveyance and limited sediment transport. The drainage feature enters the southeastern portion of the site via a culvert and conveys storm flows and urban runoff from the surrounding developed area in a northwest direction where the feature eventually connects into an underground storm drain system on the northwestern portion of the site.

2.4 Existing Conditions within the Offsite Conservation Area

The off-site mitigation site is located in a City-owned parcel in Temecula Creek approximately one mile east of its confluence with Murrieta Creek/Santa Margarita River. The off-site mitigation site is currently undeveloped open space and is within the floodplain of Temecula Creek (refer to Exhibit 5 in Appendix A). The offsite conservation area supports a mix of willow riparian scrub habitats with an understory of ruderal herbaceous and non-native species.

3 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

3.1 Methods

Section 6.1.2 of the MSHCP, identifies Riparian/Riverine resources as lands which contain habitat dominated by trees, shrubs, persistent emergent vegetation, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from nearby fresh water sources, or areas with freshwater flow during all or a portion of the year. Riverine habitat includes all wetlands and deep-water habitats contained in natural or artificial channels periodically or continuously containing flowing water or which forms a connecting link between the two bodies of standing water. Riverine habitat is bounded on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetlands dominated by trees, shrubs, persistent emergents, mosses, or lichens. In braided streams, the system is bounded by the banks forming the outer limits of the depression within which the braiding occurs. Springs discharging into a channel are considered part of the riverine habitat. The term riparian is used to define the type of wildlife habitat found along the banks of a river, stream, lake or other body of water. Riparian habitats are ecologically diverse and can be found in many types of environments including grasslands, wetlands and forests.

Based on the results of a Delineation of State and Federal Jurisdictional Waters Report (ELMT, 2023) prepared under a separate cover, one (1) drainage feature, Drainage 1, was observed on the project site. This feature will be considered riparian/riverine habitat under Section 6.1.2 of the MSHCP. The extent of the riparian/riverine habitat on the project site is synonymous with the jurisdiction of CDFW.

Riparian Obligate Species

The composition of the riparian scrub supported on-site has been degraded and does not have a contiguous willow canopy, and primarily supports non-native grasses. Due to incomplete canopy, limited acreage, and lack of riparian plant species diversity of the riparian scrub supported on-site, the habitat associated with the on-site drainages features does not provide suitable habitat for any of the riparian obligate species listed under the MSHCP that may occur within the regional vicinity, including the State- and federally-listed as endangered least Bell's Vireo (*Vireo bellii pusillus* [LBVI]), southwestern willow flycatcher (*Empidonax traillii extimus*), or yellow-billed cuckoo (*Coccyzus americanus*).

The highly degraded and inconsistent canopy of the disturbed southern willow scrub precludes nesting by LBVI, southwestern willow flycatcher, and yellow-billed cuckoo, as these species require dense, sprawling canopies to obscure nests from predators. Further, LBVI and southwestern willow flycatcher each require minimum nesting territories of 0.5 acres, which exceeds the available riparian habitats supported on-site. In addition, the lack of native plant diversity reduces the availability of insect prey for these species. As a result, no focused surveys were conducted or are recommended, and no impacts to this species will occur from project implementation.

As a result, no focused surveys were conducted or recommended, and no impacts to this species will occur from project implementation. The riparian scrub habitat onsite primarily supports oaks, and sycamores that do not provide suitable habitat for any of the aforementioned species.

Vernal Pools

One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should be considered the length of time the areas exhibit upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual "flood and drought" habitat conditions to which certain plant and wildlife species have specifically adapted as well as invertebrate species such as fairy shrimp.

The MSHCP lists two general classes of soils known to be associated with listed and special-status plant species: clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with listed and special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status plant or wildlife species associated with vernal pools can occur on the project site. None of these soils have been documented within the project site.

A review of recent and historic aerial photographs (1985-2023) of the project site did not provide visual evidence of an astatic or vernal pool conditions within the project site. No ponding was observed, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regimes needed for vernal pools.

Based on the historical aerial review, existing human disturbances, and current hydrologic regimes of the project site, it can be concluded that the project site lacks astatic conditions, and, therefore, would not provide suitable fairy shrimp habitat. Fairy shrimp require astatic conditions and a complete drying of occupied ponds so that the fairy shrimp cysts will not rot. As a result, none of the sensitive plant or wildlife species associated with vernal pools are expected to occur on the project site. Sensitive plant and wildlife species associated with vernal pools and clay soils, including fairy shrimp, are presumed absent from the project site.

3.2 Results/Impacts

The on-site drainage collectively perform the following functions within the local area of the watershed: regulation of nuisance flows, energy dissipation, nutrient cycling, retention of particulates, nutrient/particulate uptake from off-site, upstream development, and connectivity with similar habitat upstream. In its current state, Drainage 1 can be considered to have limited resource value to local and migratory wildlife since is generally disturbed on the project site, and only receives flows from and conveys immediate flows from developed areas. Drainage 1, within the project footprint, will be considered riparian/riverine habitat under the MSHCP.

The widening of Ynez road is not expected to have any impacts to the function or values of the drainage feature. The drainage feature will continue to function the same way it has been functioning, and no impacts to downstream riparian/riverine resources are expected to occur since the drainage flows into an underground storm drain system.

Based on the proposed site plan approximately 0.22 acre of permanent impacts to riparian/riverine habitat will occur from project implementation outside of the Criteria Cell on the northern portion of the site. Permanent impacts from the proposed project will primarily be to riparian vegetation, coast live oak trees, on the periphery of Drainage 1, outside the “active” channel. Since project activities will not impact the “active” channel of Drainage 1, and will only impact vegetation on the bank, no impacts to the water quality will occur.

Table 2: Impacts to Riparian/Riverine Habitat

Jurisdictional Feature	Riparian/Riverine Habitat	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	1.62 (1,970)	0.22
TOTAL	**1.62 (1,970)**	**0.22**

3.3 Mitigation and Equivalency

3.3.1 Direct Effects

Complete avoidance of riparian/riverine habitat within Drainage 1 is not possible due to the located of the oak trees on the side of the drainage between the existing road and edge of the drainage. The applicant will mitigate impacts to 0.22 acre of riverine habitat as follows:

> The applicant will mitigate impacts to 0.22 acre of riverine habitat through the management (removal of non-native plant species) of 0.66 acre of habitat within a City owned parcel along Temecula Creek. The 0.66 acre of offsite mitigation area was established using a 3:1 mitigation ratio for permanent impacts to riparian/riverine habitat along the bank of Drainage 1. The City of Temecula will be responsible for implementing the proposed mitigation program at the 0.66-acre offsite mitigation area. The offsite mitigation site is located immediately adjacent to Temecula Creek in the City of Temecula to the southeast of the project site within Assessor Parcel Number (APN) 961-440-012.
>
> The 0.66 acre of riverine/riparian habitat offsite currently supports invasive plant species (i.e., tacolote mustard, prickly lettuce, etc.) that will be removed to enhance the riparian/riverine habitat. The overall habitat functions and values provided by existing habitat areas within the offsite conservation area would be enhanced by removing invasive, non-native plant species (Temecula Creek).
>
> A conservation easement will be placed over the 0.66 acre of offsite riparian/riverine habitat in favor of a qualified habitat maintenance organization (an approved third party that both CDFW and the USFWS will get to review and approve), and the City will condition the project to submit a HMMP for review by the Wildlife agencies at least 60 days before construction begins and will provide long-term funding (an endowment) for the maintenance for the selected organization to conduct ongoing maintenance in the conservation area. Additionally, a Long-term Management Plan will be prepared and approved by the aforementioned agencies.

The above actions would result in a net increase in the function and ecological value of riparian/riverine habitat within the region by the preservation and enhancement of higher quality habitat within the same watershed through the uplift and establishment of a conservation easement by preserving/enhancing high quality habitat offsite within Temecula Creek on a parcel owned by the City.

3.3.2 Indirect Effects

The following minimization measures have been incorporated into the project design to ensure that all indirect project-related impacts to riparian/riverine habitat, including impacts from fugitive dust, toxics, invasive plant species, and grading/land development, are avoided or minimized to the greatest extent feasible.

Fugitive Dust

During soil excavation, grading, or other subsurface disturbance within 100 feet of adjacent riparian/riverine habitat onsite, the construction superintendent shall supervise provision and maintenance of all standard dust control best management practices (BMPs) to reduce fugitive dust emissions, including but not limited to the following actions:

- Water any exposed soil areas a minimum of twice per day, or as allowed under any imposed drought restrictions. On windy days or when fugitive dust can be observed leaving the construction site, additional water shall be applied at a frequency to be determined by the on-site construction superintendent.
- Pave, periodically water, or apply chemical stabilizer to construction access/egress points.
- Minimize the amount of area disturbed by clearing, grading, earthmoving, or excavation operations at all times.
- Operate all vehicles on graded areas at speeds less than 15 miles per hour.
- Cover all stockpiles that will not be utilized within three days with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with a non-toxic chemical stabilizer.

Runoff - Toxics

To address potential short-term impacts to water quality from construction runoff that may carry storm water pollutants downstream, a Storm Water Pollution Prevention Program (SWPPP) shall be implemented by the construction contractor as required by the California General Construction Storm Water Permit pursuant to State Water Quality Control Board and Regional Board regulations. The SWPPP shall identify BMPs related to the control of toxic substances, including construction fuels, oils, and other liquids. These BMPs will be implemented by the Applicant's contractor prior to the start of any ground clearing activity, shall be subject to periodic inspections by the City and the project's hydrological consultant, and shall be maintained throughout the construction period and remain in place until all landscape and permanent BMPs are in place. BMPs shall be monitored and repaired if necessary to ensure maximum erosion, sediment, and pollution control.

- Permittee shall prohibit the use of erosion control materials potentially harmful to fish and wildlife species, such as mono-filament netting (erosion control matting) or similar material, within and adjacent to CDFW jurisdictional areas.
- All fiber roles[1], straw waddles, and/or hay bales utilized within and adjacent to the project site shall be free of non-native plant materials.

[1] Fiber rolls or erosion control mesh shall be made of loose-weave mesh that is not fused at the intersections of the weave, such as jute, or coconut (coir) fiber, or other products without welded weaves. Non-welded weaves reduce entanglement risks to wildlife by allowing animals to push through the weave, which expands when spread.

- Permittee shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws and it shall be the responsibility of Permittee to ensure compliance.
- Permittee shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a lake, streambed, or flowing stream or be placed in locations that may be subjected to high storm flows.
- Spoil sites shall not be located within a lake, streambed, or flowing stream or locations that may be subjected to high storm flows, where spoil shall be washed back into a lake, streambed, or flowing stream where it will impact streambed habitat and aquatic or riparian vegetation.
- Raw cement/concrete or washings thereof, asphalt, paint, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to fish and wildlife resources resulting from project related activities shall be prevented from contaminating the soil and/or entering the waters of the State. These materials, placed within or where they may enter a lake, streambed, or flowing stream by Permittee or any party working under contract or with the permission of Permittee, shall be removed immediately.
- No equipment maintenance shall be done within or near any lake, streambed, or flowing stream where petroleum products or other pollutants from the equipment may enter these areas under any flow.
- No broken concrete, cement, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or washings thereof, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the edge of any lake, streambed, or flowing stream.

Accidental Encroachments During Construction

The following measures shall also be incorporated into the construction documents and specifications, and implemented by the contractor, to avoid potential construction-related impacts to adjacent riparian/riverine habitat outside of the approved disturbance limits:

- Construction worker training shall be provided by a qualified biologist at the first pre-construction meeting;
- Exclusionary fencing and signs shall be erected at the bottom of the manufactured slope adjacent to the riparian/riverine habitat to prevent accidental/unauthorized intrusions during construction;
- No equipment shall be operated in areas of flowing water;
- Construction access and staging areas for storage of materials and heavy equipment, and for fueling, cleaning, or maintenance of construction vehicles or equipment, shall be prohibited within 20 feet from the top of slope adjacent to riparian/riverine habitat; and
- A qualified biologist shall be onsite during initial clearing/grubbing, grading, and/or construction activities within the riparian/riverine habitat that will be impacted within the onsite drainage features, or within 100 feet of the habitat to be avoided, and shall periodically monitor these activities to ensure they do not exceed the fenced construction limits.

Post-Construction Human Disturbances

The project shall incorporate special edge treatments designed to minimize edge effects by providing a safe transition between developed areas the adjacent riparian/riverine habitat, and which would be compatible with project operation and the protection of the adjacent riparian/riverine habitat. Special edge treatments shall include native landscaping on manufactured slopes and fencing/signage near the top of slope adjacent to the riparian/riverine habitat to prevent unauthorized public access, vandalism, illegal dumping, and other adverse human disturbances. The manufacture slopes will either be hydroseeded or seeded by hand broadcasting of native seeds to stabilize the slopes above Drainage 1 on the manufactured slope.

Best Management Practices

The applicable best management practices specified in Appendix C of the MSHCP will be followed. These measures are as follows:

a. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.

b. Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.

c. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.

d. The upstream and downstream limits of projects disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.

e. Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.

f. Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian species identified in MSHCP Global Species Objective No. 7.

g. When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents

the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.

h. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional City, CDFW, and RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

i. Erodible fill material shall not be deposited into watercourses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.

j. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project footprint.

k. The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. The manufacture slopes will either be hydroseeded or seeded by hand broadcasting of native seeds to stabilize the slopes above Drainage 1.

l. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.

m. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).

n. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

o. The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs

4 ADDITIONAL SURVEY NEEDS (SECTION 6.3.2)

4.1 Burrowing Owl

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently-sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels, coyotes, and badgers) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

4.1.1 Methods

Under the MSHCP burrowing owl is considered an adequately conserved covered species that may still require focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The project site occurs within the MSHCP burrowing owl survey area and a habitat assessment was conducted for the species to ensure compliance with MSHCP guidelines for the species. In accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. The following section describes the methodology followed during the burrowing owl habitat assessment conducted for this project.

- Step I – Habitat Assessment: Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present onsite. The habitat assessment was conducted on April 19, 2023. Upon arrival at the project site, and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats on and adjacent to the property, including perch locations, to establish owl presence.

  All suitable areas of the project site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, wood debris piles, openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

According to the MSHCP guidelines, if suitable habitat is present, the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the project site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars. In addition to surveying the entire Project Site all bordering natural habitats located immediately adjacent to the Project Site were assessed. Accordingly, if suitable habitat is documented onsite or within adjacent habitats, both Step II, focused surveys and the 30-day preconstruction surveys are required in order to comply with the MSHCP guidelines.

- Step II – Locating Burrows and Burrowing Owls: Concurrent with the initial habitat assessment, a detailed focused burrow survey was conducted and included documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl - as part of the MSHCP protocol, which is described below under Part A, Focused Burrow Survey. The MSHCP protocol indicates that no more than 100 acres should be surveyed per day/per biologist.

    - Part A – Focused Burrow Survey: A systematic survey for burrows, including burrowing owl sign, was conducted by walking across all suitable habitats mapped within the project site on April 19, 2023. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 30 meters (approximately 100 feet) apart, and owing to the terrain, often much smaller. Transect routes were also adjusted to account for topography and in general ground surface visibility. Areas providing potential habitat for burrowing owls were surveyed for suitable burrows, consisting of natural and non-natural substrates in areas with low, open vegetation. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence.

4.1.2 Results/Impacts

Despite a systematic search of the project site, no burrowing owls or signs (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Portions of the project site are vegetated with a variety of low-growing plant species that allow for minimal line-of-sight observation favored by burrowing owls. Further, no small mammal burrows that have the potential to provide suitable burrowing owl nesting habitat (>4 inches in diameter) were observed within the boundaries of the site. Further, the project site does not provide suitable burrows/sites, including rock piles and non-natural substrates that could be used as burrow surrogates. Additionally, the site is surrounded by tall trees and poles that provide perching opportunities for large raptors (i.e., red-tailed hawk) that can prey on burrowing owls. Based on this information, and as a result of current and historic on-site disturbances, and surrounding development, it was determined that burrowing owls do not have potential to occur on-site, and no focused surveys are recommended.

4.1.3 Mitigation and Equivalency

4.1.3.1 Direct Effects

Based on the information provided above, and as a result of current and historic onsite disturbances, it was determined that burrowing owls do not have potential to occur onsite, and no focused surveys are recommended. Being that no appropriate burrows or burrowing owl habitat was found, Part B-Focused Burrowing Owl surveys were not required. Therefore, the project is consistent with Section 6.3.2. However, out of an abundance of caution a pre-construction burrowing owl clearance survey shall be conducted prior to ground disturbing activities to ensure no direct effects to burrowing owl occur form project implementation.

Pre-Construction Burrowing Owl Survey

A 30-day pre-construction survey for burrowing owls is required prior to initial ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, tree removal, site watering) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the Wildlife Agencies and the Regional Conservation Authority (RCA), and will need to coordinate further with RCA and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure burrowing owl has not colonized the site since it was last disturbed. If burrow owl is found, the same coordination described above will be necessary.

4.1.3.2 Indirect Effects

With implementation of a pre-construction burrowing owl clearance survey, no indirect effects to burrowing owl are expected to occur.

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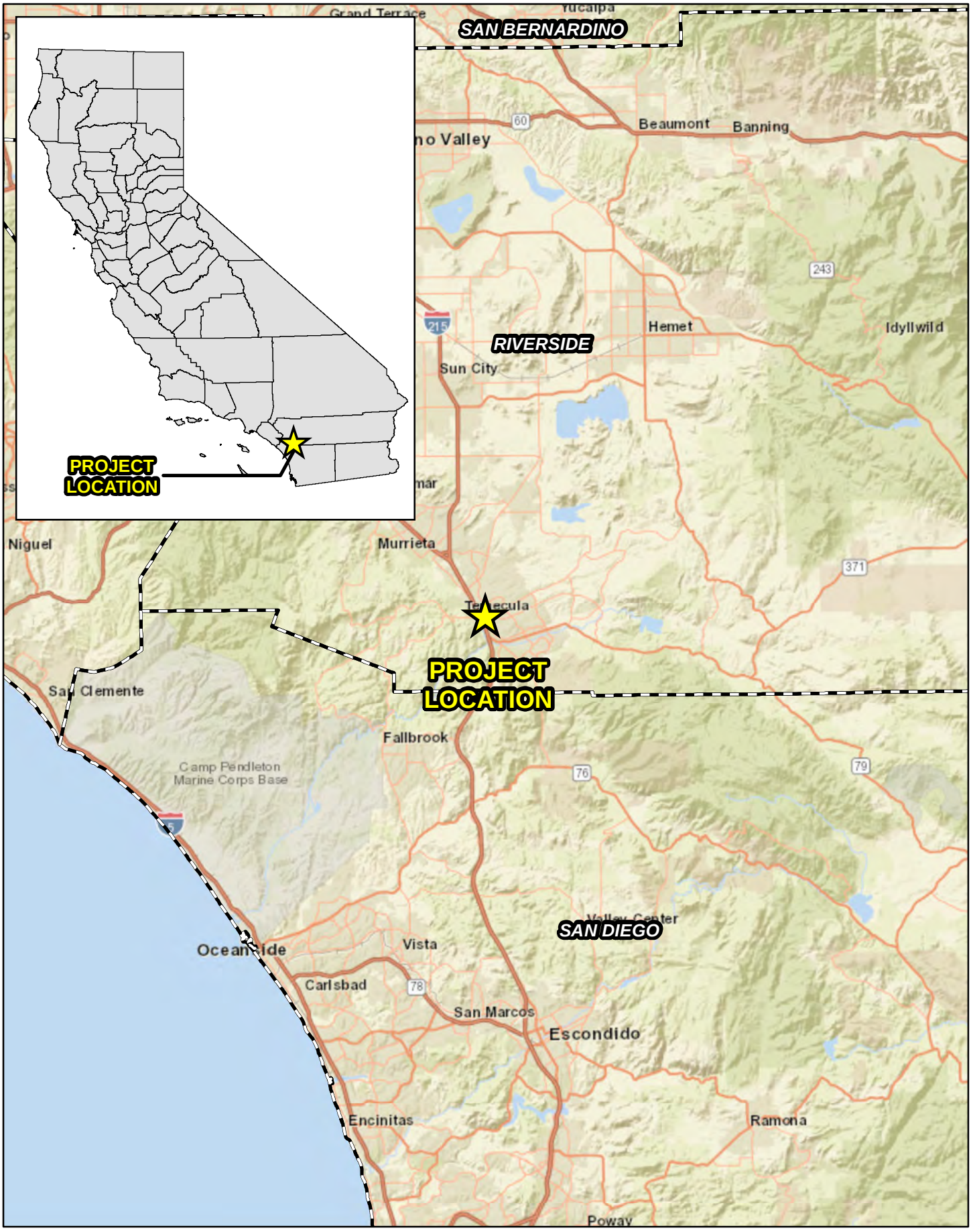
Appendix A Project Exhibits



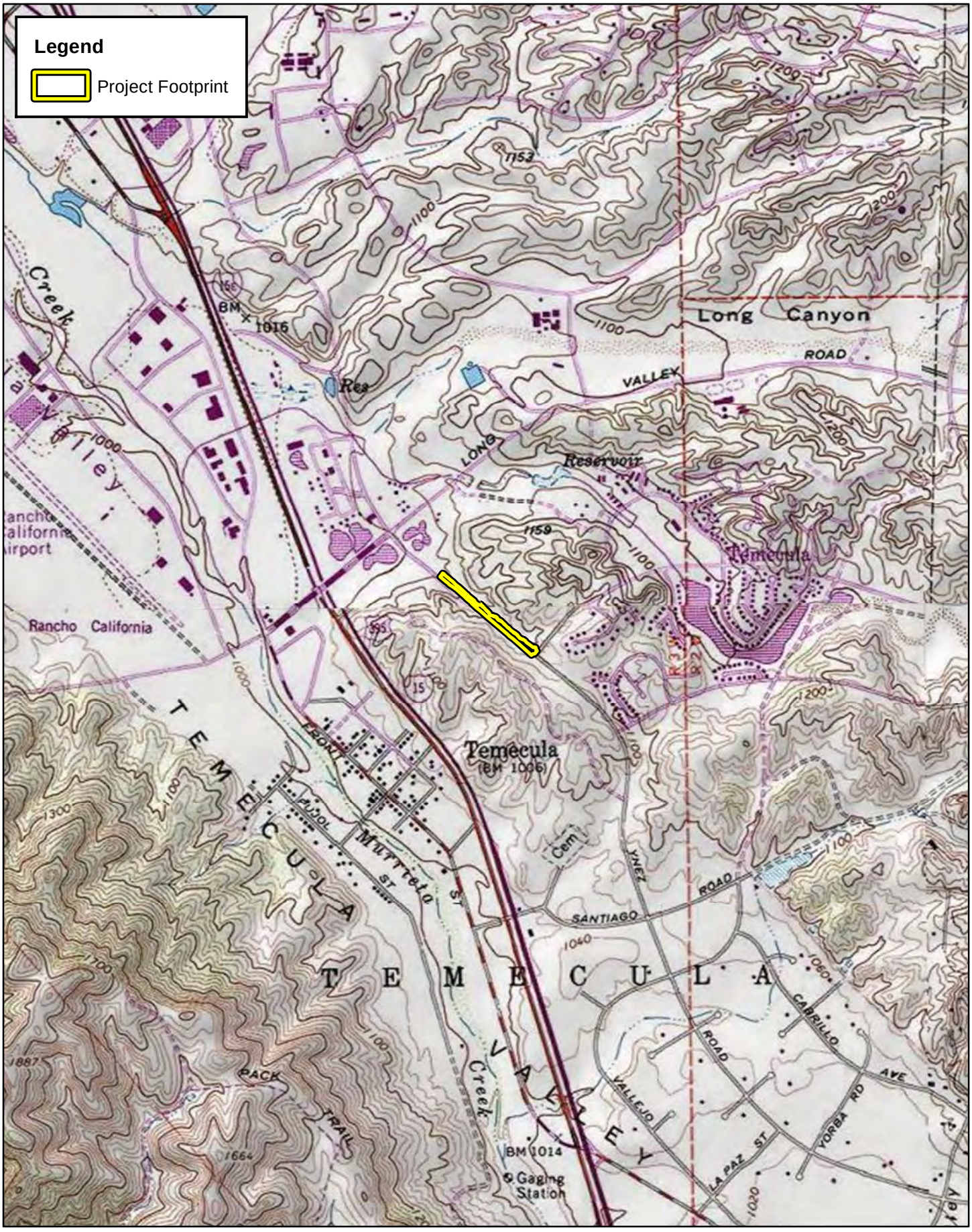
ELMT CONSULTING

Source: World Street Map, Riverside County

YNEZ ROAD IMPROVEMENTS

Regional Vicinity

Exhibit 1



ELMT CONSULTING

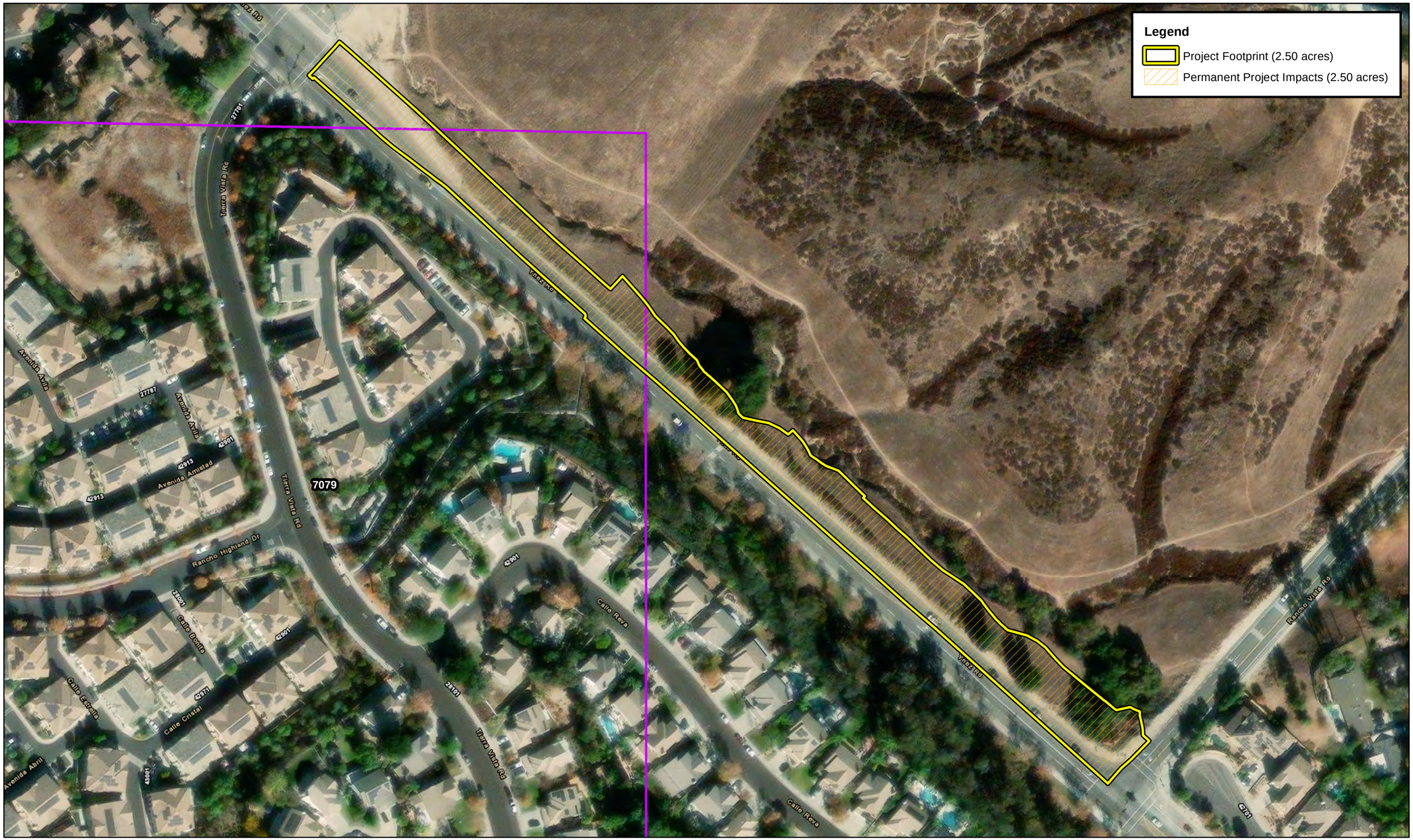
0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

YNEZ ROAD IMPROVEMENTS

Site Vicinity

Exhibit 2



ELMT CONSULTING

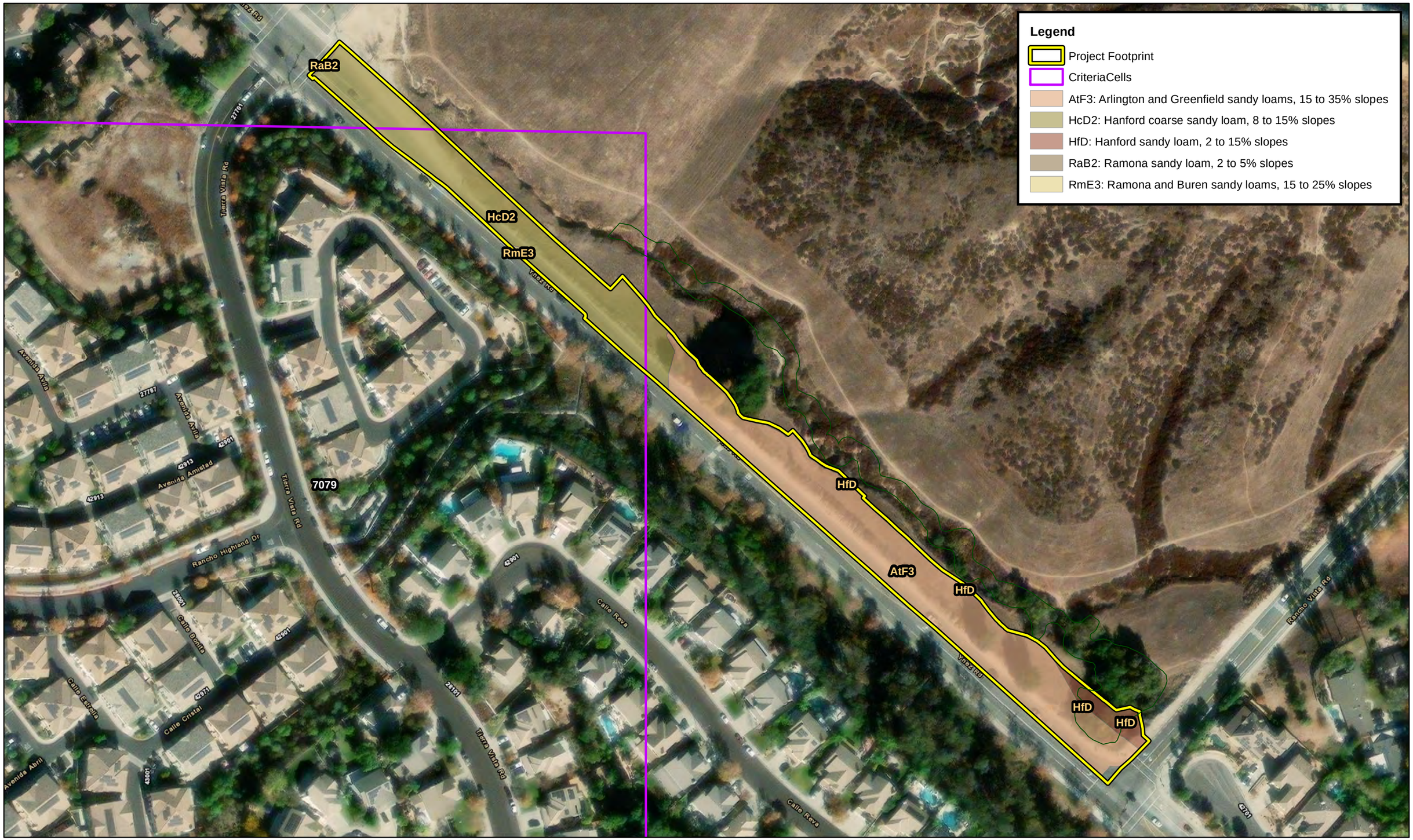
0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

YNEZ ROAD IMPROVEMENTS

Project Site

Exhibit 3



YNEZ ROAD IMPROVEMENTS

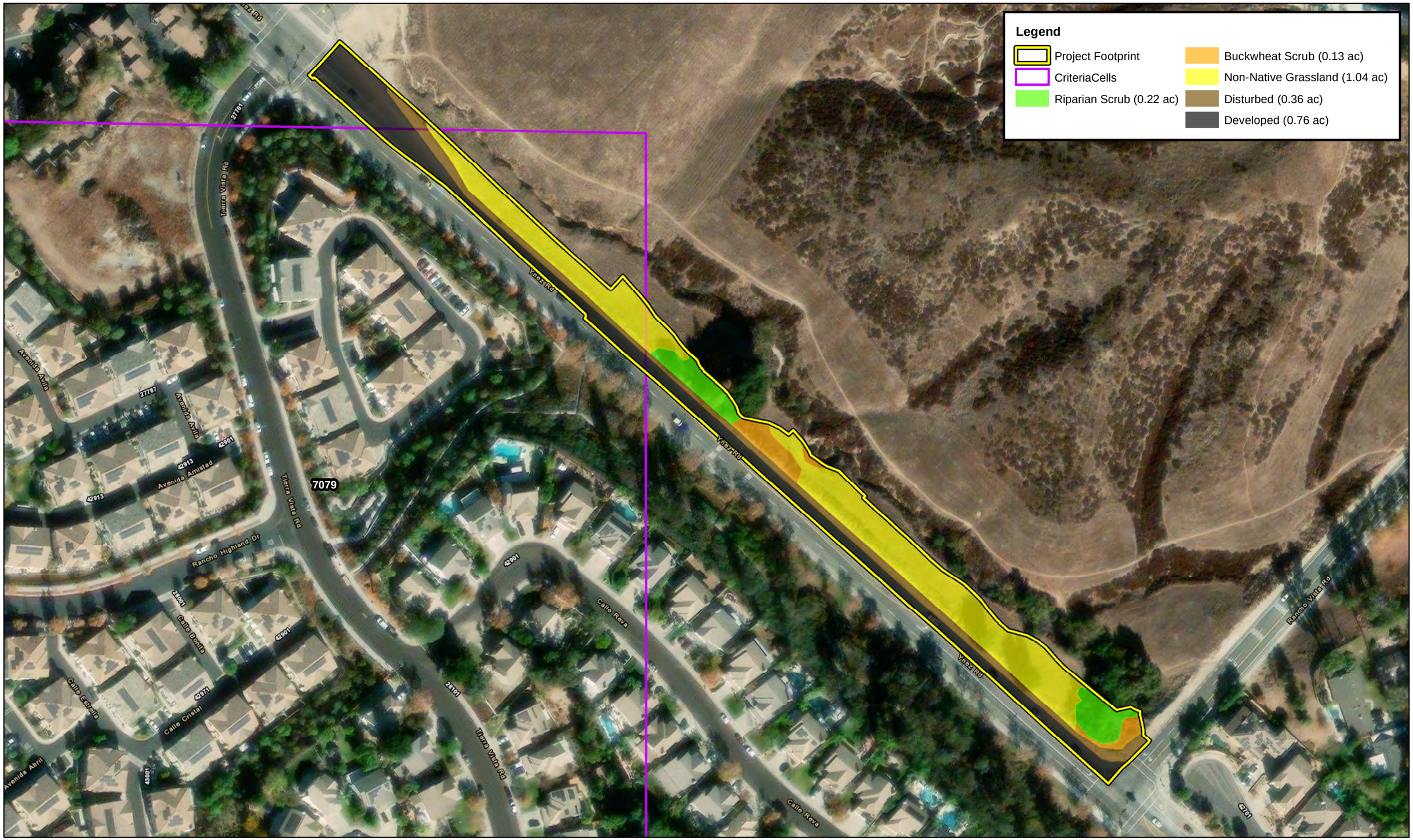
Soils

Exhibit 4

ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County



ELMT CONSULTING

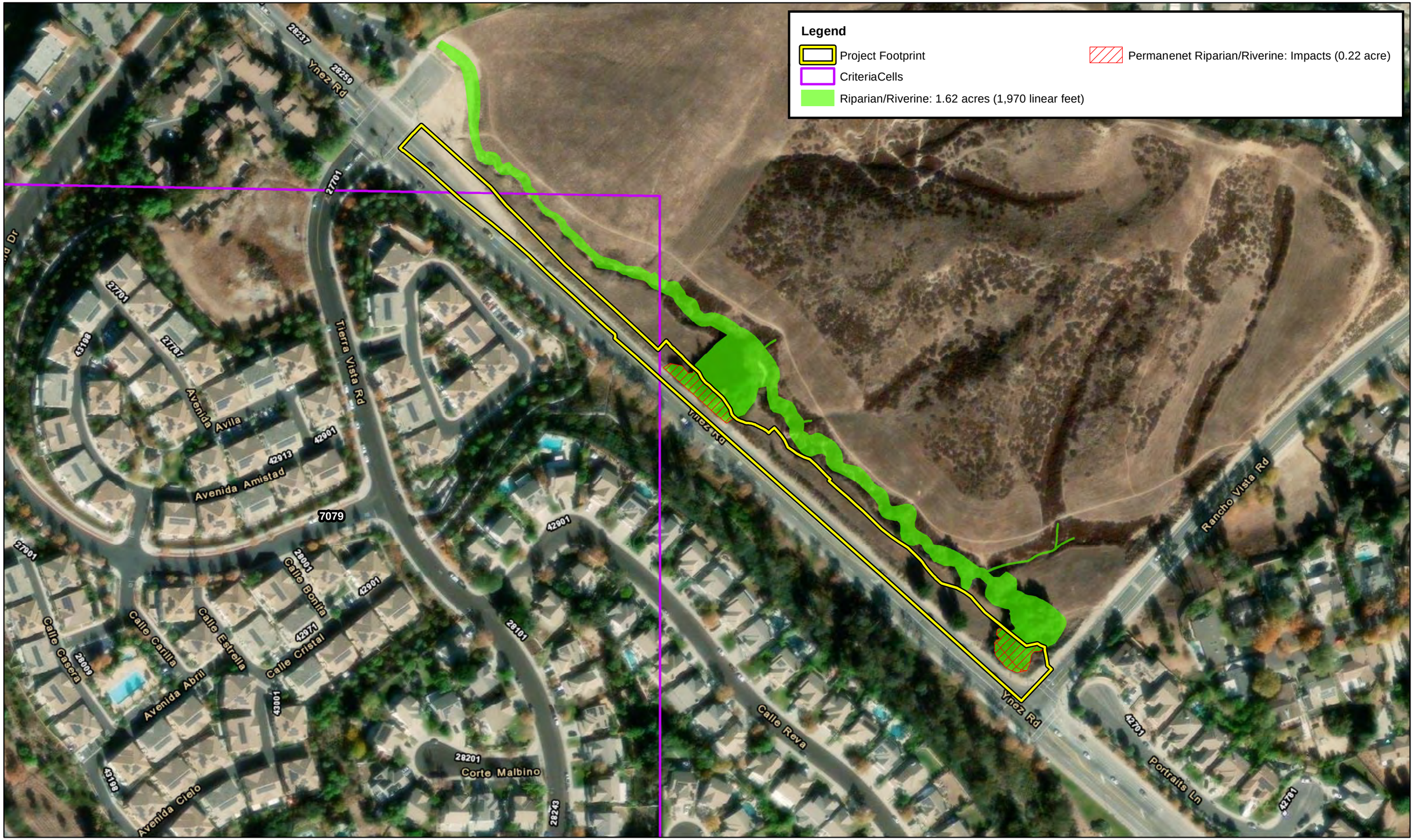
0 125 250 500 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

YNEZ ROAD IMPROVEMENTS

Vegetation

Exhibit 5



ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

YNEZ ROAD IMPROVEMENTS

Riparian/Riverine Habitat

Exhibit 6

ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

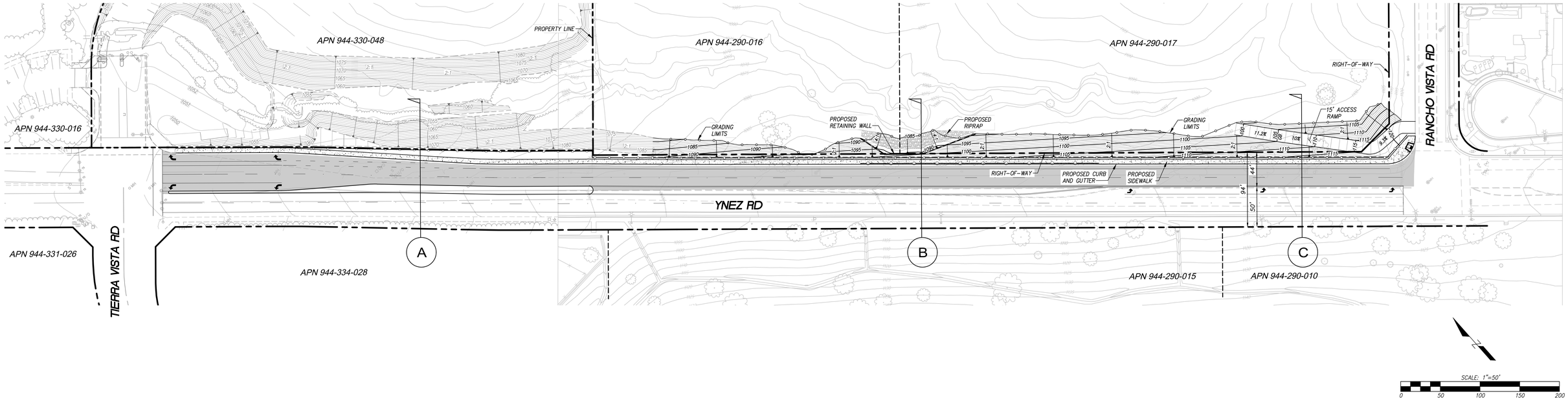
YNEZ ROAD IMPROVEMENTS

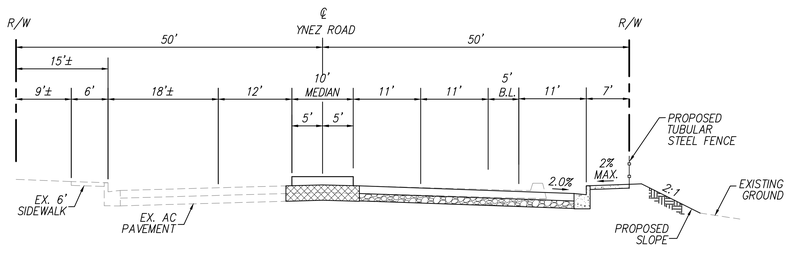
Proposed Mitigaiton Site

Exhibit 7

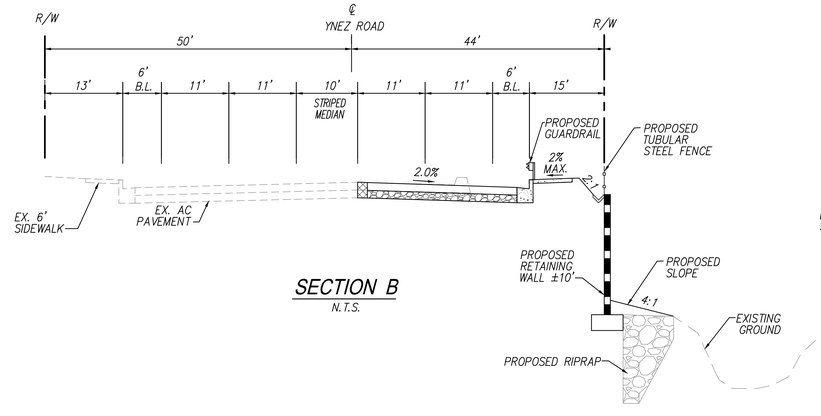
Appendix B Site Plan

YNEZ ROAD PHASE 1 STREET IMPROVEMENTS EXHIBIT

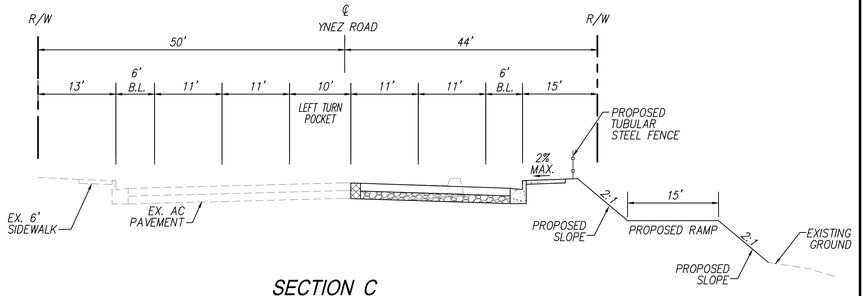




SECTION A
N.T.S.



SECTION B
N.T.S.



SECTION C
N.T.S.

LEGEND

- PUBLIC RIGHT-OF-WAY
- PROPOSED GRADING LIMITS
- PROPOSED STREET IMPROVEMENTS

PROACTIVE ENGINEERING CONSULTANTS WEST
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

Plotted: Sep 16, 2025 - 9:58am By: gilberta DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Exhibits\Ynez Road Improvements Exhibit.dwg

Appendix B-3

Jurisdictional Delineation for the Proposed Ynez Road Improvements Project –Phase 1 Project Located in the City of Temecula, Riverside County, California

ELMT Consulting

October 2025

Updated October 2025

TK CONSULTING
Contact: Kim Berry
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Irvine, California 92651

SUBJECT: Jurisdictional Delineation for the Proposed Ynez Road Improvements Project – Phase 1 Project Located in the City of Temecula, Riverside County, California

Introduction

ELMT Consulting (ELMT) conducted a Delineation of State and Federal Jurisdictional Waters for the proposed Ynez Road Improvements Project – Phase 1 Project located in the City of Temecula, Riverside County, California. This delineation was prepared in order to document the jurisdictional authority of the U.S. Army Corps of Engineers' (Corps), the Regional Water Quality Control Board's (Regional Board), and the California Department of Fish and Wildlife's (CDFW) pursuant to Sections 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Section 1600 of the Fish and Game Code. The fieldwork for this delineation was conducted on April 19, 2023.

This report explains the methodology utilized throughout the course of the delineation, defines the jurisdictional authority of the regulatory agencies, and documents the findings made by ELMT. This report presents ELMT's determination of jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance provided by the regulatory agencies.

Project Location

The project site is generally located east of Interstate 15, south and north of State Route 79, and west of Margarita Road in the City of Temecula, Riverside County, California. The site is depicted on both the Murrieta and Temecula quadrangles of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 12 of Township 8 South, Range 3 West. Specifically, the project site is located adjacent to, and encompassing a portion of Ynez Road between Rancho Vista Road and Tierra Vista Road. Refer to Exhibits 1-3 in Attachment A.

The project consists of approximately 1,763 linear feet of Ynez Road and a large open space area off of the northeastern shoulder of the road. The site is bounded to the northwest by Temecula Duck Pond and Park, to the southeast and southwest by residential development, and to the northeast by undeveloped vacant land with commercial development beyond.

Project Description

The City is proposing to improve 1,763 linear feet of the eastern half of Ynez Road between Tierra Vista Road to Rancho Vista Road in order to match the four-lane configuration and infrastructure that exists along Ynez Road north and south of this segment. Improvements will include the following and are depicted in Appendix B, *Site Plans*.

- Remove the existing asphalt curb and earthen shoulder, approximately 28 feet.
- Remove existing road striping in all lanes
- Sawcut and grind existing pavement on the north bound direction of the Ynez Road
- Grading the slope and installation of a retaining wall along the road slope (within APNs 944-290-017 and 944-290-016). The slope grading would occur along 927 linear feet, varying from 0 feet wide by 68 feet wide, and involve approximately 6,020 cubic yards.
- Removal of 10 trees and pruning of one tree. The trees to be removed and pruned are located along Ynez Road at the location of the proposed slope and retaining wall.
- Install the slope grading, retaining wall, and a maintenance access road at Rancho Vista Road/Ynez Road intersection, which would remove approximately 0.22 acre of riparian/riverine resources
- Install a guardrail and tubular steel fence along the north side of Ynez Road
- Add pavement section that would vary between 28 feet and 46 feet wide
- Construct a concrete raised median to delineate the turn pocket for Tierra Vista Road, and striped median for the turn pocket at Rancho Vista
- Stripe the new roadway for four lanes with turn pockets and Class II Bike Lanes on both the east and west sides of the road
- Installing new curbs and gutters and sidewalk along the east side of the road
- Install new streetlights on east side of the roadway
- Relocating utilities that conflict with the planned improvements
- Provide ADA compliant access ramp at the northeast corner of the Ynez Road and Rancho Vista Road Intersection.
- Slurry sealing the south bound direction.

Methodology

ELMT field staff conducted a thorough review of relevant literature and materials in order to preliminarily identify potential jurisdictional features occurring on or within the vicinity of the project site. In addition, a field investigation was conducted to verify existing conditions and document the extent of jurisdictional features within the boundaries of the project site.

Literature Review

Prior to conducting the field visit, a review of relevant literature and materials was conducted in order to preliminarily identify potential jurisdictional features occurring on or within the vicinity of the project site. In addition, the following resources were reviewed prior to conducting the field investigation:

- CDFW's *A Review of Stream Processes and Forms in Dryland Watersheds* (2010);
- Corps Arid West Regional Supplement (Version 2.0) to the Corps of Engineers Wetland Delineation Manual (2008);
- Corps Navigable Waters Protection Rule: Definition of "Waters of the United States" (2020)
- Corps Arid West Regional Wetland Plant List (2016);
- Federal Emergency Management Agency Flood Insurance Rate Map;
- Google Earth Aerials (1985 – 2020);
- State Wetland Definition and Procedures for Discharges of Dredge or Fill Material to Waters of the State (2021)

- United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Custom Soil Resource Report for Southwestern San Bernardino County;
- USDA NRCS Hydric Soils List of California;
- United States Fish and Wildlife Service National Wetlands Inventory; and
- Water Quality Control Plan for the Santa Ana River Basin.

Field Investigation

ELMT biologists Travis J. McGil surveyed the project site on April 19, 2023, to verify existing conditions and document the extent of jurisdictional features (e.g., wetlands, streambed, and riparian vegetation) within the boundaries of the project site. While in the field, jurisdictional areas and associated plant communities were mapped onto a base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less-familiar plants were identified in the laboratory using taxonomical guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual. Data points were obtained with a Garmin Map 62 Global Positioning System and used to record and identify jurisdictional boundaries, soils samples, and photograph locations. This data was then transferred via USB port as a .shp file and added to the project's jurisdictional map. The jurisdictional map and associated acreage amounts were prepared and quantified in ESRI ArcMap Version 10.

ELMT carefully assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology.

Site Conditions

The project site is located within the Santa Margarita Watershed (HUC 18070302). Murrieta Creek flows approximately 0.5 miles southwest of the project site. The size of this river is approximately 11.8 miles long. This reach of the river is considered impaired with copper, iron, manganese, nitrogen, phosphorous, and chlorpyrifos. The Santa Margarita Watershed encompasses approximately 750 square miles in northern San Diego and southwestern Riverside counties. The watershed is bounded by several mountain ranges, including the Santa Ana and Santa Margarita mountains to the north and the Palomar Mountains to the south. Several tributaries originate on the Santa Rosa Plateau, a region known for its biological diversity and its abundant wetland resources. Currently, this watershed is primarily undeveloped, containing about 20% of urban development and agricultural land use. The upper watershed basin is one of the fastest growing areas in California. The Santa Margarita Watershed consists of a single major drainage, the Santa Margarita River, which is comprised of several smaller tributaries. The mainstem begins at the confluence of Murrieta and Temecula Creeks. South flowing tributaries include Roblar, Deluz, and Sandia Creeks. Tributaries that flow north into the mainstem include Pechanga and Rainbow Creeks. The Santa Margarita River is approximately 27 miles long and is one of the last undammed rivers in Southern California, making it considered a valuable ecological resource. The mainstem enters the Santa Margarita estuary, which is connected to the Pacific Ocean.

The project site ranges in elevation from approximately 1,052 feet to 1,132 feet above mean sea level, and slopes generally from southeast to northwest. A drainage transverses the site from the southeast to the northwest and forms a depression within the topography of the project site. Based on the NRCS USDA Web Soil Survey, the project site is underlain by Arlington and Greenfield fine sandy loam (15 to 35 percent slopes, severely eroded), Hanford coarse sandy loam (8 to 15 percent slopes, eroded), Hanford sandy loam (2 to 15 percent slopes), Ramona sandy loam (2 to 5 percent slopes, eroded), and Ramona and Buren sandy loams (15 to 25 percent slopes, severely eroded). Refer to Exhibit 4, *Soil*, in Attachment A. Soils on-site range from undisturbed, to severely disturbed and heavily compacted from historic and ongoing development.

The U.S. Fish and Wildlife Service's (USFWS) National Wetland Inventory maps to determine if any blueline streams or riverine resources have been documented within or immediate surrounding the project site. Based on this review, the adjacent drainage feature has not been mapped as a blueline stream or riverine resources. A single freshwater pond is located north of the project site in association with the Temecula Duck Pond. Refer to Attachment D, *National Wetlands Inventory.*

Drainage Features

An unnamed ephemeral drainage (Drainage 1) occurs within the proposed limits of disturbance. This drainage runs from southeast to northwest along the northeastern side of Ynez Road and is fed largely by a culvert which runs beneath Rancho Vista Road to the southeast and serves to divert storm water away from the surrounding residential communities. This drainage features will eventually flow into Murrieta Creek west of the project site after flowing through several culverts and flood control channels.

The onsite ephemeral drainage feature is not relatively permanent, standing, or a continuously flowing body of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage feature will qualify was waters of the State and fall under the regulatory authority of the Regional Board and CDFW. The table below identifies the on-site jurisdictional including the total acreage of jurisdiction and anticipated impacts for each regulatory agency within the boundaries of the project site. Based on the proposed site plan approximately 0.22 acre of impacts to CDFW jurisdiction will occur from project implementation.

Table 1: Jurisdictional Area and Impact Analysis

Jurisdictional Feature	Regional Board Jurisdiction		CDFW Jurisdictional Streambed/Riparian Habitat	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	0.27 (1,970)	0	1.62 (1,970)	0.22
TOTAL	**0.27 (1,970)**	**0**	**1.62 (1,970)**	**0.22**

Findings

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in

California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into "waters of the United States" pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the California Fish and Game Code.

United States Army Corps of Engineers

The ephemeral drainage feature is not relatively permanent, standing, or a continuously flowing body of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336).

Drainage 1 is ephemeral and only receives flows from upstream urban runoff and direct precipitation. Ongoing development surrounding the project site has cut off Drainage 1 from directly flowing into Murrieta Creek. As a result of surrounding development, and restricting of water flows, Drainage 1 no longer has a significant nexus to downstream waters and has an insubstantial or speculative effect on the chemical, physical or biological significant nexus to the downstream waters.

Federal Wetlands

In order to qualify as wetland, a feature must exhibit all three wetland parameters (i.e., vegetation, soils, and hydrology) described in the Corps Arid West Regional Supplement. Based on the results of the field investigation, the soils were rocky and sandy with no ponding water and, it was determined that the basin would not support hydric soil conditions. Therefore, no areas on the project site met all three wetland parameters.

Regional Water Quality Control Board

Drainage 1 will be considered an isolated feature within the boundaries of the project site. Based on the State Policy for Water Quality Control, Drainage 1 exhibits characteristics consistent with the Regional Board's methodology and would be considered jurisdictional waters of the State.

State Wetlands

Under the State Water Resources Control Board Sate Wetland Definition, an area is a wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation. Based on the results of the field delineation, it was determined that no areas within the project site meet the State Wetland Definition. Therefore, no state wetland features exist within the project site.

California Department of Fish and Wildlife

The onsite drainage feature exhibits characteristics consistent with CDFW's methodology and would be considered CDFW streambed.

Conclusion and Recommendations

A single ephemeral drainage feature (Drainage 1) was observed within the boundaries of the project site during the field delineation. The onsite drainage does not possesses surface hydrologic nexus to downstream waters of the United States, and therefore, will not fall under the regulatory authority of the United States Army Corps of Engineers. However, Drainage 1 will fall under the regulatory authority of the Regional Board, and CDFW.

Regional Water Quality Control Board

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Based on the proposed project design, no impacts to Regional Board jurisdictional waters will occur from project implementation.

However, if impacts will occur to Regional Board jurisdictional waters, it will be necessary for the applicant to acquire a Water Quality Certification prior to impacts occurring within Regional Board jurisdictional areas. The Regional Board also requires that California Environmental Quality Act (CEQA) compliance be obtained prior to obtaining the 401 Certification. A Regional Board Application fee is required with the application package and is calculated based on the acreage and linear feet of jurisdictional impacts.

California Department of Fish and Wildlife

Pursuant to Section 1600 *et seq.* of the Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. Drainage 1 will be considered jurisdictional by CDFW. Therefore, it will be necessary for the applicant to acquire a Section 1602 Streambed Alteration Agreement prior to impacts occurring within CDFW jurisdictional areas.

Please do not hesitate to contact Tom McGill at (951) 285-6014 or tmcgill@elmtconsulting.com or Travis McGill at (909) 816-1646 or travismcgill@elmtconsulting.com should you have any questions or require further information.

Sincerely,

Thomas J. McGill, Ph.D.
Managing Director

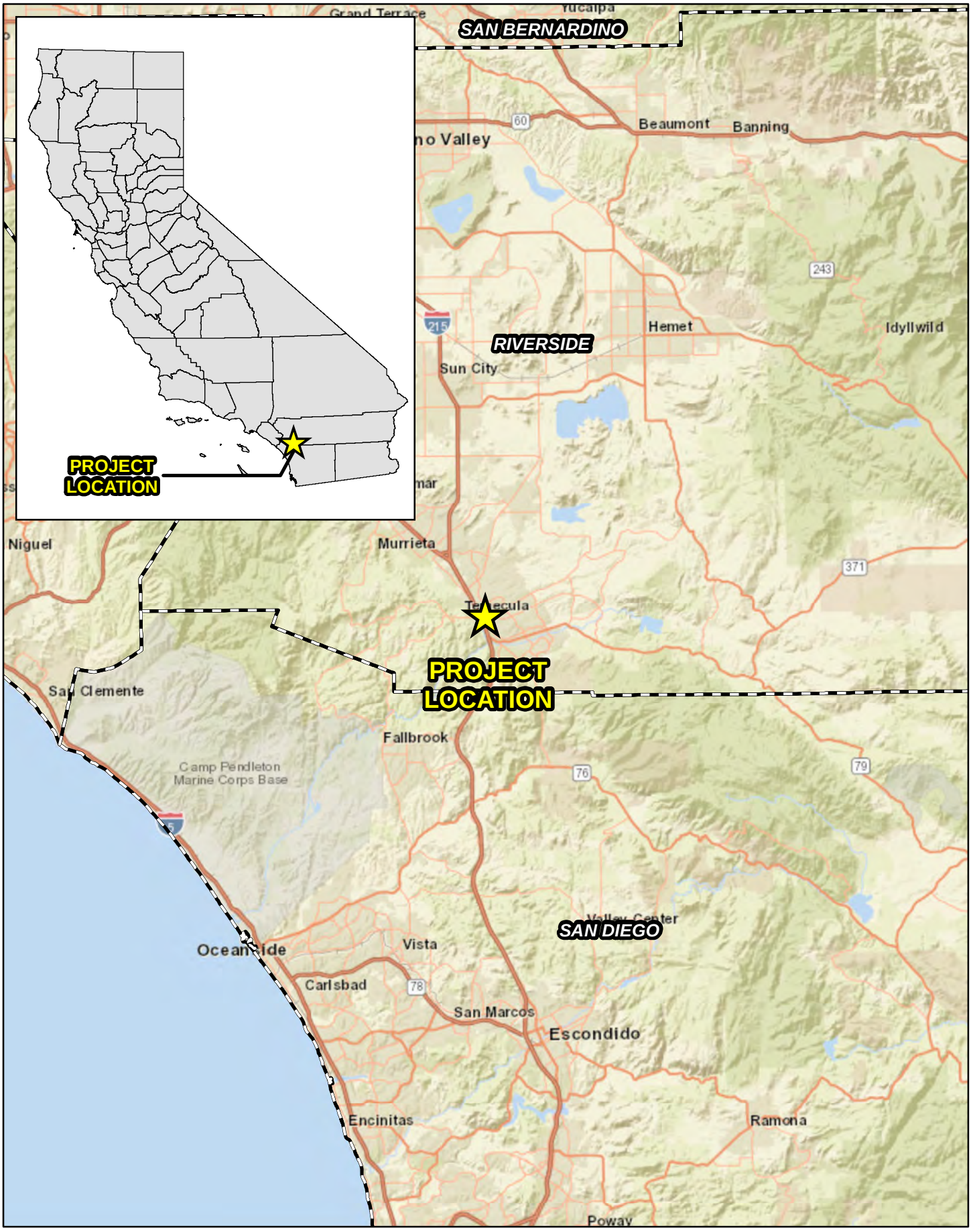
Travis J. McGill
Director

Attachments:

A. *Project Exhibits*
B. *Site Plan*
C. *Site Photographs*
D. *National Wetland Inventory*

Attachment A

Project Exhibits



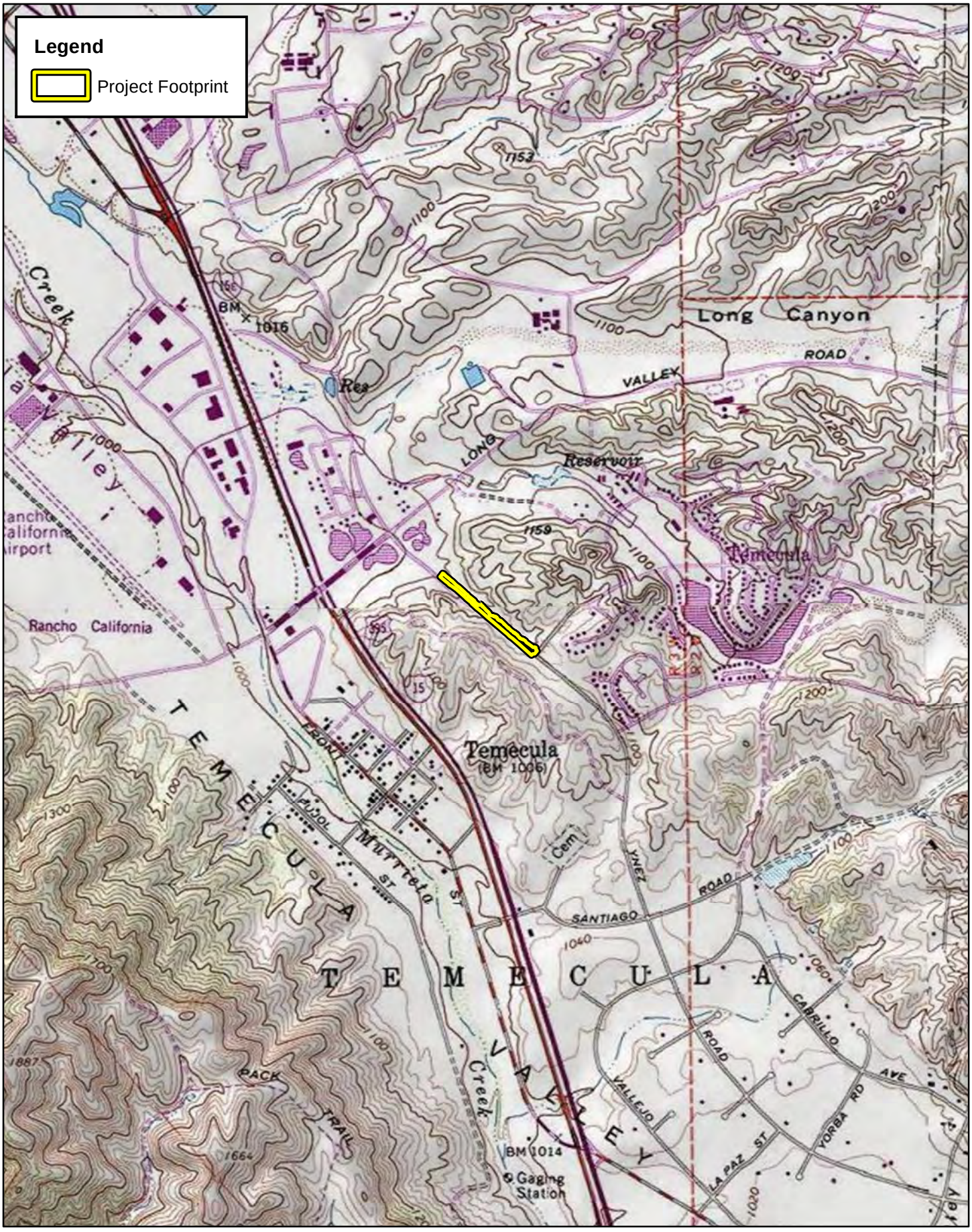
ELMT CONSULTING

Source: World Street Map, Riverside County

YNEZ ROAD IMPROVEMENTS

Regional Vicinity

Exhibit 1



ELMT CONSULTING

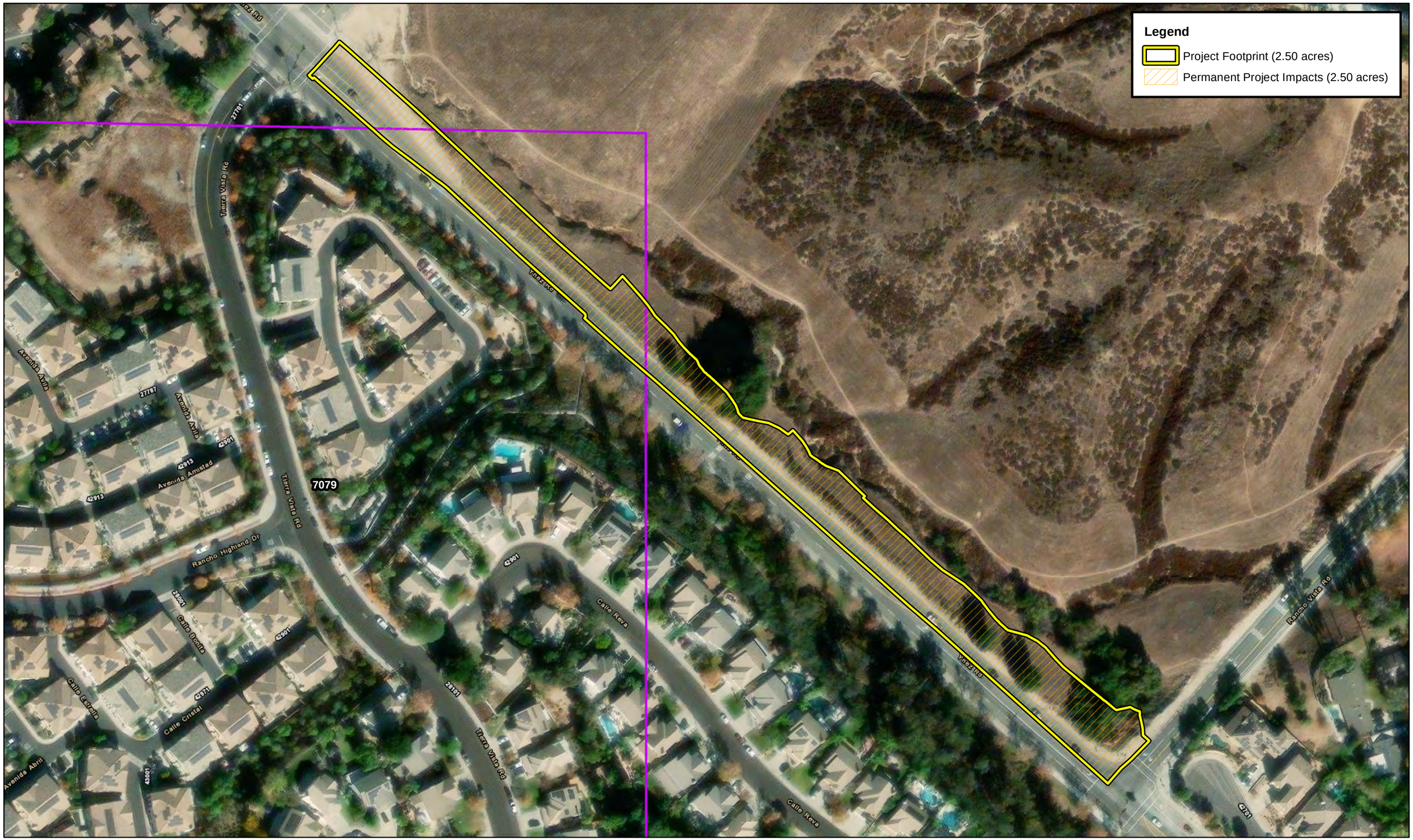
0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

YNEZ ROAD IMPROVEMENTS

Site Vicinity

Exhibit 2



ELMT CONSULTING

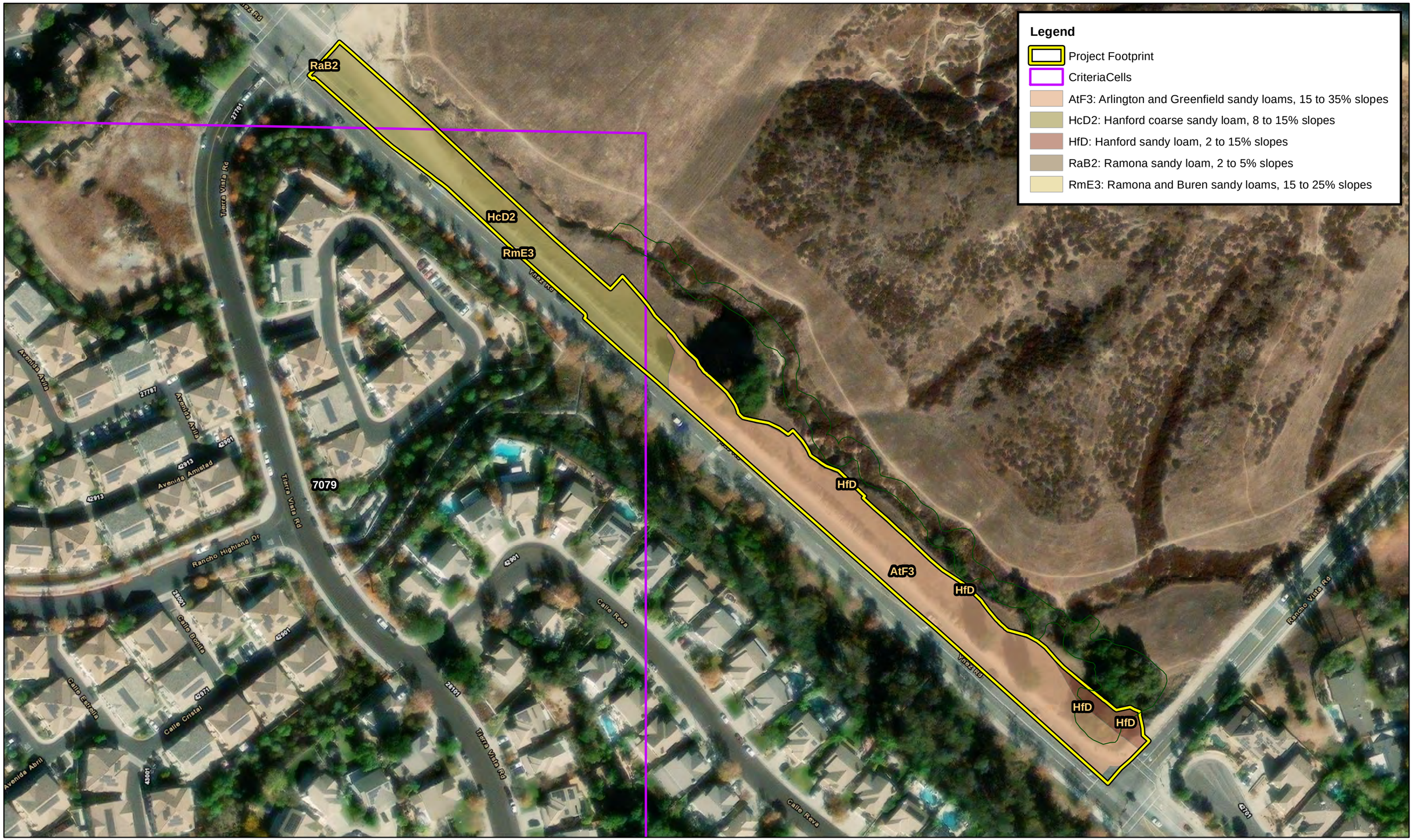
0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

YNEZ ROAD IMPROVEMENTS

Project Site

Exhibit 3



YNEZ ROAD IMPROVEMENTS

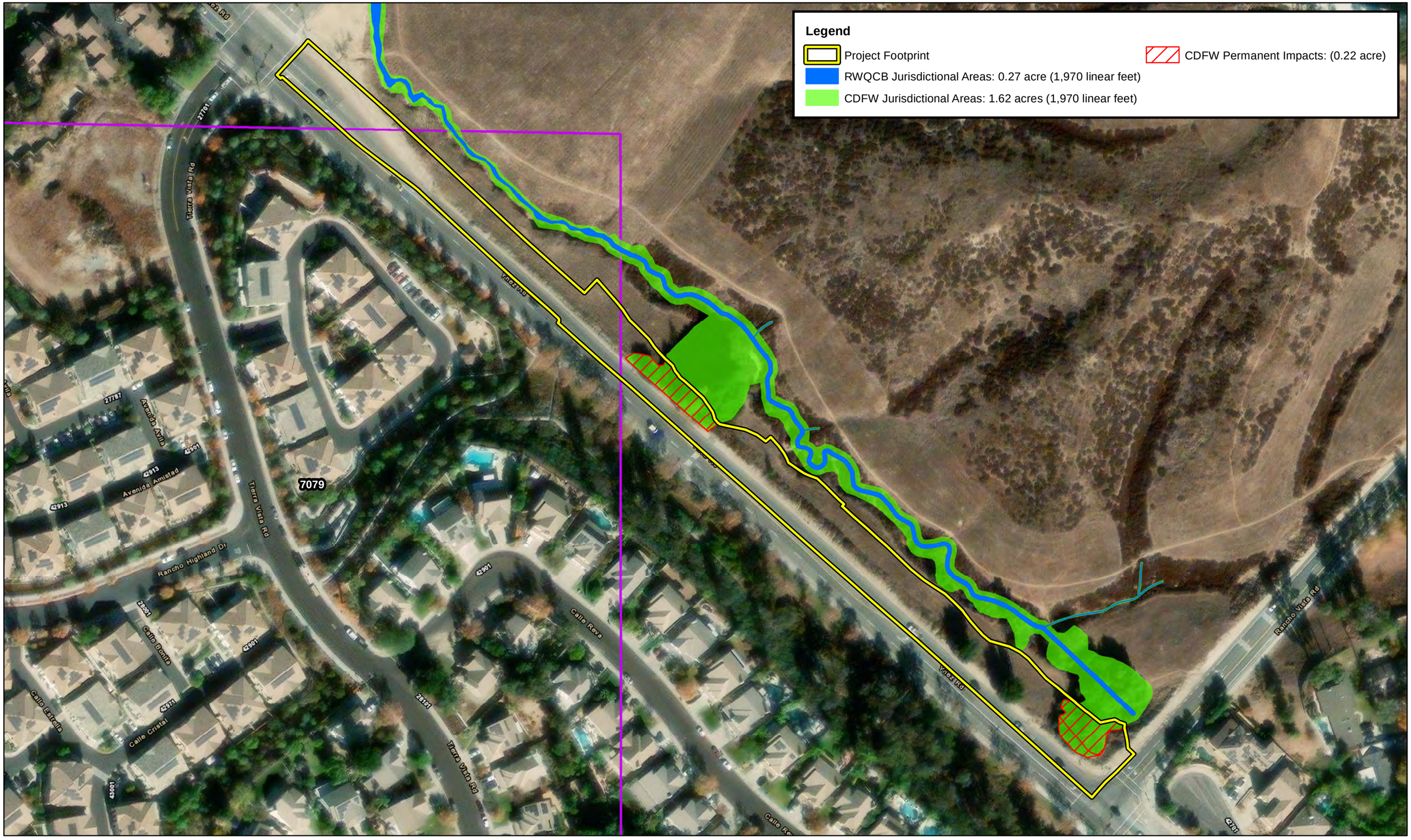
Soils

Exhibit 4

ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County



0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

YNEZ ROAD IMPROVEMENTS

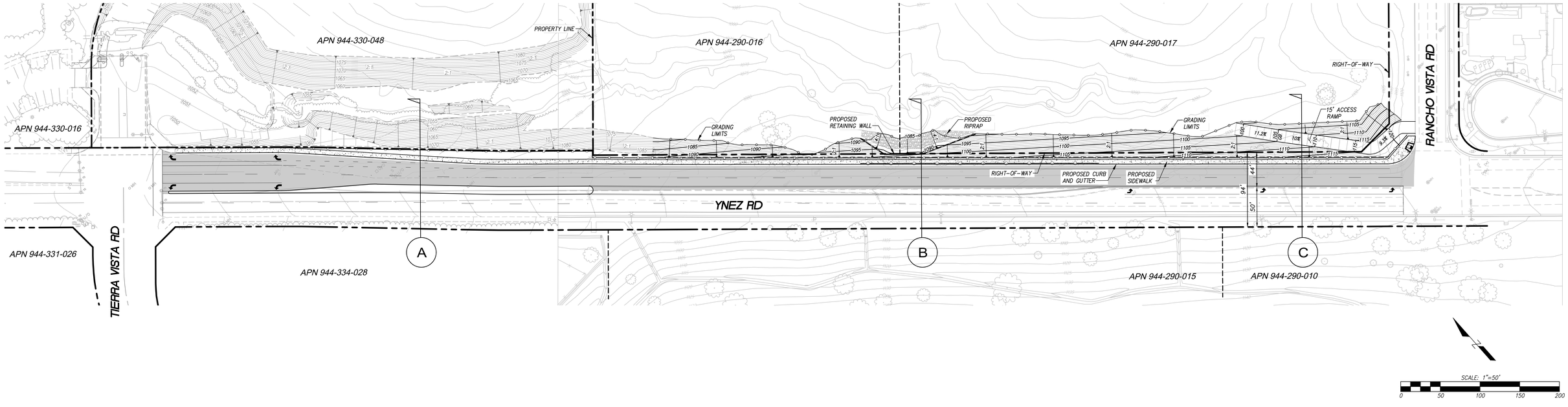
Jurisdictional Areas and Impacts

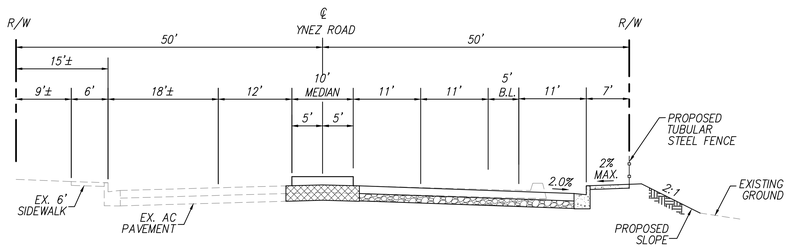
Exhibit 5

Attachment B

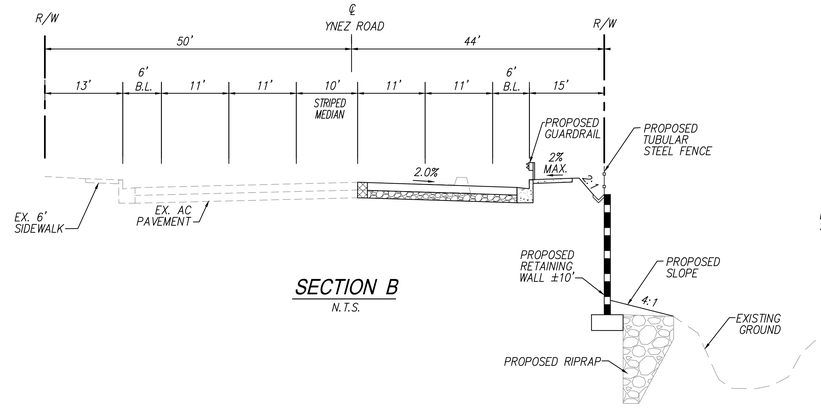
Site Plan

YNEZ ROAD PHASE 1 STREET IMPROVEMENTS EXHIBIT





SECTION A
N.T.S.



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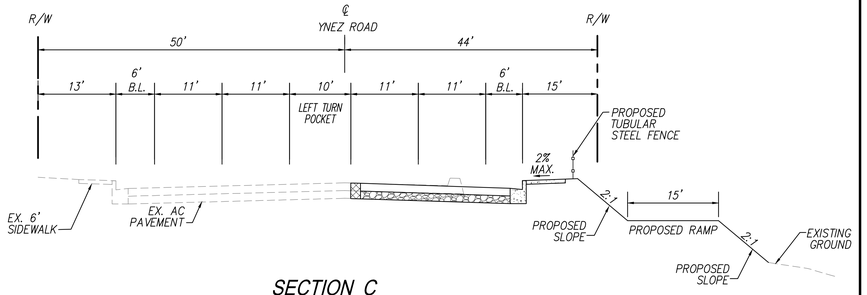
N.T.S.



SECTION C
N.T.S.

LEGEND

- PUBLIC RIGHT-OF-WAY
- PROPOSED GRADING LIMITS
- PROPOSED STREET IMPROVEMENTS

PROACTIVE ENGINEERING CONSULTANTS WEST
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

Plotted: Sep 16, 2025 - 9:58am By: gilberta DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Exhibits\Ynez Road Improvements Exhibit.dwg

Attachment C

Site Photographs

Photograph 1: From the southern boundary of the proposed project site at the northeast corner of the intersection of Ynez Road and Rancho Vista Road, looking northwest along Ynez Road.

Photograph 2: From Rancho Vista Road, looking southwest at the intersection of Rancho Vista Road and Ynez Road and the southern boundary of the proposed project site.

Photograph 3: From the eastern shoulder of Ynez Road looking southeast along the proposed project site through existing vegetation.

Photograph 4: Adjacent to the eastern boundary of the project site, looking northwest along Ynez Road and existing vegetation.

Photograph 5: Depicting a drainage (and associated vegetation) which runs parallel to the eastern boundary of the proposed project site.

Photograph 6: From the middle of the eastern boundary of the project site, looking southeast along the eastern shoulder of Ynez Road.

Photograph 7: From the middle of the eastern boundary of the project site, looking northwest along the eastern shoulder of Ynez Road.

Photograph 8: From inside the drainage which runs parallel to the eastern boundary of the project site, looking southeast.

Photograph 9: From the eastern boundary of the project site, looking northwest through an area of active construction.

Photograph 10: From an area of active construction adjacent to the project site, looking northwest at the northern boundary of the project site at the intersection of Ynez Road and Tierra Vista Road.

Attachment D

National Wetlands Inventory

U.S. Fish and Wildlife Service
National Wetlands Inventory

Ynez Road Improvements

October 11, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

Appendix B-4

Ynez Road Expansion PW23-02 Oak Tree Review and Memorandum Update, Temecula, California

Dudek

January 31, 2025

January 31, 2025

Kim Berry
Senior Project Manager
TK Consulting Inc.
2082 Michelson Drive 4th Floor
Irvine, California 92612
Email: kberry@rtacq.com

Subject: Ynez Road Expansion PW23-02 Oak Tree Review and Memorandum Update, Temecula, California

Dear Kim Berry:

Dudek has been retained by TK Consulting Inc. to provide professional arboricultural consulting services pertaining to the Ynez Road expansion project (project) located in Temecula, California. Specifically, TK Consulting Inc. has requested that a Dudek arborist, certified by the International Society of Arboriculture (ISA), evaluate the site's protected heritage trees, as defined by the City of Temecula's (City) Heritage Tree Ordinance (Chapter 8.48 Heritage Tree Ordinance). To that end, a Dudek ISA Certified Arborist, evaluated a small grove of trees (primarily seedlings and resprouts) immediately adjacent to the site on August 9, 2023. Following completion of the initial site visit, a memo was submitted to the city identifying Dudek's initial findings, which were based on a visual evaluation of the trees from the shoulder of Ynez Road and Rancho Vista Road due to perceived dense oak tree resprouting, sloped terrain, and an encampment of people experiencing homelessness. Following submittal of the memo to the city, the city cleared the encampment, allowing for safe access to the tree/s located at the intersection of Ynez Road and Rancho Vista Road. Furthermore, due to the presence of several oak trees located north of the intersection of Ynez Road and Rancho Vista Road and the potential for impacts associated with the road widening, TK Consulting Inc. requested that Dudek revisit the site and evaluate the additional trees. As such, this memo provides an updated evaluation of the trees located at the intersection of Ynez Road and Rancho Vista Road, as well as 10 additional trees located along Ynez Road immediately adjacent to the proposed project. In summary, this memo provides a synopsis of the results of Dudek's assessment, details current and potential impacts, and gives recommendations for the future management of the trees.

Project Background

The project is located at the intersection of Ynez Road and Rancho Vista Road in Temecula, California. The project involves the expansion of Ynez Road and the installation/improvement of an inlet adjacent to a small grove of oak trees. The adjacent open space area contains several trees that may be impacted by the proposed project and, due to concerns related to oak tree impacts, the city required an evaluation of the trees and recommendations for the future management of the trees.

City Requirements

Trees subject to City Heritage Tree permit requirements include those defined by Section 8.48.160 (Designation of Heritage Trees) of the City's Heritage Tree Ordinance:

> Designated Species. Any specimen of the following species that has been identified in a tree inventory in connection with the submittal of an application for a discretionary permit and has reached the required diameter is a Heritage Tree:
>
> - Oak trees of the genus Quercus including, but not limited to, California or Coast Live Oak (Quercus agrifolia), Coastal Sage Scrub Oak (Quercus dumosa), Engelman Oak (Quercus engelmannii), Scrub Oak (Quercus berberidifolia), and Valley Oak (Quercus lobata) more than eighteen inches in diameter when measured at a point four feet above the natural grade at the base of the tree.
> - Platanus racemosa, (California Sycamore) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree.
> - Umbellularia californica, (California Bay Laurel) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree.
> - Juglans californica, (California Black Walnut) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree.
> - Heteromeles (Photinia) arbutafolia, (California Holly) or (Toyon) more than twelve inches in diameter when measured at a point four feet above the natural grade at the base of the tree.
> - Trees of the above listed species with multiple trunks are deemed to have reached the required diameter if the sum of the diameters of the multiple trunks exceeds the diameter required for a single trunk tree by two inches.

Observations/Discussion

Dudek arborist Christopher J. Kallstrand performed an updated site visit on August 30, 2023, to reevaluate the trees located at the intersection of Ynez Road and Rancho Vista Road, as well as 10 additional trees located along Ynez Road immediately adjacent to the proposed project. The updated site visit was completed following the removal of an encampment of those experiencing homelessness that previously prevented safe access to the site. The subsequent removal of the encampment allowed for safe access to the tree understory, allowing for a more complete analysis of the total number of trees and the overall site conditions. Furthermore, Dudek mapped and evaluated 10 additional trees located along Ynez Road immediately adjacent to the proposed project. In total, Dudek evaluated 18 trees located along the northeast side of Ynez Road between Rancho Vista Road to the southeast and an active construction site to the northwest.

Pursuant to the Guide for Plant Appraisal (ISA 2000), tree health and structure were evaluated with respect to five tree components: roots, trunk(s), scaffold branches, small branches, and foliage. Each component of the tree was assessed for health factors such as insect, fungal, or pathogen damage; fire damage; mechanical damage; presence of decay; presence of wilted or dead leaves; and wound closure. Components were graded as good, fair,

poor, or dead, with "good" representing no apparent problems, and "dead" representing a dying or dead tree. Health rating descriptions are as follows:

Excellent. Tree has excellent health and strong vigor. No damage. Flowering and fruiting expected. Typically, only given to large, high-quality specimens (taller than 15 feet in height).

Good. Tree has good health and vigor. All branches are alive and healthy. Damage is very localized and minimal. Flowering and fruiting likely, if tree is large enough.

Fair. Tree health is average. Some stressors or damage possible, but any damage is minimal to moderate (e.g., rodent grazing, insect damage). No dead/broken branches.

Poor. Tree is under stress, and overall health is in decline, or tree has taken significant damage. Mortality likely unless stressors relieved and/or conditions change. Broken/dead limbs likely present.

Critical. Tree is in extreme decline. One or more branches dead. One or more branches dying. Physical damage likely present. Damage is significant and extensive. Mortality expected within 2 to 4 years.

Dead. Tree is dead.

The 18 trees comprise 16 coast live oak trees and 2 California sycamore trees. The individual tree diameters at standard height (4.5 feet above ground level) range from 3 to 44 inches. The tree crowns range from 5 to 50 feet across at their widest points and reach heights of up to 40 feet. In general, all the trees were found to be in fair to good health and fair to poor structural condition.

Tree no. 4, as shown in Attachment 1, Tree Location Map, was previously assessed to be a smaller tree among what was evaluated as vigorous resprouting. However, after the arborist gained access to the understory, tree no. 4 was found to be a 32-inch diameter tree with very poor form. The trunk of the tree, as shown in Attachment 2, Representative Site and Tree Photographs, has multiple stems that were cut and recut at an early age, resulting in an abnormal branching structure that runs parallel to the ground. This abnormal, ground-parallel branching structure gives off the visual appearance of "vigorous resprouting" when evaluated from the road edge. However, as seen in Attachment 2, Representative Site and Tree Photographs, the "vigorous resprouting" is the branching structure of the tree. Additional photographs of tree no. 4 can also be seen in Attachment 2.

Based on the Heritage Tree size requirements of Section 8.48.160 of the city ordinance, seven of the trees (six coast live oak trees and one California sycamore) located within the survey area are considered Heritage Trees. Individual tree locations are presented in Attachment 1, Tree Locations Map. Photographs of the site and its oak trees are presented in Attachment 2, Representative Site and Tree Photographs, and individual tree attributes are presented in Attachment 3, Tree Information Matrix.

Impacts

Tree impacts, as discussed in this report, are based on the information provided to Dudek by TK Consulting Inc. in January 2025 and on the results of Dudek's site evaluation on August 30, 2023. Based on the location of each of the trees and their position within the landscape, ten trees (tree nos. 1, 2, 3, 4, 9, 10, 11, 12, 13, and 14) will require removal to accommodate the proposed project. Tree nos. 4, 9, 10, and 14 are considered Heritage Trees. Furthermore, one tree (tree no. 15) will require pruning to minimize construction-related damage and meet

California Department of Transportation (Caltrans) clearance standards. The single tree requiring pruning is considered a Heritage Trees. The location of the individual tree impacts, by impact type, can be found in Attachment 4, Tree Impacts.

Recommendations/Conclusion

Based on the site evaluation, four Heritage Trees will require removal (tree nos. 4, 9, 10, and 14) and one Heritage Tree will require pruning (tree no. 15). The remaining seven trees, including four heritage trees, will be preserved in place. Based on Section 8.48.210 of the city ordinance, a permit will be required to for the removal of four Heritage Trees and pruning of one Heritage Tree. As such, Dudek recommends that TK Consulting Inc. submit a Heritage Tree permit request for the removal of four Heritage Trees and pruning of one Heritage Tree.

Furthermore, consistent with the requirements of the city's Heritage Tree Ordinance, Dudek recommends that the four removed Heritage Trees be replaced, on site, with six 48-inch box coast live oak trees and two 48-inch California sycamore trees. Should it be found that the eight trees cannot be accommodated on site, Dudek recommends TK Consulting Inc. work with the city to identify alternative planting locations.

In addition to the permit and Heritage Tree recommendations, Dudek recommends that tree no. 15 be pruned to accommodate the project and meet Caltrans clearance standards. Specifically, Dudek recommends that all pruning be conducted under the supervision of an ISA Certified Arborist, in accordance with American National Standards Institute (ANSI) A300 pruning standards, and that the tree have its crown raised on the street side to a minimum height of 15 feet to meet clearance standards.

Dudek further recommends that tree no. 15 be protected in place during the construction process in accordance with the tree protection requirements provided in Attachment 5, Tree Protection Recommendations.

This arborist memo provides conclusions and recommendations based only on a visual examination of the trees within the tree survey area by ISA Certified Arborists and reasonable reliance on the completeness and accuracy of the information provided to the arborist. The examination did not include subterranean or internal examination of the trees.

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near them. Although trees provide many benefits to those who live near them, they also include inherent risks from breakage or failure that can be minimized but not eliminated.

To live or work near trees is to accept some degree of risk. Neither the author of this arborist report nor Dudek have assumed any responsibility for or will be liable for any claims, losses, or damages for damage to any tree, death or injury to any person, or any loss of or damage to any personal or real property. Should you have any questions, please contact Chris Kallstrand at ckallstrand@dudek.com.

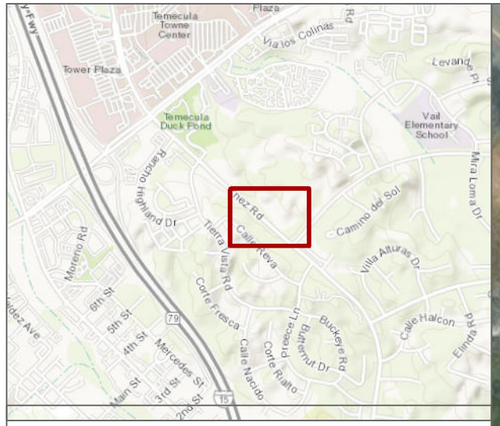
Sincerely,

Christopher Kallstrand
Urban Forestry Specialist
Urban Forestry and Fire Protection Planning

Att.: *1. Tree Locations Map*
2. Representative Site and Tree Photographs
3. Tree Information Matrix
4. Tree Impacts
5. Tree Protection Recommendations

Attachment 1

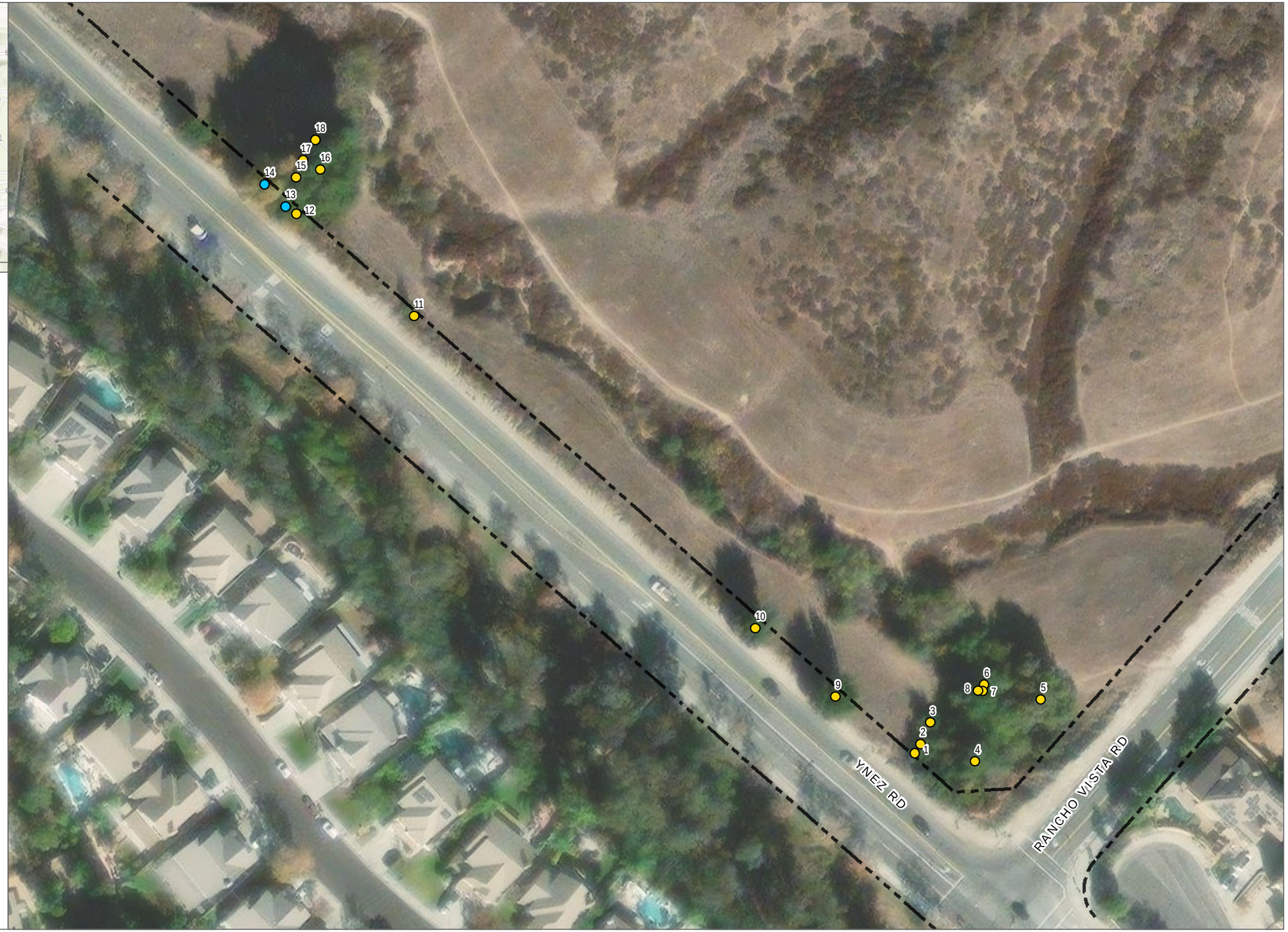
Tree Locations Map



Right-of-Way

Species

- *Platanus racemosa*, California Sycamore
- *Quercus agrifolia*, Coast Live Oak



SOURCE: AERIAL-ESRI MAPPING SERVICE 2022

DUDEK

0 40 80 Feet

ATTACHMENT 1

Tree Locations Map

Ynez Road Expansion Project

Attachment 2

Representative Site and Tree Photographs

Photograph 1. Overview photograph of tree nos. 1 – 8.

Photograph 2. Overview photo of tree no. 9 (Photo taken facing northwest). The tree is located mid-slope on steep berm. Tree is in fair health. As a fair health tree, the tree health is average with some evidence of stressors, but any damage is minimal to moderate. Primary stressors include early evidence of oak anthracnose (fungi that produce dark, pinpoint-sized, fruiting bodies and localized necrotic spots. Early sign of twig girdler, but limited within the crow. Damage is minimal throughout the crown.

Photograph 3. Close up view of tree no. 9's lower stem. Tree is multi-stemmed and has included bark throughout the base of tree. Evidence of stem damage is present.

Photograph 4. Close-up view of the backside (northeast side) of tree no. 9. Significant wounding is present on the backside of the tree, which includes ripping, tearing, and early signs of decay from improper pruning cuts.

Photograph 5. Alternative close-up view of the backside of tree no. 9. Significant basal damage is present at the base of the tree. The tree does not appear to be healing from the wound.

Photograph 6. Overview of tree no. 10 (Photo taken facing northwest). Similar to tree no. 9, tree no. 10 is located mid-slope on steep berm. Tree is in fair health. As a fair health tree, the tree health is average with some evidence of stressors, but any damage is minimal to moderate. Primary stressors include early evidence of oak anthracnose (fungi that produce dark, pinpoint-sized, fruiting bodies and localized necrotic spots. Early sign of twig girdler, but limited within the crown. Damage is minimal throughout the crown.

Photograph 7. Close up view of tree no. 10's lower stem. Tree is multi-stemmed and has included bark throughout the base of tree.

Photograph 8. Overview photograph of tree no. 11.

Photograph 9. Overview photograph of tree nos. 12 - 18.

Photograph 10. View of tree no. 18. Tree no. 18 is a fair health. As a fair health tree, the tree health is average with some evidence of stressors, but any damage is minimal to moderate. The tree exhibits some evidence of wounding, the presence of clear-wing moth, and anthracnose.

Photograph 11. Close-up view of tree no. 18. The tree exhibits evidence of clearwing moth and potential signs of early decay on an old pruning wound approximately 4 feet up on the tree's northwestern side.

Photograph 12 – Overview of tree no. 18. Tree no. 18 overhangs the adjacent project site and exhibits evidence of pruning to raise the crown over the adjacent road.

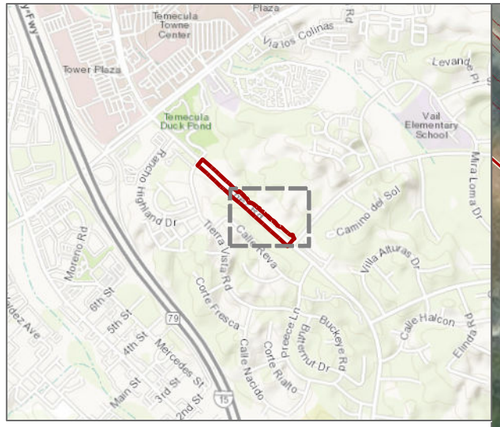
Attachment 3

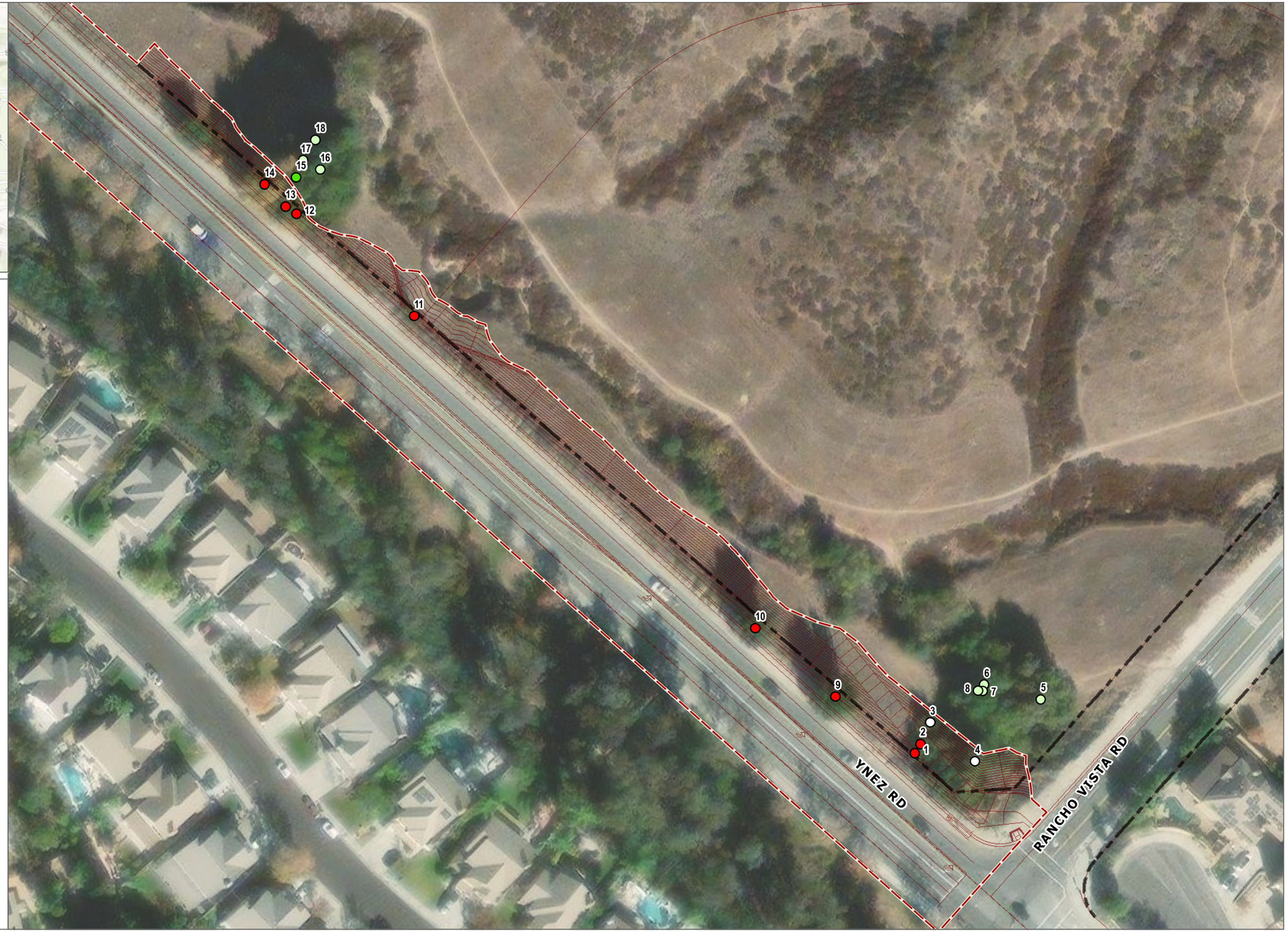
Tree Information Matrix

Tree No.	Botanical Name	Common Name	Stems	Individual Stem Diameters						Height (ft.)	Crown Width (ft.)	Health	Structure	Heritage Tree Status	Impact Status
				D1	D2	D3	D4	D5	D6						
1	*Quercus agrifolia*	Coast Live Oak	1	3	0	0	0	0	0	10	6	Fair	Fair	Non-jurisdictional	Removal
2	*Quercus agrifolia*	Coast Live Oak	1	3	0	0	0	0	0	10	8	Fair	Fair	Non-jurisdictional	Removal
3	*Quercus agrifolia*	Coast Live Oak	1	8	0	0	0	0	0	12	15	Fair	Poor	Non-jurisdictional	Removal
4	*Quercus agrifolia*	Coast Live Oak	4	32	9	9	10	0	0	20	35	Good	Poor	Heritage Tree	Removal
5	*Quercus agrifolia*	Coast Live Oak	1	44	0	0	0	0	0	30	50	Fair	Fair	Heritage Tree	Preserve
6	*Quercus agrifolia*	Coast Live Oak	1	10	0	0	0	0	0	25	15	Fair	Poor	Non-jurisdictional	Preserve
7	*Quercus agrifolia*	Coast Live Oak	2	16	9	0	0	0	0	25	20	Fair	Fair	Non-jurisdictional	Preserve
8	*Quercus agrifolia*	Coast Live Oak	1	11	0	0	0	0	0	25	15	Fair	Poor	Non-jurisdictional	Preserve
9	*Quercus agrifolia*	Coast Live Oak	5	12	15	15	23	10	0	30	35	Fair	Fair	Heritage Tree	Removal
10	*Quercus agrifolia*	Coast Live Oak	4	12	12	15	16	0	0	30	35	Fair	Fair	Heritage Tree	Removal
11	*Quercus agrifolia*	Coast Live Oak	3	5	5	3	0	0	0	15	10	Good	Fair	Non-jurisdictional	Removal
12	*Quercus agrifolia*	Coast Live Oak	4	6	6	5	3	0	0	18	10	Fair	Fair	Non-jurisdictional	Removal
13	*Platanus racemosa*	California Sycamore	2	6	6	0	0	0	0	20	10	Fair	Fair	Non-jurisdictional	Removal
14	*Platanus racemosa*	California Sycamore	1	27	0	0	0	0	0	35	35	Fair	Fair	Heritage Tree	Removal
15	*Quercus agrifolia*	Coast Live Oak	1	26	0	0	0	0	0	35	40	Fair	Fair	Heritage Tree	Preserve - Clearance Prune
16	*Quercus agrifolia*	Coast Live Oak	2	35	13	0	0	0	0	40	40	Good	Fair	Heritage Tree	Preserve
17	*Quercus agrifolia*	Coast Live Oak	2	32	10	0	0	0	0	35	30	Good	Fair	Heritage Tree	Preserve
18	*Quercus agrifolia*	Coast Live Oak	1	34	0	0	0	0	0	40	40	Good	Fair	Heritage Tree	Preserve

Attachment 4

Tree Impacts





Disposition

- Preserve
- Preserve - Clearance Prune
- Preserve - Crown Reduction
- Removal
- Removal (2025 Access Rd Impact)
- Grading Limits

SOURCE: AERIAL-ESRI MAPPING SERVICE (ACCESSED 2025)

DUDEK

0 40 80 Feet

ATTACHMENT 4

Tree Impacts Map

Ynez Road Expansion Project

Attachment 5

Tree Protection Recommendations

Tree Protection Measures

The following tree protection measures are provided as general guidelines for tree protection from construction impacts. The measures presented should be monitored by arborists and enforced by contractors and developers for maximum benefit to the trees.

Tree Protection Measures Prior to Construction

Prior to any construction activity (drainage, demolition, material removal or delivery), oak and landmark trees with canopies that fall within 30 feet of construction activity shall be protected by fencing and signage. All contractors shall be made aware of the tree protection measures. A project arborist shall be assigned to monitor tree health and construction activity near retained trees on site. The project arborist shall be an International Society of Arboriculture (ISA) Certified Arborist.

Fencing. A 6-foot high, chain link fence with tree protection signs shall be erected around all trees (or tree groups) with canopies that fall within 30 feet of construction activity. The protective fence should be installed at a distance from the trunk that is equal to the dripline radius plus 5 feet (protected tree zone). For any trees that would be encroached upon by construction activities, fencing shall be placed as far away from trunk of the tree as possible while still allowing the required construction activities to proceed. This fencing will delineate the tree protection zone and prevent unwanted activity in and around the trees in order to reduce soil compaction in the root zones of the trees and other damage from heavy equipment. Fences are to be mounted on two-inch diameter galvanized iron posts, driven into the ground to a depth of at least 2-feet at no more than 10-foot spacing. In areas where fencing is located on paving or concrete that will not be demolished, then the posts may be supported by an appropriate grade level concrete base. Tree protection signs should be attached to every fourth post. The contractor shall maintain the fence to keep it upright, taut, and aligned at all times. Fencing shall be removed only after all construction activities are complete.

Pre-Construction Meeting. A pre-construction meeting shall be held between all contractors and the arborist. The arborist will instruct the contractors on tree protection practices and answer any questions. All equipment operators and spotters, assistants, or those directing operators from the ground, shall provide written acknowledgement of their receiving tree protection training. This training shall include information on the location and marking of protected trees, the necessity of preventing damage, and the discussion of work practices that will accomplish such.

Protection and Maintenance During Construction

Once construction activities have begun, the following measures shall be adhered to:

Avoidance: Signs, ropes, cables, or any other items shall not be attached to any tree.

Equipment Operation and Storage. Operating heavy machinery around the root zones of trees will increase soil compaction, which decreases soil aeration and subsequently reduces water penetration in the soil. All heavy equipment and vehicles shall stay out of the fenced tree protection zone, unless where specifically approved in writing by the City Arborist and under the supervision of an ISA Certified Arborist

Storage and Disposal. Do not store or discard any supply or material, including paint, lumber, concrete overflow, etc. within the fenced tree protection zone. Remove all foreign debris within the fenced tree protection zone; it is important

to leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrients. Avoid draining or leakage of equipment fluids near retained trees. Fluids such as: gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) should be disposed of properly. Keep equipment parked outside of the fenced tree protection zone of retained trees to avoid the possibility of leakage of equipment fluids into the soil. The effect of toxic equipment fluids on the retained trees could lead to decline and death.

Moving Construction Materials. Moving Construction Materials: Care will be taken when moving equipment or supplies near the trees, especially overhead. Avoid damaging the tree(s) when transporting or moving construction materials and working around retained trees (even outside of the fenced tree protection zone). Above ground tree parts that could be damaged (e.g., low limbs, trunks) should be flagged with red ribbon. If contact with the tree crown is unavoidable, prune the conflicting branch(es) using ISA or ANSI A300 standards.

Grade Changes. Grade changes, including adding fill, are not permitted within the tree protection zone, without special written authorization and under supervision by a Certified Arborist. Lowering the grade within this area will necessitate cutting main support and feeder roots, jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade will compact the soil further, and decrease both water and air availability to the trees' roots.

Root Pruning. Except where specifically approved in writing, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction, forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts shall be clean and sharp, to minimize ripping, tearing, and fracturing the root system. The trench shall be made no deeper than necessary.

Trenching. Unless a Tree Permit has been issued for trenching activity within the fenced tree protection zone, all trenching shall be outside of the fenced tree protection zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain tree roots, prune the roots using a Dosko root pruner or equivalent. All cuts should be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. The trench should be made no deeper than necessary

Irrigation. Trees that have been substantially root pruned (30% or more of their root zone) will require irrigation for the first twelve months. The first irrigation should be within 48 hours of root pruning. They should be deep watered every two to four weeks during the summer and once a month during the winter (adjust accordingly with rainfall). One irrigation cycle should thoroughly soak the root zones of the trees to a depth of 3 feet. The soil should dry out between watering; avoid keeping a consistently wet soil. Designate one person to be responsible for irrigating (deep watering) the trees. Check soil moisture with a soil probe before irrigating. Irrigation is best accomplished by installing a temporary above ground micro-spray system that will distribute water slowly (to avoid runoff) and evenly throughout the fenced tree protection zone ***but never soaking the area located within 6- feet of the tree trunk***.

Pruning. Do not prune any of the trees until all construction is completed. This will help protect the tree canopies from damage. All pruning shall be completed under the direction of an ISA Certified Arborist and using ISA guidelines. Only dead wood shall be removed from tree canopies.

Washing. Periodic washing of the foliage is recommended during construction but no more than once every two weeks. Washing should include the upper and lower leaf surfaces and the tree bark. This should continue beyond the

construction period at a less frequent rate with a high-powered hose only in the early morning hours. Washing will help control dirt/dust buildup that can lead to mite and insect infestations.

Inspection. An ISA Certified Arborist shall inspect the trees on at least a monthly basis for the duration of construction activity. A summary report documenting observations and management recommendations shall be submitted to the owner following each inspection. Photographs of representative trees are to be included in each report.

Maintenance After Construction

Once construction is complete the tree protection fencing may be removed and the following measures performed to sustain and enhance the vigor of the preserved trees.

Mulch. Provide a 4-inch mulch layer of mulch under the canopy of trees. Mulch shall be clean and organic and provide long-term soil conditioning, soil moisture retention, and soil temperature control.

Pruning. Pruning should only be done to maintain clearance and remove broken, dead or diseased branches. Pruning shall only take place following a recommendation by an ISA Certified Arborist and performed under the supervision of an ISA Certified Arborist. No more than 15% of the canopy shall be removed at any one time. All pruning shall conform to ISA or ANSI A300 standards.

Watering. Retained trees on site shall be watered as they were prior to the commencement of construction activity. Supplemental irrigation may be necessary for twelve months following substantial root pruning.

Watering Adjacent Plant Material. All plants near the trees shall be compatible with water requirements of said trees. Watering regime included in the site's landscape plan shall be developed with consideration for the water needs of retained trees.

Spraying. If the trees are maintained in a healthy state, regular spraying for insect or disease control should not be necessary. If a problem does develop, an ISA Certified Arborist should be consulted; the trees may require application of insecticides to prevent the intrusion of bark-boring beetles and other invading pests. All chemical spraying should be performed by a licensed applicator under the direction of a licensed pest control advisor.

Inspection. All trees within 30 feet of construction activity shall be monitored by an ISA Certified Arborist for the first two years after construction completion. An annual monitoring report shall be submitted to the City Arborist. Each report shall summarize the inspection efforts, document observations and management actions taken, include photographs of each tree, and compare postconstruction tree conditions with the original, pre-construction baseline condition. If any retained trees die within this inspection period, they shall be replaced at a ratio approved by the City.

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Appendix C

Cultural Resource Assessment Ynez Road Improvements Project

BCR Consulting

August 7, 2025

CULTURAL RESOURCES ASSESSMENT

Ynez Road Improvements Project

Temecula, Riverside County, California

Prepared for:

Travis J. McGill
Director/ Biologist
ELMT Consulting
2201 North Grand Avenue #10098
Santa Ana, California 92711

Prepared by:

Nick Shepetuk, M.A., RPA
BCR Consulting LLC
505 W. 8th Street
Claremont, California 91711

Project No. EMT2502

Data Base (NADB) Information:
Type of Study: Reconnaissance Survey
Resources Recorded: None
USGS Quadrangle: 7.5-minute *Temecula* (1975), Murrieta, California (1979)

BCRCONSULTING LLC

August 7, 2025

MANAGEMENT SUMMARY

BCR Consulting LLC (BCR Consulting) is under contract to ELMT Consulting to complete a Cultural Resources Assessment of the Ynez Road Improvements Project (the project) located in Temecula, Riverside County, California. A cultural resources records search, reconnaissance level pedestrian field survey, Sacred Lands File search with the Native American Heritage Commission, and paleontological resources overview were conducted for the project in partial fulfillment of the California Environmental Quality Act (CEQA).

The records search revealed that 71 cultural resource studies have taken place resulting in the recording of 35 cultural resources within one mile of the project site. Of the 71 previous studies, three have assessed the project site and no cultural resources have been previously identified within its boundaries. During the field survey, BCR Consulting did not discover any cultural resources, including prehistoric or historic-period archaeological sites or historic-period buildings, within the project boundaries. Based on these results, no significant impacts related to archaeological resources are anticipated and no further investigations or monitoring are recommended for any proposed project activities.

The current study attempted to determine whether significant archaeological deposits were present on the proposed project site. Although none were yielded during the records search and field survey, ground-disturbing activities have the potential to reveal buried deposits not observed on the surface. Prior to the initiation of ground-disturbing activities, field personnel should be alerted to the possibility of buried prehistoric or historic archaeological deposits. In the event that field personnel encounter buried archaeological materials, work in the immediate vicinity of the find should cease and a qualified archaeologist should be retained to assess the significance of the find. The qualified archaeologist should have the authority to stop or divert construction excavation as necessary. If the qualified archaeologist finds that any archaeological resources present meet eligibility requirements for listing on the California Register of Historical Resources (California Register) or the National Register of Historic Places (National Register), plans for the treatment, evaluation, and mitigation of impacts to the find will need to be developed. Prehistoric or historic archaeological materials that may be encountered during ground-disturbing activities include:

- historic-period artifacts such as glass bottles and fragments, cans, nails, ceramic and pottery fragments, and other metal objects;
- historic-period structural or building foundations, walkways, cisterns, pipes, privies, and other structural elements;
- prehistoric flaked-stone artifacts and debitage (waste material), consisting of obsidian, basalt, and or cryptocrystalline silicates;
- groundstone artifacts, including mortars, pestles, and grinding slabs;
- dark, greasy soil that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire affected rocks;
- human remains.

Findings were positive during the Sacred Lands File search with the NAHC. The NAHC recommended contacting the Pechanga Band of Indians for more information. The City will initiate Assembly Bill (AB) 52 Native American Consultation for the project. Since the City will

initiate and carry out the required Native American Consultation, the results of the consultation are not provided in this report. However, this report may be used during the consultation process, and BCR Consulting staff is available to answer questions and address concerns as necessary. A representative from Pechanga Band of Indians accompanied BCR Consulting personnel during the pedestrian field survey.

According to CEQA Guidelines, projects subject to CEQA must determine whether the project would "directly or indirectly destroy a unique paleontological resource". The Paleontological Overview provided in Appendix D has recommended that:

> The geologic units underlying the project area are mapped as the Pleistocene sandstone member of the Pauba Formation (Tan & Kennedy 2000, Geologic map of the Temecula 7.5-minute quadrangle, San Diego and Riverside counties, California: A digital database; Kennedy et al. 2003, Preliminary geologic map of the Murrieta 7.5' quadrangle, Riverside County, California). Pleistocene units such as the Pauba Formation are considered to be fossiliferous and highly paleontologically sensitive. Although the Western Science Center does not have any fossil localities within the project area or 1-mile radius, there is a fossil-bearing locality less than half a mile outside the radius and also in the Pauba Formation. Pleistocene units throughout Southern California have produced large quantities of fossils, such as the extensive collection from Diamond Valley Lake housed at Western Science Center.
>
> Any fossil specimens recovered from the project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Quaternary units, and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils from the study area.

If human remains are encountered during any proposed project activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery.

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D: PALEONTOLOGICAL OVERVIEW

INTRODUCTION

BCR Consulting LLC (BCR Consulting) is under contract to ELMT Consulting to complete a Cultural Resources Assessment of the Ynez Road Improvements Project (the project) located in the City of Temecula, Riverside County, California. A cultural resources records search, reconnaissance level pedestrian field survey, paleontological overview, and Sacred Lands File search with the Native American Heritage Commission (NAHC) were conducted for the project site in partial fulfillment of the California Environmental Quality Act (CEQA). The project site is located within a non-sectioned portion of Township 8 South, Range 3 West, San Bernardino Baseline and Meridian. It is depicted on the United States Geological Survey (USGS) *Temecula, California* (1975), *Murrieta, California* (1979) 7.5-minute topographic quadrangle (Figure 1).

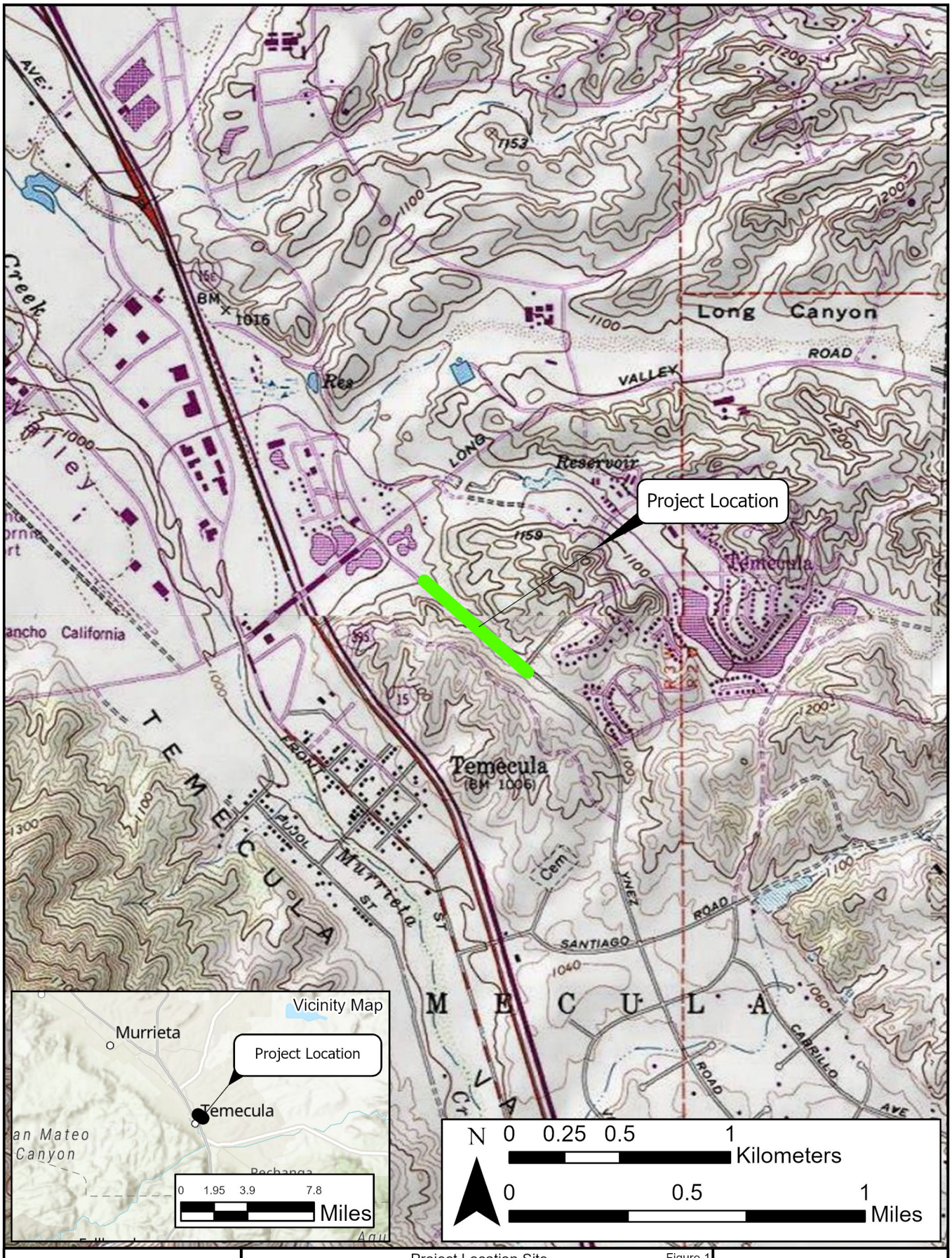
NATURAL SETTING

The elevation of the project site is approximately 1,055 to 1,125 feet above mean sea level (AMSL). It has been subject to disturbances related to surface erosion (sheet washing and rilling) and surface clearing and grubbing related to a recent development project in the property adjacent to the south side of the project site. Surficial geological deposits within the project site naturally included Holocene and latest Pleistocene, unconsolidated deposits of alluvial fan gravels, sands, and silts (Tan and Kennedy 2000). The current study has not yielded any evidence that such sediments have produced raw materials used in prehistoric tool manufacture. Local rainfall ranges from 2 to 5 inches annually (Jaeger and Smith 1971:36-37). The project has a northwesterly aspect. The mild climate of the late Pleistocene allowed piñon-juniper woodland to thrive throughout most of the Mojave Desert (Van Devender et al. 1987). The vegetation and climate during this epoch attracted significant numbers of Rancholabrean fauna, including dire wolf, saber-toothed cat, short-faced bear, horse, camel, antelope, mammoth, as well as birds which included pelican, goose, duck, cormorant, and eagle (Reynolds 1988). The drier climate of the middle Holocene resulted in the local development of complementary flora and fauna, which remain largely intact to this day. Common native plants include creosote, cacti, rabbit bush, interior golden bush, cheesebush, species of sage, and various grasses. Common native animals include coyotes, cottontail and jackrabbits, rats, mice, desert tortoises, roadrunners, raptors, turkey vultures, and other bird species.

CULTURAL SETTING

Prehistoric Context

The local prehistoric cultural setting has been organized into many different chronological frameworks (see Warren and Crabtree 1986; Bettinger and Taylor 1974; Lanning 1963; Hunt 1960; Wallace 1958, 1962, 1977; Wallace and Taylor 1978; Campbell and Campbell 1935), although there is no definitive sequence for the entire region. The difficulties in establishing cultural chronologies for the Mojave Desert are a function of its enormous size and the small amount of archaeological excavations that have been conducted there. Moreover, throughout prehistory the Mojave Desert has been occupied sporadically by many groups, whose territories often overlap spatially and chronologically resulting in mixed artifact deposits. Due to dry climate and capricious geological processes, these artifacts rarely become integrated in-situ. Lacking a milieu hospitable to the preservation of cultural midden, geological



BCRCONSULTING LLC

Project Location Site
Ynez Road Improvements Project

Figure 1

Reference: ESRI; USGS Quad: Murrieta, California (1979); Temecula, California (1975)

ELMT Consulting

processes, these artifacts rarely become integrated in-situ. Lacking a milieu hospitable to the preservation of cultural midden, local chronologies have relied upon temporally diagnostic artifacts, such as projectile points, or upon the presence/absence of other temporal indicators, such as groundstone. Such methods are instructive, but can be limited by prehistoric occupants' concurrent use of different artifact styles, or by artifact reuse or re-sharpening, as well as researchers' mistaken diagnosis, and other factors (see Flenniken 1985; Flenniken and Raymond 1986; Flenniken and Wilke 1989). Recognizing the shortcomings of comparative temporal indicators, this study recommends review of Warren and Crabtree (1986), who have drawn upon this method to produce a commonly cited and relatively comprehensive chronology.

Ethnography

The project site is situated within the traditional boundaries of the Luiseño (Bean and Shipek 1978; Kroeber 1925). Typically, the native culture groups in southern California are named after nearby Spanish missions, and such is the case for this Takic-speaking population. For instance, the term "Luiseño" is applied to the natives inhabiting the region within the "ecclesiastical jurisdiction of Mission San Luis Rey…[and who shared] an ancestral relationship which is evident in their cosmogony, and oral tradition, common language, and reciprocal relationship in ceremonies" (Oxendine 1983:8). The first written accounts of the Luiseño are attributed to the mission fathers. Sparkman (1908), Oxendine (1983) and others produced later documentation. Prior to Spanish occupation of California, the territory of the Luiseño extended along the coast from Agua Hedionda Creek to the south, Aliso Creek to the northwest, and the Elsinore Valley and Palomar Mountain to the east. These territorial boundaries were somewhat fluid and changed through time. They encompassed diverse environments that included coastal beaches, lagoons and marshes, inland river valleys and foothills, and mountain groves of oaks and evergreens (Bean and Shipek 1978:551).

Like other Native American groups in southern California, the Luiseño caught and collected seasonally available food resources, and led a semi-sedentary lifestyle. Luiseño villages generally were located in valley bottoms, along streams, or along coastal strands near mountain ranges sheltered in canyons, near a water source, and in a location that was easily defended. Individuals from these villages took advantage of the varied resources available. They also established seasonal camps along the coast and near bays and estuaries to gather shellfish and hunt waterfowl (Kroeber 1925, Bean and Shipek 1978). The Luiseño lived in small communities, which were the focus of family life. Luiseño villages were politically independent, administered by a hereditary chief, and occupied by patrilineally linked extended families (Kroeber 1925; Bean and Shipek 1978). The Luiseño believed in private property, which covered items and land owned by the village, as well as items (houses, gardens, ritual equipment, trade beads, eagle nests, and songs) owned by individuals. Trespass against any property was punished (Bean and Shipek 1978:551). Luiseño subsistence was based primarily on seeds like acorns, grass seed, Manzanita, sunflower, sage, chia, and pine nuts. Seeds were dried and ground to be cooked into a mush. Game animals such as deer, rabbit, jackrabbit, wood rat, mice, antelope, and many types of birds supplemented their vegetal intake (Lightfoot and Parrish 2009:341-362). The Luiseño utilized fire for crop management and communal rabbit drives (ibid.; Bean and Shipek 1978:552).

History

Historic-era California is generally divided into three periods: the Spanish Period (1769 to 1821), the Mexican Period (1821 to 1848), and the American Period (1848 to present).

Spanish Period. The first European to pass through the vicinity was most likely Father Francisco Garces. Having become familiar with the area, Father Garces acted as a guide to Juan Bautista de Anza, who was commissioned to lead a group across the desert from a Spanish outpost in Arizona to set up quarters at the Mission San Gabriel in 1771 near what today is Pasadena (Beck and Haase 1974). Garces was followed by Alta California Governor Pedro Fages, who briefly explored the region in 1772. Searching for San Diego Presidio deserters, Fages had traveled through Riverside to San Bernardino, crossed the mountains into the Mojave Desert, and then to the San Joaquin Valley (Beck and Haase 1974).

Mexican Period. In 1821, Mexico overthrew Spanish rule and the missions began to decline. By 1833, the Mexican government passed the Secularization Act, and the missions, reorganized as parish churches, lost their vast land holdings, and released their neophytes (Beattie and Beattie 1974).

American Period. The American Period, 1848–Present, began with the Treaty of Guadalupe Hidalgo. In 1850, California was accepted into the Union of the United States primarily due to the population increase created by the Gold Rush of 1849. The cattle industry reached its greatest prosperity during the first years of the American Period. Mexican Period land grants had created large pastoral estates in California, and demand for beef during the Gold Rush led to a cattle boom that lasted from 1849–1855. However, beginning about 1855, the demand for beef began to decline due to imports of sheep from New Mexico and cattle from the Mississippi and Missouri Valleys. When the beef market collapsed, California ranchers lost their ranchos through foreclosure. A series of floods in 1861–1862, followed by a significant drought diminished the economic impact of local ranching. This decline combined with agricultural and real estate developments of the late 19th century, set the stage for diversified economic pursuits that have continued to proliferate (Beattie and Beattie 1974; Cleland 1941).

PERSONNEL

David Brunzell, M.A., RPA acted as the Principal Investigator for the current study. Nick Shepetuk, M.A., RPA acted as the Project Manager and compiled the technical report with contributions from BCR Consulting Staff Archaeologists John Defachelle, B.A., B.S., and Eduardo Gutierrez, B.S. BCR Consulting Staff Archaeologist Doug Kazmier, B.A., PGC completed the cultural resources records search. BCR Consulting Staff Archaeologist George Brentner, B.A., completed the pedestrian survey with Pechanga Band of Indians Representative Jocelyne Reyes.

METHODS

Research

Prior to fieldwork, a records search was conducted at the South Coastal Information Center (SCIC), located at San Diego State University. This archival research reviewed the status of all recorded historic and prehistoric cultural resources, and survey and excavation reports

completed within a one-mile radius of the project site. The Built Environment Resource Directory (BERD) was also reviewed to determine whether the project might affect any resources that have been found eligible for National Register or California Register listing by the California Office of Historic Preservation.

Field Survey

An archaeological field survey of the project site was conducted on July 29, 2025. The survey was conducted by walking parallel transects along 100 percent of the alignment frontage, including a 15-meter buffer on either side of it, where accessible. Sediment exposures were carefully inspected for evidence of cultural resources.

RESULTS

Research

Research completed through the SCCIC revealed that 71 cultural resource studies have taken place resulting in the recording of 35 cultural resources within a one-mile radius of the project site. Of the 71 previous studies, three have assessed the project site and no cultural resources have been previously identified within or adjacent to its boundaries. A records search summary is included below, and a complete records search bibliography is provided in Attachment A.

Table A. Cultural Resource Records Search Results

USGS 7.5 Min Quad	Resources Within One Mile of Project Site (Location)	Studies in Vicinity of Project Site
Murrieta (1979) and *Temecula* (1975), *California*	P-33-1382: Historic Graves/Cemetery (1 Mile NW) P-33-2134: Prehistoric Milling/Lithic Scatter (1/2 Mile SW) P-33-4949: Historic-Period Slaughterhouse (1 Mile SW) P-33-7737: Historic-Period Hotel (1/2 Mile SW) P-33-7738: Historic First National Bank (1/2 Mile SW) P-33-7739: Historic-Period Commercial Building (1/2 Mile SW) P-33-7740: Historic-Period Commercial Building (1/2 Mile SW) P-33-7741: Historic-Period Commercial Building (1/2 Mile SW) P-33-7742: Historic-Period Commercial Building (1/2 Mile SW) P-33-7750: Historic-Period Hotel (3/4 SW Mile) P-33-7751: Historic-Period House (1/2 Mile SW) P-33-7752: Historic-Period Commercial Building (1/2 Mile SW) P-33-7754: Historic-Period Commercial Building (1/2 Mile SW) P-33-7755: Historic-Period Church (1/2 Mile SW) P-33-7756: Historic-Period House (3/4 Mile SW) P-33-7758: Historic-Period House (3/4 Mile SW) P-33-7759: Historic-Period House (3/4 Mile SW) P-33-7760: Historic-Period House (3/4 Mile SW) P-33-7761: Historic-Period House (3/4 Mile SW) P-33-7762: Historic-Period House (3/4 Mile SW) P-33-7763: Historic-Period House (3/4 Mile SW) P-33-7764: Historic-Period House (3/4 Mile SW) P-33-7765: Historic-Period House (3/4 Mile SW) P-33-7767: Historic-Period House (1/2 Mile SW) P-33-7768: Historic-Period House (1/2 Mile SW) P-33-7769: Historic-Period House (1/2 Mile SW) P-33-7770: Historic-Period Resource (1/2 mile SW)	RI-201, 225, 707, 787, 864, 865, 1048*, 1176, 1426, 1824, 1987, 2216, 2239, 2360, 2388, 2434, 2435, 2729, 2817, 3025, 3116, 3189*, 3290, 3496, 4085, 4094, 4351, 4404*, 4531, 4654, 4877, 5205, 5533, 5539, 5720, 6048, 6059, 6612, 6831, 6877, 7009, 7274, 7540, 7574, 7646, 7879, 8199, 8363, 8387, 8408, 8487, 9146, 9161, 9257, 9446, 9517, 9747, 9799, 9810, 9913, 9966, 10048, 10058, 10088, 10114, 10220, 10414, 10483, 10790, 11082, 11129

USGS 7.5 Min Quad	Resources Within One Mile of Project Site (Location)	Studies in Vicinity of Project Site
	P-33-7771: Historic-Period House (3/4 Mile SW) P-33-7772: Historic-Period House (3/4 Mile SW) P-33-7773: Historic-Period House (3/4 Mile SW) P-33-7774: Historic-Period House (3/4 Mile SW) P-33-13686: Unspecified Prehistoric Resource (5/8 Mile NE) P-33-13712: Prehistoric Milling Feature (3/4 Mile SW) P-33-19848: Historic-Period House (1/2 Mile SW) P-33-26828: Isolated Prehistoric Artifact (1/2 Mile NE)	

*Previously assessed project site.

Field Survey

During the field survey, Mr. Brentner and Jocelyne Reyes carefully inspected the project site, and identified no cultural resources (including historic-period or prehistoric archaeological sites, or historic-period architectural resources) of any kind within the project site boundaries. The project site has been subject to severe disturbances associated with modern landscaping, and the construction of roads and nearby residential areas. Surface visibility was approximately 65 to 70 percent within the project site. Sediments observed were comprised of a light brown sandy loam.

RECOMMENDATIONS

The records search and field survey did not identify any cultural resources, including prehistoric or historic-period archaeological sites or historic-period buildings, located within or adjacent to the project boundaries. Based on these results, no significant impacts related to archaeological resources are anticipated and no further investigations or monitoring are recommended for any proposed project activities.

The current study attempted to determine whether significant archaeological deposits were present on the proposed project site. Although none were yielded during the records search and field survey, ground-disturbing activities have the potential to reveal buried deposits not observed on the surface. Prior to the initiation of ground-disturbing activities, field personnel should be alerted to the possibility of buried prehistoric or historic archaeological deposits. In the event that field personnel encounter buried archaeological materials, work in the immediate vicinity of the find should cease and a qualified archaeologist should be retained to assess the significance of the find. The qualified archaeologist should have the authority to stop or divert construction excavation as necessary. If the qualified archaeologist finds that any archaeological resources present meet eligibility requirements for listing on the California Register of Historical Resources (California Register) or the National Register of Historic Places (National Register), plans for the treatment, evaluation, and mitigation of impacts to the find will need to be developed. Prehistoric or historic archaeological materials that may be encountered during ground-disturbing activities include:

- historic-period artifacts such as glass bottles and fragments, cans, nails, ceramic and pottery fragments, and other metal objects;
- historic-period structural or building foundations, walkways, cisterns, pipes, privies, and other structural elements;

- prehistoric flaked-stone artifacts and debitage (waste material), consisting of obsidian, basalt, and or cryptocrystalline silicates;
- groundstone artifacts, including mortars, pestles, and grinding slabs;
- dark, greasy soil that may be associated with charcoal, ash, bone, shell, flaked stone, groundstone, and fire affected rocks;
- human remains.

Findings were positive during the Sacred Lands File search with the NAHC. The NAHC recommended contacting the Pechanga Band of Indians for more information. The City will initiate Assembly Bill (AB) 52 Native American Consultation for the project. Since the City will initiate and carry out the required Native American Consultation, the results of the consultation are not provided in this report. However, this report may be used during the consultation process, and BCR Consulting staff is available to answer questions and address concerns as necessary. A representative from Pechanga Band of Indians accompanied BCR Consulting personnel during the pedestrian field survey.

According to CEQA Guidelines, projects subject to CEQA must determine whether the project would "directly or indirectly destroy a unique paleontological resource". The Paleontological Overview provided in Appendix D has recommended that:

> The geologic units underlying the project area are mapped as the Pleistocene sandstone member of the Pauba Formation (Tan & Kennedy 2000, Geologic map of the Temecula 7.5-minute quadrangle, San Diego and Riverside counties, California: A digital database; Kennedy et al. 2003, Preliminary geologic map of the Murrieta 7.5' quadrangle, Riverside County, California). Pleistocene units such as the Pauba Formation are considered to be fossiliferous and highly paleontologically sensitive. Although the Western Science Center does not have any fossil localities within the project area or 1-mile radius, there is a fossil-bearing locality less than half a mile outside the radius and also in the Pauba Formation. Pleistocene units throughout Southern California have produced large quantities of fossils, such as the extensive collection from Diamond Valley Lake housed at Western Science Center.
>
> Any fossil specimens recovered from the project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Quaternary units, and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils from the study area.

If human remains are encountered during any proposed project activities, State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the County Coroner has made a determination of disposition pursuant to Public Resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a Most Likely Descendant (MLD). With the permission

of the landowner or his/her authorized representative, the MLD may inspect the site of the discovery.

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1977 A Half Century of Death Valley Archaeology. *The Journal of California Anthropology* 4(2):249-258.

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APPENDIX A

RECORDS SEARCH BIBLIOGRAPHY

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-00201	NADB-R - 1080258; Voided - MF-0194	1980	Nancy A. Wittney-Desautele	Archaeological Assessment	Scientific Surveys Inc.	
RI-00225	NADB-R - 1080282; Submitter - 245; Voided - MF-0212	1977	Ken Daly	An Archaeological Assessment of Areas A, B, and C, Rancho California, Riverside County, California	Archaeological Research Unit, U.C. Riverside	
RI-00707	NADB-R - 1080758; Voided - MF-0630	1979	Mark Roeder	An Archaeological/Paleontological Survey, Inventory and Assessment of the Proposed San Diego "Pipeline 5" Right-of-Way and Attendant Facilities Located in the Counties of Riverside and San Diego, California	Scientific Resource Surveys, Inc., Santa Ana, CA	33-000855
RI-00787	NADB-R - 1080839; Voided - MF-0708	1980	Larry L. Bowles and Jean A. Salpas	An Archaeological Assessment of Parcel 15012	Archaeological Consulatants	
RI-00864	NADB-R - 1080919; Other - UCRARU #501; Voided - MF-0782	1980	Renee Giansanti	Environment Impact Evaluation: An Archaeological Assessment of Tentative Tract 15265, Temecula Valley Area of Riverside County, California	Archaeological Research Unit, U.C. Riverside	
RI-00865	NADB-R - 1080920; Other - UCRARU #502; Voided - MF-0783	1980	Renee Giansanti	Environmental Impact Evaluation: An Archaeological Assessment of Tentative Tract 15458, Temecula Valley Area of Riverside, California	Archaeological Research Unit, U.C. Riverside	
RI-01048	NADB-R - 1081146; Voided - MF-0991	1980	Christopher W. White	Cultural Resource Inventory and Impact Assessment for the KACOR/Rancho California Property	Archaeological Systems Management, Inc.	33-001726, 33-001727, 33-001728, 33-001729, 33-001730, 33-001742, 33-001753
RI-01176	NADB-R - 1081285; Voided - MF-1121	1980	Roger J. Desautels	Archaeological Assessment of PM 16720	Scientific Resource Surveys, Inc., Santa Ana, CA	
RI-01426	NADB-R - 1081676; Voided - MF-1496	1982	BOWLES, LARRY L.	ARCHAEOLOGICAL ASSESSMENT FOR TENTATIVE PARCEL 18254	AUTHOR(S)	33-000050, 33-000270, 33-002134
RI-01824	NADB-R - 1082177; Voided - MF-1971	1984	DROVER, CHRISTOPHER E.	AN ARCHAEOLOGICAL ASSESSMENT OF PARCEL MAPS 19580 AND 19626 IN TEMECULA, CALIFORNIA	AUTHOR(S)	33-001382, 33-001384
RI-01987	NADB-R - 1082407; Voided - MF-2177	1985	MCCARTHY, DANIEL	AN ARCHAEOLOGICAL ASSESSMENT OF 3+ ACRES OF LAND IN THE TEMECULA AREA OF RIVERSIDE COUNTY	ARCHAEOLOGICAL RESEARCH UNIT, U.C. RIVERSIDE	
RI-02216	NADB-R - 1082647; Voided - MF-2403	1988	DROVER, C.E.	AN ARCHAEOLOGICAL ASSESSMENT OF VESTING TENTATIVE TRACT MAP 23160, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR(S)	

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-02239	NADB-R - 1082672; Voided - MF-2430	1988	DROVER, C.E.	AN ARCHAEOLOGICAL ASSESSMENT OF PM 23496, RANCHO CALIFORNIA AUTO CENTER ALTERNATIVE II, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR(S)	
RI-02360	NADB-R - 1082826; Voided - MF-2569	1988	SCIENTIFIC RESOURCE SURVEYS, INC.	ARCHAEOLOGICAL ASSESSMENT FORM: MURRIETA AREA OF RIVERSIDE COUNTY	SCIENTIFIC RESOURCE SURVEYS, INC.	
RI-02388	NADB-R - 1082886; Voided - MF-2628	1988	KELLER, JEAN SALPAS	AN ARCHAEOLOGICAL ASSESSMENT OF PLOT PLAN 10.864, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR(S)	
RI-02434	NADB-R - 1082926; Voided - MF-2667	1989	DROVER, C.E.	AN ARCHAEOLOGICAL ASSESSMENT OF PLOT PLAN 1101, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR(S)	
RI-02435	NADB-R - 1085211; Submitter - PA 97-0089; Voided - MF-2667	1997	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF TUSCANY RIDGE PA97-0089 13.80 ACRES OF LAND LOCATED IN TEMECULA, RIVERSIDE COUNTY, CALIFORNIA USGS MURRIETA, CALIFORNIA QUADRANGLE, 7.5' SERIES	AUTHOR	
RI-02729	NADB-R - 1083339; Voided - MF-2934	1990	KELLER, JEAN A.	AN ARCHAEOLOGICAL ASSESSMENT OF TENTATIVE TRACT MAP 25980 RIVERSIDE COUNTY, CALIFORNIA	AUTHOR	
RI-02817	NADB-R - 1083423; Voided - MF-3017	1990	DROVER, CHRISTOPHER E.	AN ARCHAEOLOGICAL ASSESSMENT OF TENTATIVE TRACT 23990 TEMECULA, CALIFORNIA	AUTHOR	
RI-03025	NADB-R - 1083572; Voided - MF-3250	1990	DROVER, CHRISTOPHER E.	AN ARCHAEOLOGICAL ASSESSMENT OF TENTATIVE TRACT 25981, TEMECULA, RIVERSIDE COUNTY, CALIFORNIA.	AUTHOR	
RI-03116	NADB-R - 1081142; Voided - MF-3338	1987	BISSELL, R.M.	A CULTURAL RESOURCES RECONNAISSANCE OF TENTATIVE PARCEL NO. 22515 NEAR TEMECULA, RIVERSIDE COUNTY, CALIFORNIA	RMW PALEO	
RI-03189	NADB-R - 1083751; Other - 89-90; Voided - MF-3408	1990	PEAK AND ASSOCIATES and Brian F. Mooney Associates	CULTURAL RESOURCES ASSESSMENT OF AT&T'S PROPOSED SAN BERNARDINO TO SAN DIEGO FIBER OPTIC CABLE, SAN BERNARDINO, RIVERSIDE AND SAN DIEGO COUNTIES, CALIFORNIA	PEAK AND ASSOCIATES & BRIAN F. MOONEY ASSOCIATES	

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-03290	NADB-R - 1083888; Voided - MF-3523	1991	KELLER, JEAN A.	AN ARCHAEOLOGICAL ASSESSMENT OF TENTATIVE PARCEL MAP 26845, 3.68 ACRES OF LAND IN TEMECULA, RIVERSIDE COUNTY, CALIFORNIA, USGS TEMECULA, CALIFORNIA QUADRANGLE, 7.5' SERIES	AUTHOR(S)	
RI-03496	NADB-R - 1084178; Voided - MF-3757	1992	JONES & STOKES ASSOCIATES, INC.	ARCHAEOLOGICAL SURVEY REPORT FOR RIVERSIDE COUNTY MURRIETA CREEK FLOOD CONTROL PROJECT	JONES & STOKES ASSOCIATES, INC.	33-001085
RI-04085	NADB-R - 1085241; Other - TR3552; Voided - MF-4536	1998	HORNE, MELINDA	CULTURAL RESOURCES SURVEY OF A 7.5 ACRE PARCEL LOCATED AT THE WESTERN EDGE OF TEMECULA VALLEY, RIVERSIDE COUNTY, CALIFORNIA	APPLIED EARTHWORKS	
RI-04094	NADB-R - 1085266; Submitter - 316; Voided - MF-4556	1998	LOVE, BRUCE, BAI "TOM" TANG, and Michael Hogan	CULTURAL RESOURCES REPORT: PROPOSED GENERAL MOTORS DEALERSHIP AT INTERSECTION OF SOLONA WAY AND YNEZ ROAD CITY OF TEMECULA, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	
RI-04351	NADB-R - 1085649; Voided - MF-4847	1999	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF TEMECULA VILLAGE (PA 99-0309/ PA 99-0310/ PA 99-0311), 22.97 ACRES OF LAND IN TEMECULA, RIVERSIDE COUNTY, CALIFORNIA.	AUTHOR	
RI-04404	NADB-R - 1085736; Voided - MF-4913	2000	JONES AND STOKES ASSOCIATES, INC.	FINAL CULTURAL RESOURCES INVENTORY REPORT FOR THE WILLIAMS COMMUNICATIONS, INC., FIBER OPTIC CABLE SYSTEM INSTALLATION PROJECT, RIVERSIDE TO SAN DIEGO, CALIFORNIA VOL I-IV.	JONES AND STOKES ASSOCIATES, INC.	33-000816, 33-000817, 33-000862, 33-001845, 33-002970, 33-003081, 33-003839, 33-004202, 33-004624, 33-004744, 33-004768, 33-007587, 33-007601, 33-008105, 33-008172, 33-009772, 33-009773, 33-009774, 33-009775, 33-009776
RI-04531	NADB-R - 1085892; Submitter - PBM031	2001	DUKE, CURT	LETTER REPORT: CULTURAL RESOURCE ASSESSMENT FOR CINGULAR WIRELESS FACILITY NO. SD 457-01, RIVERSIDE COUNTY, CALIFORNIA	LSA ASSOCIATES, INC.	
RI-04654	NADB-R - 1086013	2002	KELLER, JEAN A.	A PHASE I CULTURAL RESOURCES ASSESSMENT OF TENTATIVE TRACT MAP 30169, 4.57 ACRES OF LAND IN THE CITY OF TEMECULA, RIVERSIDE COUNTY, CALIFORNIA	AUTHOR	

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Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-04877	NADB-R - 1086239	2003	PEAK & ASSOCIATES, INC.	CULTURAL RESOURCES ASSESSMENT OF THE PROPOSED TEMECULA VALLEY REGIONAL WATER RECLAMATION FACILITY EFFLUENT PIPELINE, RIVERSIDE COUNTY, CALIFORNIA	PEAK & ASSOCIATES, INC.	33-010986
RI-05205	NADB-R - 1086568	2000	WHITE, LAURIE	RECORDS SEARCH RESULTS FOR SPRINT PCS FACILITY RV35XC0099C (TOWER PLAZA/ RANCHO CA TOWN CENTER), CITY OF TEMECULA, RIVERSIDE COUNTY, CA	MICHAEL BRANDMAN ASSOCIATES	
RI-05533	NADB-R - 1086896	2006	KELLER, JEAN A.	A PHASE I CULTURLA RESOURCES ASSESSMENT OF TENTATIVE TRACT MAP 30434, +/-31.98 ACRES OF LAND IN THE CITY OF TEMECULA, CALIFORNIA	JEAN KELLER	
RI-05539	NADB-R - 1086902	2006	KELLER, JEAN	A PHASE I CULTURAL RESORUCES ASSESSMENT OF TENTATIVE PARCEL MAP 30404, +/-5.19 ACRES OF LAND IN THE CITY OF TEMECULA, RIVERSIDE COUNTY, CALIFORNIA	JEAN KELLER	
RI-05720	NADB-R - 1087083	2005	HARPER, CAPRICE D.	PHASE I CULTURAL RESOURCES ASSESSMENT OF THE PROPOSED SELBY 21.22 ACRE DEVELOPMENT PROJECT, TEMECULA, RIVERSIDE COUNTY, CA	BONTERRA CONSULTING	
RI-06048	NADB-R - 1087411	2005	TETRA TECH, INC.	A PHASE I ARCHAEOLOGICAL SURVEY OF 4 ACRES FOR THE PROPOSED ELITE'S PLAZA PROJECT (APN 921-060-044, 921-060-046, 921-060-053) LOCATED EAST OF JEFFERSON AVENUE AND NORTH OF RANCHO CALIFORNIA ROAD, IN THE CITY OF TEMECULA, RIVERSIDE COUNTY,CALIFORNIA	TETRA TECH, INC.	
RI-06059	NADB-R - 1087422	2004	ANDREWS, SHERRI	ARCHAEOLOGICAL STUDY OF LOT 11 BUISNESS CENTER DRIVE, RIVERSIDE COUNTY, CALIFORNIA	ASM AFFILIATES	
RI-06612	NADB-R - 1087979; Submitter - CRM TECH CONTRACT #1866	2006	TANG, BAI "TOM", MICHAEL HOGAN, JOSH SMALLWOOD, and THOMAS SHACKFORD	HISTORICAL/ARCHAEOLOGICAL RESOURCES SURVEY REPORT: ASSESSOR'S PARCEL NUMBER 922-130-016, CITY OF TEMECULA, RIVERSIDE COUNTY, CALIFORNIA	CRM TECH	33-007770

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-06831	Submitter - CRM TECH Contract No. 2010	2007	Tang, Bai "Tom", Michael Hogan, Clarence Bodmer, Daniel Ballester, and Laura H. Shaker	Historical/Archaeological Resources Survey Report: Assessor's Parcel No. 944-290-022, in the City of Temecula, Riverside County, California	CRM TECH	
RI-06877	Other - DACW09-03-D-005; Submitter - Technical Report 05-89	2006	Jill Onken, Kerry D. Cato, Anne Q. Stoll, and Michael K. Lerch	Geoarchaeological Evaluation for the Murrieta Creek Flood Control and Ecosystem Restoration Project, Riverside County, California	Statistical Research, Inc.	33-000526
RI-07009		2006	White, Robert S. and White, Laura S.	A Cultural Resources Assessment of Tentative Tract 33584, a 7.4-Acre Parcel Located at the Northeast Corner of Mira Loma Drive and Rancho Vista Road, City of Temecula, Riverside County	Archaeological Associates	
RI-07274		2007	Robert S. White and Laura S. White	A Phase I Cultural Resources Assessment of the 1 Acre YMCA at Margarita Community Park Project (PA05-0365) Located at 29119 Margarita Road, City of Temecula, Riverside County	Archaeological Associates	
RI-07540		2007	Keller, Jean A.	A Phase I Cultural Resources Assessment of Pujol Street Apartments, Planning Application 07-0229, +-13.72 Acres of Land in the City of Temecula, Riverside County, California	Jean A. Keller, Cultural Resources Consultant	
RI-07574		2008	Patrick McGinnis and Hillary Murphy	Phase I Archaeological Assessment of 3-Acres Proposed for the Santiago Sedimentation Basin Project, Riverside County, California, APN 945-120-01, TPM No. 11125	Tierra Environmental Services, Inc.	
RI-07646		2005	Clifford, James, Scott Mattingly, and Brian F. Smith	A Cultural Resources Survey for the Star World Center Project, City of Temecula, Riverside County	Brian F. Smith and Associates	
RI-07879		2006	Pierson, Larry J. and Brian F. Smith	An Archaeological Report for the Mitigation Monitoring and Reporting Program at the Temecula Ridge Apartments Project, City of Temecula	Brian F. Smith and Associates	33-013686
RI-08199		2009	Robert J. Wlodarski	Field Reconnaissance Phase for the Proposed AT&T Wireless Telecommunications Site RS0152	Cellular Archaeological Resource Evaluations	
RI-08363		2009	Kathy Anderson and Madeleine Bray	Old Town Specific Plan Amendment, Temecula, Riverside County, California.	Environmental Science Associates	33-007737, 33-007738, 33-007739, 33-007740, 33-007750, 33-007752, 33-007757, 33-007758, 33-007759, 33-007760, 33-007761, 33-007773

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-08387	Other - BCR Consulting Project No. SYN0903	2009	David Brunzell	Letter Report: Cultural Resources Assessment of the Distributed Antennae Communications System Porject in the Cities of Temecula and Murrieta, Riverside County, California (BCR Consulting Project No. SYN0903).	BCR Consulting	
RI-08408		2009	Jean A. Keller	A Phase I Cultural Resources Assessment of Santiago Road Property APN 945-120-001 thru 004.	Jean A. Keller, PhD., Cultural Resources Consultant	
RI-08487	Other - 8-RIV-Temecula BRLO-Main Street P.M. (Project Number) 5459 (22)	2010	M.K. Meiser, Cheryl Bowden-Renna, Christy Dolan, and Rebecca McCorkle Apple	HISTORICAL RESOURCES EVALUATION REPORT FOR THE MAIN STREET BRIDGE REPLACEMENT PROJECT CITY OF TEMECULA, RIVERSIDE COUNTY, CALIFORNIA	EDAW, Inc.	33-007750, 33-007754
RI-09146		2013	Tracy A.Stropes and Brian F. Smith	Phase I Archaeological Assessment for the Ridge Park Project, City of Temecula, California	Brian F. Smith and Associates, Inc.	
RI-09161		2009	Sara Clowery-Moreno and Brian F. Smith	Archaeological Assessment for the Ridge Park Plaza Project City of Temecula, California	Brian F. Smith and Associates.	33-002134
RI-09257		2011	David Brunzell	Cultural Resources Assessment of the NewPath Networks, LLC DAS Project in the Cities of Murrieta and Temecula, Riverside County, California (BCR Consulting Project No. SYN0901)	BCRConsulting Archaeology Historic Preservation Paleontology	
RI-09446		2015	Joan George and Josh Smallwood	Cultural Resource Assessment for the Uptown Temecula Auto Spa Project, City of Temecula, Riverside County, California	Applied Earthworks	
RI-09517		2014	David Brunzell	Cultural Resources Assessment of the Lyndie Project, Temecula, Riverside County, California (BCR Consulting Project No. TRF 1408)	BCR Consulting LLC	
RI-09747	Project No. 14-00924	2014	Robert Ramirez, Jennifer Peterson, and Kevin Hunt	Eastern Municipal Water District Temecula Valley Recycled Water Pipeline Project Cultural Resources Study	Rincon Consultants	
RI-09799		2015	Eric A. Rodriguez and Brian F. Smith	A Class III Section 106 (NHPA) Cultural Resource Study for the Southpointe Project, SPL-2015-00849-PJB Temecula, California	Brian F. Smith & Associates	

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-09810	Other - LSA Project No. TRD1701	2017	Gini Austerman	Archaeological Resources Assessment PA17-0324 Marketplace Project, Assessor's Parcel Numbers 922-360-004, 005, 006, and 007, City of Temecula, Riverside County, California	LSA	
RI-09913		2005	Wayne H. Bonner and Marnie Aislin-Kay	Cultural Resource Records Search and Site Visit Results for T-Mobile Telecommunications Facility Candidate IE04711A (Orchard Christian Fellowship), 42101 Moraga Road, Temecula, Riverside County, California	Michael Brandman Associates	
RI-09966		2017	Stacie Wilson	Cultural Resources Survey Report for the Proposed Temecula Hotel and Condominium Project, City of Temecula, Riverside County, California	Helix Environmental Planning, Inc.	
RI-10048		2002	LORNA BILLAT	LETTER REPORT: NEXTEL COMMUNICATIONS PROPOSED WIRELESS TELECOMMUNICATIONS SERVICE FACILITIES IN SOUTHERN CALIFORNIA	EARTHTOUCH LLC	
RI-10058		2009	Wayne H. Bonner and Arabesque Said	Cultural Resources Records Search Results For Verizon Wireless Canidate "Moontide" 30470 Pauba Road, Temecula, Riverside County, California	Michael Brandman Associates	
RI-10088	Other - TCNS ID # 115367	2014	Matthew Beazley and Matthew Fields	Archaeological Assessment: Proposed Collocation of Antennas on an Existing 73-Foot Stealth Telecommunications Equipment Compound.	Envioronmrntal Corporation of America	
RI-10114		2015	CANDACE EHRINGER, MICHAEL VADER, and CHRIS LOCKWOOD	ALTAIR SPECIFIC PLAN EIR PROJECT TEMECULA RIVERSIDE COUNTY CALIFORNIA	ESA	33-000270, 33-025246, 33-025247, 33-028069, 33-028070, 33-028071
RI-10220		2009	Diane F. Bonner and Robert J. Wlodarski	LETTER REPORT: Cultural Resources Record Search and Archaeological Survey Results for the proposed Royal Street Communications, California, LLC, Site LA3453A (Rancho Baptist Church) located at 29775 Santiago Road, Temecula, Riverside County, California 92592-3055	Historical Environmental Archaeological Research Team (H.E.A.R.T.)	
RI-10414		2018	Michael Vader	Vine Creek Apartments Project, City of Temecula, California	ESA	33-006486, 33-006877, 33-008363

Report List

Report No.	Other IDs	Year	Author(s)	Title	Affiliation	Resources
RI-10483		2018	David Brunzell	Cultural Resources Assessment Ynez Road Improvements Project Temecula, Riverside County, California	BCR Consulting LLC	
RI-10790	Other - CSL02031_LAC670	2018	Sarah A. Williams	Cultural Resources Record Search and Site Visit Results for AT&T Mobility, LLC Candidate CSL02031_LAC670 (DCH Chrysler Dodge Jeep), 26845 Ynez Road, Temecula, Riverside County, California CASPR #:3551A0B3ZV	Environmental Assessment Specialists, Inc.	
RI-11082		2020	Hannah Haas and Chrisopher Duran	Archaeological Monitoring for the Pala Force Main Project, Temecula, Riverside County, California	Rincon	
RI-11129		2019	Andrew J. Garrison and Brian F. Smith	A Section 106 (NHPA) Historic Resources Study for the Altair Project, SPL-2016-00641-PJB, City of Temecula, California	Brian F. Smith and Associates	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-33-001382	CA-RIV-001382	Other - TR: TV 2-1	Site	Historic	AH12	1976 (Pettus, n/a); 1984 (C.E. Drover, n/a)	RI-01824, RI-02502, RI-02903
P-33-002134	CA-RIV-002134		Site	Prehistoric	AP02; AP04	1982 (L.L. Bowles, n/a); 1998 (W.H. Bonner, Scientific Resource Surveys, Inc., Huntington Beach, CA.)	RI-01426, RI-01427, RI-02502, RI-09161
P-33-004949	CA-RIV-004949	Other - The Slaughter House; Other - JSA 6-H	Structure	Historic	HP08	1983 (Judy Stewart, Riverside County Historical Commission); 1992 (J. Russell, Jones & Stokes Associates, Inc.)	
P-33-007737		Other - Palomar Hotel; Other - Ser. No. 33-2390-3; National Register - 3s	Building, Structure	Historic	HP05	1983 (Pauline Larson, Riverside County Historical Comm.)	RI-08363
P-33-007738		Other - The Bank; Other - First National Bank; Other - Ser. No. 33-2390-4; National Register - 3S	Building	Historic	HP06	1983 (Pauline Graham, Riverside County Historical Comm.)	RI-08363
P-33-007739		Other - Faith Christian Center; Other - Machado Store; Other - Ser. No. 33-2390-5; National Register - 3S	Building	Historic	HP06; HP16	1983 (Pauline Graham, Riverside County Historical Comm.)	RI-08363
P-33-007740		Other - Swing Inn Café; Other - Clogstone Restaurant; Other - Ser. No. 33-2390-6; National Register - 5S2	Building	Historic	HP06	1983 (Joy Sullivan, Riverside County Historical Comm.)	RI-08363
P-33-007741		Other - Temecula Carpets; Other - Knott's Garage; Other - Ser. No. 33-2390-7; National Register - 5S2	Building	Historic	HP06	1983 (Joy Sullivan, Riverside County Historical Comm.)	
P-33-007742		Other - Munoa House; Other - Ser. No. 33-2390-8; National Register - 7N	Building	Historic	HP02	1983 (Joy Sullivan, Riverside County Historical Comm.)	
P-33-007750		Other - Hotel Temecula; Other - Welty Hotel; Other - Ser. No. 33-2390-9; National Register - 3S	Building	Historic	HP05	1983 (Pauline Graham, Riverside County Historical Comm.)	RI-08363, RI-08487
P-33-007751		Other - Pete Escallier House; Other - Alec Escallier House; Other - Ser. No. 33-2390-10; National Register - 3S	Building	Historic	HP02	1983 (Joy Sullivan, Riverside County Historical Comm.)	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-33-007752		Other - The Loft Antiques; Other - Friedeman Market; Other - Ser. No. 33-2390-11; Other - 5S	Building	Historic	HP06	1983 (Joy Sullivan, Riverside County Historical Comm.)	RI-08363
P-33-007754		Other - B & C Antiques; Other - Imigrant Office; Other - Ser. No. 33-2390-13; National Register - 3S	Building	Historic	HP06	1983 (Joy Sullivan, Riverside County Historical Comm.)	RI-08487
P-33-007755		Other - Saint Catherine's Church; Other - Ser. No. 33-2390-14; National Register - 3S	Building	Historic	HP16	1983 (Pauline Graham, Riverside County Historical Comm.)	
P-33-007756		Other - Jack Liefer House; Other - Al Burnham House; Other - Ser. No. 33-2390-15; National Register - 5S2	Building	Historic	HP02	1983 (Judy Stewart, Riverside County Historical Comm.)	
P-33-007758		Other - H. Raish House; Other - McConville House; Other - Ser. No. 33-2390-17; National Register - 3S	Building	Historic	HP02	1983 (Judy Stewart, Riverside County Historical Comm.)	RI-08363
P-33-007759		Other - Jim Freeman House; Other - Albert Nienke House; Other - Ser. No. 33-2390-18; National Register - 3S	Building	Historic	HP02	1983 (Judy Stewart, Riverside County Historical Comm.)	RI-08363
P-33-007760		Other - G. A. Burnham House; Other - Ser. No. 33-2390-19; National Register - 3S	Building	Historic	HP02	1983 (Mildred Tobin, Riverside County Historical Comm.)	RI-08363
P-33-007761		Other - Al Otto House; Other - Ser. No. 33-2390-20; National Register - 5S2	Building	Historic	HP02	1983 (Judy Stewart, Riverside County Historical Comm.)	RI-08363
P-33-007762		Other - The Jordan Home; Other - Fred Ramirez House; Other - Ser. No. 33-2390-21; National Register - 5S2	Building	Historic	HP02	1983 (Mildred Tobin, Riverside County Historical Comm.)	
P-33-007763		Other - Angel Ramirez House; Other - Ser. No. 33-2390-22; National Register - 5S2	Building	Historic	HP02	1983 (Pauline Graham, Riverside County Historical Comm.)	
P-33-007764		Other - Ser. No. 33-2390-23; National Register - 5S2	Building	Historic	HP02	1983 (J. Stewart, Riverside County Historical Comm.)	

Resource List

Primary No.	Trinomial	Other IDs	Type	Age	Attribute codes	Recorded by	Reports
P-33-007765		Other - Betty Otto House; Other - Harry Walters House; Other - Ser. No. 33-2390-24; National Register - 5S2	Building	Historic	HP02	1983 (Judy Stewart, Riverside County Historical Comm.)	
P-33-007767		Other - Tally House; Other - J. D. Welty; Other - Ser. No. 33-2390-26; National Register - 7R	Building	Historic	HP02	1983 (Pauline Graham, Riverside County Historical Comm.)	
P-33-007768		Other - Delgado House; Other - Ser. No. 33-2390-27; National Register - 7R	Building	Historic	HP02	1983 (Pauline Graham, Riverside County Historical Comm.)	
P-33-007769		Other - Arviso House; Other - Ser. No. 33-2390-28; Other - Amcal-2; National Register - 5S2	Building	Historic	HP02; HP06	1983 (Mildred Tobin, Riverside County Historical Comm.); 2011 (Laura S. White, Archaeological Associates)	
P-33-007770				Historic		1983 (B. Taylor, Riverside County Historical Comm.); 2006 (J. Smallwood)	RI-06612
P-33-007771		Other - Nellis Escallier House; Other - Pete Maureen House; Other - Ser. No. 33-2390-30; National Register - 5S2	Building	Historic	HP02	1983 (Joy Sullivan, Riverside County Historical Comm.)	
P-33-007772		Other - French House; Other - Ser. No. 33-2390-31; National Register - 5S2	Building	Historic	HP02	1983 (Jim Warner, Riverside County Historical Comm.)	
P-33-007773		Other - Escallier House; National Register - 3S	Building	Historic	HP02	1983 (Judy Stewart, Riverside County Historical Comm.)	RI-08363
P-33-007774		Other - Bill Friedeman House; Other - Ser. No. 33-2390-33; National Register - 3S	Building	Historic	HP02	1983 (Jim Warner, Riverside County Historical Comm.)	
P-33-013686				Prehistoric		2004 (Meier, H., Brian F. Smith and Associates)	RI-07879
P-33-013712			Site	Prehistoric	AP04; AP16	1982 (Bowles, L.L., UCR ARU)	
P-33-019848		Other - Baron Residence; Other - Amical-1	Building	Historic	HP02	2011 (Laura S. White, Archaeological Associates)	
P-33-026828		Other - LSA-DRH1701-I-1	Other	Prehistoric	AP16	2017 (Nicholas Bizzell, LSA)	

APPENDIX B

PHOTOGRAPHS

Photo 1: Overview of Project Area

Photo 2: Overview of Area Surrounding the North Side of the Central Project Area

Photo 3: Overview of Project Area

Photo 4: Overview of Project Area From Its South Portion

Photo 5: Overview of Project Area from N Portion

Photo 6: Overview of Project Area

APPENDIX C

NAHC SACRED LANDS FILE SEARCH

NATIVE AMERICAN HERITAGE COMMISSION

CHAIRPERSON
Reginald Pagaling
Chumash

VICE-CHAIRPERSON
Buffy McQuillen
Yokayo Pomo, Yuki, Nomlaki

SECRETARY
Sara Dutschke
Miwok

PARLIAMENTARIAN
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Luiseño

COMMISSIONER
Isaac Bojorquez
Ohlone-Costanoan

COMMISSIONER
Stanley Rodriguez
Kumeyaay

COMMISSIONER
Reid Milanovich
Cahuilla

COMMISSIONER
Bennae Calac
Pauma-Yuima Band of Luiseño Indians

COMMISSIONER
Vacant

ACTING EXECUTIVE SECRETARY
Michelle Carr

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov

July 17, 2025

George Brentner
BCR Consulting, LLC

Via Email to: bcrllc2008@gmail.com

Re: Ynez Road Improvements Project, Riverside County

To Whom It May Concern:

As requested, a search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed based on information submitted for the above referenced project. The results were positive. Please contact the Pechanga Band of Indians on the attached list for more information. Be aware that tribes do not always record their sacred sites in the SLF, nor are they required to do so. As such, an SLF search is not a substitute for consultation with all tribes that are traditionally and culturally affiliated with a project's geographic area.

Attached is a list of Native American tribes that are traditionally and culturally affiliated with the project's geographic area. Please contact all of the listed tribes as they may have information about sacred sites within the project area that is not listed with the NAHC.

If within two weeks of notification, a response has not been received, the Commission requests that you follow up with a telephone call or email to ensure that the project information was received.

If you receive notification of a change of address or phone number from a tribe, please inform the NAHC so that we can assure that our lists contain current information.

In addition to engaging in tribal consultation, you should consult the appropriate regional California Historical Research Information System (CHRIS) information center to determine whether it has information regarding the presence of recorded archaeological sites within the project area.

If you have any questions or need additional information, please contact me at Andrew.Green@nahc.ca.gov.

Sincerely,

Andrew Green

Andrew Green
Cultural Resources Analyst

Attachment

Native American Heritage Commission
Native American Contact List
Riverside County
7/17/2025

Tribe Name	Contact Person	Contact Address	Phone #	Email Address	Cultural Affiliation
Agua Caliente Band of Cahuilla Indians	Lacy Padilla, Director of Historic Preservation/THPO	5401 Dinah Shore Drive Palm Springs, CA, 92264	(760) 333-5222	ACBCI-THPO@aguacaliente.net	Cahuilla
Cahuilla Band of Indians	Anthony Madrigal, Tribal Historic Preservation Officer	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549	anthonymad2002@gmail.com	Cahuilla
Cahuilla Band of Indians	BobbyRay Esparza, Cultural Director	52701 CA Highway 371 Anza, CA, 92539	(951) 763-5549	besparza@cahuilla-nsn.gov	Cahuilla
Cahuilla Band of Indians	Erica Schenk, Chairperson	52701 CA Highway 371 Anza, CA, 92539	(951) 590-0942	chair@cahuilla-nsn.gov	Cahuilla
Juaneno Band of Mission Indians Acjachemen Nation - Belardes	Joyce Perry, Cultural Resource Director	4955 Paseo Segovia Irvine, CA, 92603	(949) 293-8522	kaamalam@gmail.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	Nathan Banda, Chairman	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(949) 426-8804	nbanda@jbmian.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	Heidi Lucero, THPO/MLD	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(562) 879-2884	thpo@jbmian.com	Juaneno
Juaneno Band of Mission Indians Acjachemen Nation 84A	Shannon Wingfield, Secretary	31411-A La Matanza Street San Juan Capistrano, CA, 92675	(949) 488-3484	webmaster@jbmian.com	Juaneno

Native American Heritage Commission
Native American Contact List
Riverside County
7/17/2025

La Jolla Band of Luiseno Indians	Wesley Ruise, Tribal Chairman	22000 Highway 76 Pauma Valley, CA, 92061	(760) 742-3771	wesley.ruisejr@lajolla-nsn.gov	Luiseno
Pala Band of Mission Indians	Christopher Nejo, Legal Analyst/Researcher	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3564	cnejo@palatribe.com	Cupeno Luiseno
Pala Band of Mission Indians	Shasta Gaughen, Tribal Historic Preservation Officer	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3515	sgaughen@palatribe.com	Cupeno Luiseno
Pala Band of Mission Indians	Alexis Wallick, Assistant THPO	PMB 50, 35008 Pala Temecula Road Pala, CA, 92059	(760) 891-3537	awallick@palatribe.com	Cupeno Luiseno
Pauma Band of Luiseno Indians	Temet Aguilar, Chairperson	P.O. Box 369 Pauma Valley, CA, 92061	(760) 742-1289	bennaecalac@aol.com	Luiseno
Pechanga Band of Indians	Steve Bodmer, General Counsel for Pechanga Band of Indians	P.O. Box 1477 Temecula, CA, 92593	(951) 770-6171	sbodmer@pechanga-nsn.gov	Luiseno
Pechanga Band of Indians	Tuba Ebru Ozdil, Pechanga Cultural Analyst	P.O. Box 2183 Temecula, CA, 92593	(951) 770-6313	eozdil@pechanga-nsn.gov	Luiseno
Quechan Indian Tribe of the Fort Yuma Reservation	Jonathan Koteen, President, Quechan Tribal Council	P.O.Box 1899 Yuma, AZ, 85366-1899	(760) 919-3600	executivesecretary@quechantribe.com	Quechan
Quechan Indian Tribe of the Fort Yuma Reservation	Jill McCormick, Historic Preservation Officer	P.O. Box 1899 Yuma, AZ, 85366-1899	(928) 261-0254	historicpreservation@quechantribe.com	Quechan
Rincon Band of Luiseno Indians	Joseph Linton, Tribal Council/Culture Committee Member	One Government Center Lane Valley Center, CA, 92082	(760) 803-3548	jlinton@rincon-nsn.gov	Luiseno

Native American Heritage Commission
Native American Contact List
Riverside County
7/17/2025

Rincon Band of Luiseno Indians	Cheryl Madrigal, Cultural Resources Manager/Tribal Historic Preservation Officer	One Government Center Lane Valley Center, CA, 92082	(760) 648-3000	cmadrigal@rincon-nsn.gov	Luiseno
Rincon Band of Luiseno Indians	Laurie Gonzalez, Tribal Council/Culture Committee Member	One Government Center Lane Valley Center, CA, 92082	(760) 484-4835	lgonzalez@rincon-nsn.gov	Luiseno
Rincon Band of Luiseno Indians	Denise Turner Walsh, Attorney General	One Government Center Lane Valley Center, CA, 92082	(760) 689-5727	dwalsh@rincon-nsn.gov	Luiseno
San Luis Rey Band of Mission Indians	Carmen Mojado, Secretary of Goverment Affairs	1889 Sunset Drive Vista, CA, 92083	(760) 917-1736	cjmojado@slrmissionindians.org	Luiseno
Santa Rosa Band of Cahuilla Indians	Vanessa Minott, Tribal Administrator	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	vminott@santarosa-nsn.gov	Cahuilla
Santa Rosa Band of Cahuilla Indians	Mercedes Estrada, Cultural Director	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	mestrada@santarosa-nsn.gov	Cahuilla
Santa Rosa Band of Cahuilla Indians	Steven Estrada, Tribal Chairman	P.O. Box 391820 Anza, CA, 92539	(951) 659-2700	sestrada@santarosa-nsn.gov	Cahuilla
Soboba Band of Luiseno Indians	Jessica Valdez, Cultural Resource Specialist	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-6261	jvaldez@soboba-nsn.gov	Cahuilla Luiseno
Soboba Band of Luiseno Indians	Joseph Ontiveros, Tribal Historic Preservation Officer	P.O. Box 487 San Jacinto, CA, 92581	(951) 663-5279	jontiveros@soboba-nsn.gov	Cahuilla Luiseno

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Ynez Road Improvements

APPENDIX D

PALEONTOLOGICAL OVERVIEW

WESTERN SCIENCE CENTER

July 9, 2025

BCR Consulting LLC
George Brentner
505 West 8th Street
Claremont, CA 91711

Dear George Brentner,

This letter presents the results of a record search conducted for the Ynez Road Improvements Project (EMT2502) in Temecula, Riverside County, California.

The geologic units underlying the project area are mapped as the Pleistocene sandstone member of the Pauba Formation (Tan & Kennedy 2000, *Geologic map of the Temecula 7.5-minute quandrangle, San Diego and Riverside counties, California: A digital database*; Kennedy et al. 2003, *Preliminary geologic map of the Murrieta 7.5' quadrangle, Riverside County, California*). Pleistocene units such as the Pauba Formation are considered to be fossiliferous and highly paleontologically sensitive. Although the Western Science Center does not have any fossil localities within the project area or 1-mile radius, there is a fossil-bearing locality less than half a mile outside the radius and also in the Pauba Formation. Pleistocene units throughout Southern California have produced large quantities of fossils, such as the extensive collection from Diamond Valley Lake housed at Western Science Center.

Any fossil specimens recovered from the project would be scientifically significant. Excavation activity associated with the development of the project area would impact the paleontologically sensitive Quaternary units, and it is the recommendation of the Western Science Center that a paleontological resource mitigation program be put in place to monitor, salvage, and curate any recovered fossils from the study area.

If you have any questions, or would like further information, please feel free to contact me at amcdonald@westerncentermuseum.org

Sincerely,

Andrew McDonald

Andrew McDonald, PhD
Curator

Ynez Road Improvements Project (EMT2502)

Project area + 1 mile radius

Legend

Q: Quaternary alluvium and marine deposits (Pliocene to Holocene)

Ynez Rd
Margarita Rd
Diaz Rd
Rancho California Rd
LAKE VILLAGE
Pauba Rd
Temecula
WINDSOR CREST
Old Town Front St
Via Santa Rosa
Principe 5
PALOMA DE
CSUS
N
4000 ft
Google Earth

Appendix D

Geotechnical Recommendations Report for the Proposed Widening of the East Side of Ynez Road between Station No. 101+99.21 and 117+61.56, Temecula, California

LGC Valley, Inc

October 16, 2024

LGC Valley, Inc.
Geotechnical Consulting

October 16, 2024 Project No. 174002-05

Ms. Kim Berry
TK Consulting, Inc.
2082 Michelson Drive, 4th Floor
Irvine, California 92612

Subject: ***Geotechnical Recommendations Report for the Proposed Widening of the East Side of Ynez Road between Station No. 101+99.21 and 117+61.56, Temecula, California***

In accordance with your request, LGC Valley, Inc. (LGC) has performed a geotechnical evaluation of the proposed widening of the east side of Ynez Road between Station No. 101+99.21 (southeast side of Tierra Vista Road) and Station No. 117+61.56 (northwest side of Rancho Vista Road) in the City of Temecula, California. The purpose of our study was to evaluate the existing on-site geotechnical conditions relative to the current grading/improvement plan design and to provide geotechnical recommendations applicable to the planned roadway median, east side travel lanes widening, and associated parkway improvements for the project. Our study included a review of the previous geotechnical documents relative to the Ynez Road improvements on the Rancho Highlands property by LGC; review of available pertinent geotechnical and geologic reports and maps relative to the general vicinity; a site reconnaissance; analysis of the collected data; and preparation of our findings, conclusions, and recommendations relative to the proposed Ynez Road widening improvements.

Based on our evaluation, it is our professional opinion that the site design is suitable from a geotechnical perspective provided the findings, conclusions, opinions, and recommendations contained within this report are

If you have any questions regarding our report, please contact this office. We appreciate this opportunity to be of service.

Respectfully submitted,

LGC VALLEY, INC.

Randall K. Wagner, CEG 1612
Senior Project Geologist

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Principal Engineer

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1.0 INTRODUCTION

1.1 Purpose and Scope of Services

The main purpose of this study was to evaluate the proposed widening of the east side of Ynez Road between Station No. 101+99.21 and Station No. 117+61.56 in the City of Temecula, California (Figure 1) from a geotechnical perspective and to provide preliminary geotechnical recommendations relative to the grading and improvement operations along the roadway. This report was prepared to summarize the existing geotechnical conditions; and to provide our geotechnical findings, conclusions, opinions, and recommendations relative to the grading of the roadway. Our scope of services included:

- Review of the latest Ynez Road Improvement Plans prepared by Proactive Engineering Consultants West, Inc. (PEC West), which was used as a base for our geotechnical map (Plate 1).

- Review of pertinent available geotechnical literature/publications, geologic maps, and aerial photographs (Appendix A).

- Review of previous geotechnical reports prepared by LGC for the adjacent Rancho Highlands development (Appendix A).

- Reconnaissance and geologic mapping of the site.

- Geotechnical analysis of the data accumulated during our study.

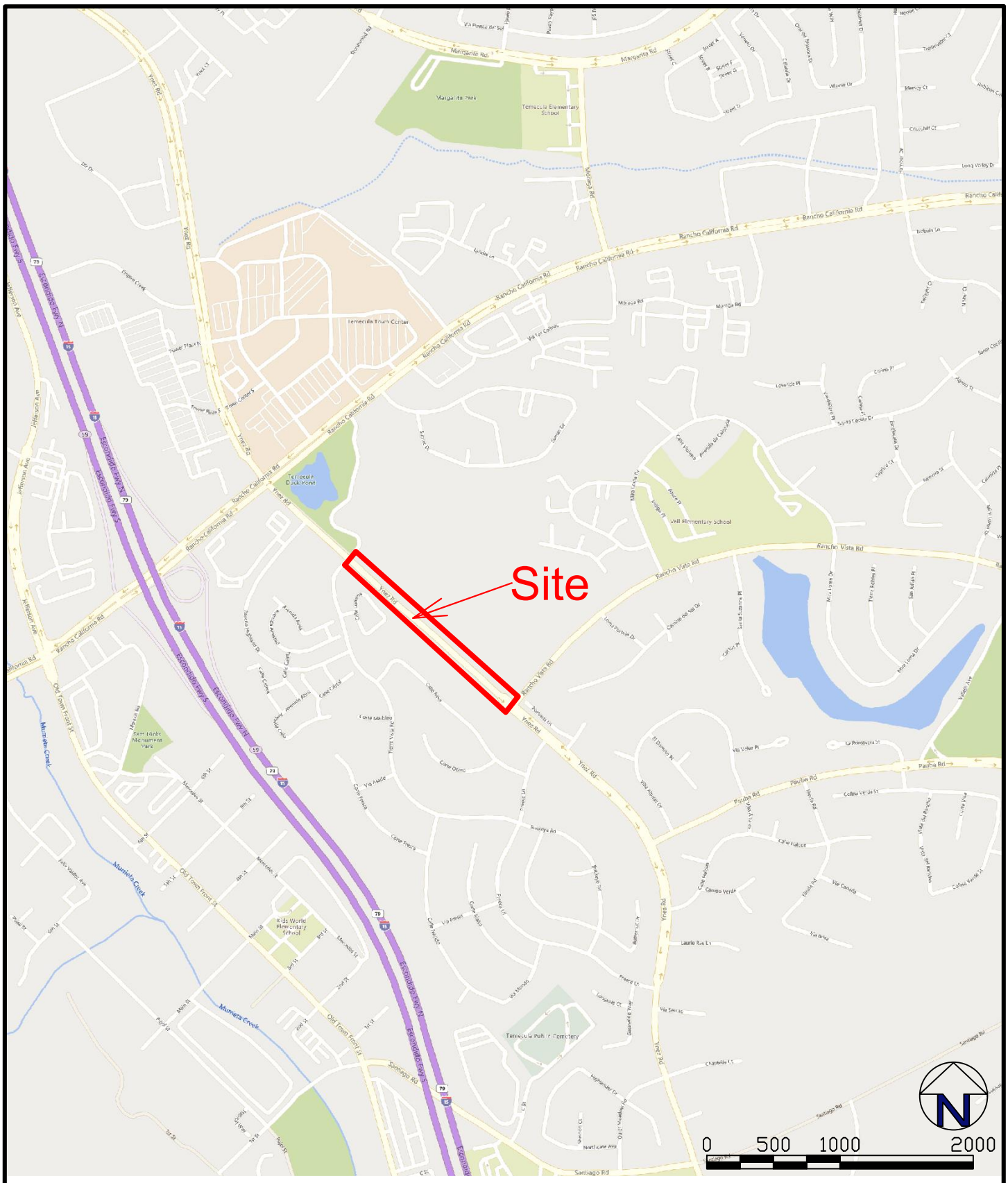
- Preparation of this report presenting our findings, conclusions, interpretations, and recommendations including the General Earthwork and Grading Specifications for Rough Grading (Appendix B) with respect to the proposed rough and post grading of the roadway.

1.2 Site and Project Description

The proposed street improvement/widening project is located along the east side of Ynez Road between Station No. 101+99.21 (southeast side of Tierra Vista Road) and Station No. 117+61.56 (northwest side of Rancho Vista Road) in the City of Temecula, California (Figure 1). The proposed Rancho Highlands multi-family development is located along the east side of Ynez Road from Station No. 101+99.21 to 107+26 while undeveloped property is located east of Station No. 107+26 to 117+61.56.

Elevations along the roadway range from approximately 1051 feet at the northwest end or the widening project to 1120 feet at the southeast end. In general, the site is located on the east flank of a small tributary canyon running parallel to Ynez Road in a northwest-southeast direction.

Based on the street improvement plans prepared by PEC West Inc. (PEC, 2024), the proposed improvements will include the addition of a second northbound travel lane creating a east-facing fill slope up to approximately 20 to 25-feet in height, a maximum 18-foot tall masonry retaining wall (between Station No. 110+61 and 112+10), a right-turn and left-turn pocket at Tierra Vista Road, a left-turn pocket at Rancho Vista Road, a raised center median between Station No. 101+90 and 107+25), a new curb/gutter and sidewalk along the east side of the roadway, new street lights, underground utilities, landscaping, etc. Estimated design earthwork quantities are approximately 6,000 cubic yards of fill with minimal cut.



Basemap: ESRI World Imagery Basemap, Accessed September 30, 2024

LGC

Figure 1
Site Location Map
Ynez Road Widening
Sta # 101+91.21 to 117+61.56
Temecula, California

Project Name	Ynez Road Widening
Project No.	174002-05
Eng. / Geol.	BIH/RKW
Scale	1" = 1000'
Date	October 16, 2024

2.0 GEOTECHNICAL CONDITIONS

2.1 Site Geology

Based on our subsurface investigation and geologic mapping during the development of the Rancho Highlands residential project, geologic reconnaissance mapping along the roadway widening, and review of available geologic maps and publications relative to the site and general vicinity (Appendix A), the roadway is composed of surficial units consisting of document artificial fill (Afd) placed during the Rancho Highlands grading operations, older artificial fill (Afo) associated with the construction of the existing portion of Ynez Road, and Quaternary-aged young alluvial deposits (Qya); that are underlain by the sandstone facies of the Pauba Formation (Qps). The approximate limits of the mapped units are indicated on the Geotechnical Map (Plate 1).

The documented fills along the northeast side of the proposed Ynez Road widening were placed during the grading of the Rancho Highlands residential development in November 2021 through February 2022. The fill soils generally consist of medium brown to gray yellow-brown and red brown, silty to clayey very fine to medium sands and silty fine to coarse sands (LGC, 2022a). The older fill along Ynez Road is related to the grading and construction of the existing portion of Ynez Road along the east side of the roadway and consist mainly of silty sands. Potentially compressible deposits of young alluvium were encountered along the entire east side of Ynez Road. As observed, these deposits primarily consist of medium to dark brown and gray to red-orange brown, silty to clayey very fine to medium sands that are low to highly expansive, porous, and contain scattered organics. The upper portion of the young alluvium is considered potentially compressible in the present state. The Early Pleistocene-Aged Pauba Formation, Sandstone Facies, as encountered during Rancho Highlands grading consists primarily of massively-bedded yellow gray-brown to light gray red-brown slightly silty to silty very fine to coarse sands with some interbedded clays.

2.2 Geologic Structure

The overall structure of the formational material in the general vicinity of the site is trending east-west to slightly northwest-southeast dipping 2 to 10 degrees to the north (Kennedy and Morton, 2003). Based on our professional experience, bedding within the Pauba Formation is massive to thickly-bedded. Jointing on-site is anticipated to be variable, but predominantly trends northwest-southeast (generally subparallel to the Elsinore Fault Zone), with dips moderately to steeply dipping (dips on the order of 45 to 89 degrees to the west).

2.3 Ynez Road Widening Between Station No. 101+80 and 107+25

Prior to grading along the east side of Ynez Road between Station No. 101+80 and 107+25, the area was cleared of light vegetation and other miscellaneous debris and the material was disposed of at an off-site facility. The upper 5 feet of the existing young alluvium within the limits of grading was removed to competent material (i.e. medium dense to dense young alluvial soils). Following the remedial removals, areas to receive fill were scarified approximately 6-inches, moisture-conditioned, as needed, to obtain a near-optimum moisture content and compacted to a minimum 90 percent relative compaction, as determined by ASTM Test Method D6938 (nuclear gauge method). The field density

test results and the approximate test locations are presented in the Rancho Highlands As-Graded Report of Rough and Precise Grading (LGC, 2022a).

Prior to the placement of the fill slope along the east side of Ynez Road between approximate Station No. 103+75 and 107+05, a fill slope key was constructed. The fill slope key was excavated at least 2 feet into competent soil along the toe-of-slope and constructed approximately 15 feet wide with the key bottom angled a minimum of 2 percent into-the-slope. The approximate location of the fill slope key is shown on the Geotechnical Map (Plate 1).

2.4 Landslides

Based on our geologic reconnaissance mapping along the Ynez Road; and review of the geotechnical reports of the site, general vicinity, and geologic literature (Appendix A); no evidence of landsliding or other slope instability conditions were observed in the vicinity or noted in the literature. Consequently, the potential for the existence of landslides is considered insignificant.

2.5 Groundwater

Based on our review of the State of California Department of Water Resources (CDWR) website, the project lies within the Temecula Valley Groundwater Basin which is part of the larger California South Coast Hydrogeologic Region (CDWR, 2003). As indicated in the 2003 update of California Bulletin 118 (CDWR, 2003), groundwater in the Temecula Valley Groundwater Basin is mainly located within the alluvial soils present in the area, and to a lesser extent, in the fractured basement rocks. The overall groundwater movement in the area of the site is towards the southeast.

During our subsurface investigation for the Rancho Highlands project (LGC, 2019), a perched groundwater condition was encountered within the lower portion of the young alluvial soils at a depth of 15 feet below the existing ground surface. The prior geotechnical investigation of the site by Converse in 1988 encountered ground water in the alluvial soils to the northwest of the site adjacent to the Temecula Duck Pond at depths ranging from approximately 12 to 17 feet below the existing ground surface (Converse, 1988).

While there is a perched groundwater condition in the lower portion of the alluvial soils along the east side of the Ynez Road improvements, groundwater is not expected to be a significant impact to the proposed development (provided the recommendations of this report are implemented during the design, grading, and construction of the proposed site improvements).

2.6 Faulting

The southern California region has long been recognized as being seismically active. The seismic activity results from a number of active faults that cross the region, all of which are related to the San Andreas transform system, a broad zone of right lateral faults that extend from Baja California to Cape Mendocino. The numerous faults in Southern California include Holocene-active and pre-Holocene faults. The definitions of fault activity terms used here are based on those developed for

the Alquist-Priolo (AP) Special Studies Zone Act of 1972 that was recently updated in January 2018 (CDCCGS, 2018).

Holocene-active faults are faults that have had surface displacement within Holocene time (i.e. the last 11,700 years before the present [BP]). Faults are considered pre-Holocene if the past movement is older than 11,700 years BP. A third category, age-undetermined faults are faults where the recency of faulting has not been determined (i.e. "a fault can be considered age-undetermined if the fault in question has simply not been studied in order to determine its recency of movement [CDCDMG, 2018]).

Regional active faults that occur within the southern California area include the on-shore and off-shore Rose Canyon-Newport Inglewood fault zone to the southwest, the Elsinore fault zone within a portion of the site, and the San Jacinto and San Andreas faults to the northeast. The closest known active fault to the site is the Wildomar fault (part of the Elsinore Fault Zone, Temecula Section) and is located just to the west of Ynez Road (Within 100 feet of the roadway).

Secondary effects of seismic shaking resulting from large earthquakes on the major faults in the southern California region include soil liquefaction and dynamic settlement. Other secondary seismic effects include shallow ground rupture, seiches and tsunamis. In general, these secondary effects of seismic shaking are a possibility throughout the Southern California region and are dependent on the distance between the site and the causative fault and the on-site geology.

2.7 Seismicity and Related Effects

The main seismic parameters to be considered when discussing the potential for earthquake-induced damage are the distances to the causative faults, earthquake magnitudes, and expected ground accelerations. We have performed site-specific analysis based on these seismic parameters for the site and the on-site geologic conditions. The results of our analysis are discussed in terms of the potential seismic events that could be produced by the maximum probable earthquakes. A maximum probable earthquake is the maximum earthquake likely to occur given the known tectonic framework.

2.7.1 Seismic Design Criteria

The site seismic characteristics were evaluated per the guidelines set forth in Chapter 16, Section 1613 of the 2022 California Building Code (CBC). The maximum considered earthquake (MCE) spectral response accelerations (S_{MS} and S_{M1}) and adjusted design spectral response acceleration parameters (S_{DS} and S_{D1}) for Site Class D are provided in Table 1.

Table 1 California Building Code Site Seismic Characteristics	
Selected Parameters from 2022 CBC, Section 1613 - Earthquake Loads	**Seismic Design Values**
Site Class (per Chapter 20 of ASCE 7)	D
Risk-Targeted Spectral Acceleration for Short Periods (S_S)	1.646g
Risk-Targeted Spectral Accelerations for 1-Second Periods (S_1)	0.614g
Site Coefficient F_a [per CBC Table 1613.3.3(1)]	1.0
Site Coefficient F_v [per CBC Table 1613.3.3(2)]	1.7
Site Modified Spectral Acceleration for Short Periods (S_{MS}) for Site Class D [Note: $S_{MS} = F_aS_S$]	1.646g
Site Modified Spectral Acceleration for 1-Second Periods (S_{M1}) for Site Class D [Note: $S_{M1} = F_vS_1$]	1.044g
Design Spectral Acceleration for Short Periods (S_{DS}) for Site Class D [Note: $S_{DS} = (^2/_3)S_{MS}$]	1.097g
Design Spectral Acceleration for 1-Second Periods (S_{D1}) for Site Class D [Note: $S_{D1} = (^2/_3)S_{M1}$]	0.696g
Seismic Design Category (per CBC Section 1613.2.5)	D

Section 1803.5.12 of the 2022 CBC (per Section 11.8.3 of ASCE 7) states that the maximum considered earthquake ground motions, Peak Ground Acceleration (PGA) should be used for the geotechnical evaluations. The PGA_M for the site is equal to 0.818g (USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2).

A deaggregation of the PGA based on a 2,475-year average return period indicates that an earthquake magnitude of 7.71 at a distance of approximately 1.5 kilometers (0.93 miles) from the site would contribute the most to this ground motion (USGS, 2020).

2.7.2 Liquefaction and Dynamic Settlement

Liquefaction is a seismic phenomenon in which loose, saturated, granular soils behave similarly to a fluid when subject to high-intensity ground shaking. Liquefaction occurs when three general conditions exist: 1) shallow groundwater; 2) low density non-cohesive (granular) soils; and 3) high-intensity ground motion. Liquefaction is typified by a buildup of pore-water pressure in the affected soil layer to a point where a total loss of shear strength occurs, causing the soil to behave as a liquid. Studies indicate that saturated, loose to medium dense, near surface cohesionless soils exhibit the highest liquefaction potential, while dry, dense, cohesionless soils and cohesive soils exhibit low to negligible liquefaction potential. Effects of liquefaction on level ground include settlement, sand boils, and bearing capacity failures below structures.

Based on the anticipated relative density of on-site soils and placement of compacted fill soils along the roadway; and the depth to the static groundwater in the area of the proposed roadway improvements; it is our opinion that the potential for liquefaction impacting the site is low, and seismically induced settlements are considered to be negligible.

During a strong seismic event, seismically induced settlement can occur within loose to moderately dense, dry or saturated granular soil. Settlement caused by ground shaking is often non-uniformly distributed, which can result in differential settlement. Based on in-situ densities, and soil types, dry sand settlement and induced surface manifestations are not considered an issue at the site.

2.8 Engineering Characteristics of the On-Site Soils

Based on our review of the laboratory test results of the adjacent Rancho Highlands project and our professional experience on adjacent sites with similar soils, the engineering characteristics of the on-site soils are discussed below.

Resistance Value: Resistance Value (i.e. R-Value) testing of representative soils samples during the development of the Rancho Highlands project indicates representative roadway soils possess R-Values ranging from 16 to 41 (LGC, 2022b).

Corrosivity Testing: Based on the limited corrosivity testing during the development of the Rancho Highlands project indicates representative roadway soils have a pH ranging from 6.52 to 6.73; a sulfate content of ranging from 0.009 to 0.079 percent; a chloride content ranging from 520 to 665 ppm, and a minimum resistivity of 960 to 1,700 (ohms-cm). Caltrans currently considers a site to be corrosive to foundation elements if one or more of the following conditions exist: chloride concentrations are greater than or equal to 500 ppm, sulfate concentrations are greater than or equal to 2000 ppm or the pH is 5.5 or less. Based on the Rancho Highlands project results, the site soils have negligible soluble sulfates and are considered corrosive per Caltrans criteria.

Excavation Characteristics: The roadway widening area is anticipated to be underlain by surficial units consisting of silty to sandy soils. It is anticipated that the on-site materials can be excavated

with conventional heavy-duty construction equipment and that difficult excavation and/or blasting is not anticipated.

3.0 CONCLUSIONS

Based on the results of our geotechnical evaluation of the Ynez Road improvements between Station No. 101+99.21 and 117+61.56, it is our professional opinion that the proposed improvement of Ynez Road is feasible from a geotechnical standpoint, provided the following conclusions and recommendations are incorporated into the project plans, specifications, and followed during the site grading operations. The following is a summary of the geotechnical conclusions derived from our study:

- The proposed roadway is composed of surficial units consisting of document artificial fill (Afd) placed during the Rancho Highlands grading operations, older artificial fill (Afo) associated with the construction of the existing portion of Ynez Road, and Quaternary-aged young alluvial deposits (Qya); that are underlain by the sandstone facies of the Pauba Formation (Qps). The approximate limits of the mapped units are indicated on the Geotechnical Map (Plate 1)

- Any undocumented fill, desiccated documented older fill soils, and the upper 5 feet of the young alluvial deposits are considered unsuitable in their present state and will require removal and recompaction in areas of proposed street improvements and design fills.

- The overall structure of the formational material in the general vicinity of the site is trending east-west to slightly northwest-southeast dipping 2 to 10 degrees to the north (Kennedy and Morton, 2003). Based on our professional experience, bedding within the Pauba Formation is massive to thickly-bedded.

- No evidence of landsliding or other slope instability conditions were observed in the vicinity or noted in the literature. Consequently, the potential for the existence of landslides is considered insignificant.

- The existing on-site soils appear to be suitable material for use as fill provided, they are relatively free of rocks (larger than 8 inches in maximum dimension), organic material and debris.

- While there is a perched groundwater condition in the lower portion of the alluvial soils along the east side of the Ynez Road improvements, groundwater is not expected to be a significant impact to the proposed development (provided the recommendations of this report are implemented during the design, grading, and construction of the proposed site improvements)

- Active faults are not known to exist along the proposed widening of Ynez Road; and consequently, the potential for surface rupture at the site is considered low.

- The main seismic hazard that may affect the site is ground shaking from one of the active regional faults.

- Resistance Value (i.e. R-Value) testing of representative soils samples during the development of the Rancho Highlands project indicates representative roadway soils possess R-Values ranging from 16 to 41.

- Based on limited laboratory testing and our professional experience on adjacent sites, the on-site soils have a low to high expansion potential, possess a negligible soluble sulfate content, and are considered corrosive per Caltrans criteria. However, some of the soils may possess a moderate to high sulfate content and may be very corrosive; therefore, corrosion testing should be performed at the completion of grading to assess this potential, as necessary.

- It is anticipated that the on-site materials can be excavated with conventional heavy-duty construction equipment and that difficult excavation and/or blasting is not anticipated.

- The anticipated site excavation and the proposed construction will not have an adverse impact on the adjacent properties.

4.0 RECOMMENDATIONS

4.1 Site Earthwork

We anticipate that earthwork at the site will consist of site preparation and remedial grading followed by subgrade preparation for the proposed roadway widening, placement of fills for the design slope, construction of the retaining wall, construction of curb and gutters, aggregate base and asphaltic concrete placement, and sidewalk construction. We recommend that earthwork and construction onsite be performed in accordance with the following recommendations, the City of Temecula and County of Riverside requirements, and the General Earthwork and Grading Specifications for Rough Grading included in Appendix B. In case of conflict, the recommendations in the following sections shall supersede those included as part of Appendix B.

4.1.1 Site Preparation

Prior to grading of areas to receive structural fill or pavement areas, the areas should be cleared of surface obstructions, any existing debris, potentially compressible material (such as undocumented or unsuitable fill soils, unsuitable alluvium, or weathered bedrock) and stripped of vegetation. Vegetation and debris should be removed and properly disposed of off-site. Holes resulting from the removal of buried obstructions or utilities, should be replaced with suitable compacted fill material. Areas to receive fill and/or other surface improvements should be scarified to a minimum depth of 6 inches, brought to a near-optimum moisture condition, and recompacted to at least 90 percent relative compaction (based on American Standard of Testing and Materials [ASTM] Test Method D1557).

4.1.2 Removal and Recompaction

As discussed in Section 2.2, the upper portion of the site east of the existing roadway is underlain by potentially compressible unsuitable soils (undocumented or unsuitable fill soils, unsuitable alluvium), which may settle under the surcharge of fill and/or traffic loads. Compressible materials not removed by the planned grading should be excavated to competent material and replaced with compacted fill soils. We anticipate that the upper 5 feet of the young alluvial soils, and upper 1 to 2 feet of existing fills will need to be removed and replaced with compacted fill.

From a geotechnical perspective, material that is removed may be placed as fill provided the material is relatively free from rocks (greater than 8 inches in maximum dimension), organic material and construction debris, is moisture-conditioned or dried (as needed) to obtain above-optimum moisture content, and then recompacted prior to additional fill placement or construction.

4.1.3 Fill Slope Key

Prior to the placement of the fill slop along the east side of Ynez Road; a fill slope key should be constructed. The fill slope key should be excavated at least 2 feet into competent soil along the toe-of-slope and constructed approximately 15 feet wide with the key bottom angled a minimum of 2 percent into-the-slope.

We also recommend that a subdrain be installed along the back bottom edge of the key. The outlet locations of the subdrains should be determined in the field during site grading. The subdrains should consist of a 4-inch diameter perforated PVC pipe surrounded by 3 cubic feet (per linear foot) of crushed rock wrapped in filter fabric (Marifi 140N or equivalent). The subdrain should have a minimum fall of 1-percent toward the outlet.

4.1.4 Temporary Excavation Stability

In general, all excavations should be performed in accordance with project plans, specifications, and all Occupational Safety and Health Administration (OSHA) requirements. Excavations should be laid back or shored in accordance with OSHA requirements before personnel or equipment are allowed to enter. Soil conditions should be mapped and frequently checked by a representative of LGC to verify conditions are as anticipated. The contractor shall be responsible for providing the "competent person" required by OSHA standards to evaluate soil conditions. Close coordination with the geotechnical engineer should be maintained to facilitate construction while providing safe excavations. Excavation safety is the responsibility of the contractor.

Temporary excavations maybe cut vertically up to five feet. Excavations over five feet should be slot-cut, shored, or cut no steeper than 1:1 (horizontal to vertical) slope gradient. Surface water should be diverted away from the exposed cut, and not be allowed to pond on top of the excavations. Temporary cuts should not be left open for an extended period of time.

4.1.5 Fill Placement and Compaction

From a geotechnical perspective, the on-site soils are suitable for use as compacted fill, provided they are screened of rocks greater than 8-inches in maximum dimension, organic material, and construction debris. Areas prepared to receive structural fill and/or other surface improvements should be scarified to a minimum depth of 6-inches, brought to at least optimum-moisture content, and recompacted to at least 90 percent relative compaction (based on ASTM Test Method D1557). The optimum lift thickness to produce a uniformly compacted fill will depend on the type and size of compaction equipment used. In general, fill should be placed in uniform lifts generally not exceeding 8-inches in loose thickness. Placement and compaction of fill should be performed in accordance with local grading ordinances under the observation and testing of the geotechnical consultant.

If possible, import soils should contain no materials over 3- to 6-inches in maximum dimension and have a very low expansion potential.

4.1.6 Trench Backfill and Compaction

The on-site soils may generally be suitable as trench backfill provided they are screened of rocks and other material over 3- to 6-inches in diameter and organic matter. Trench backfill should be compacted in uniform lifts (generally not exceeding 8-inches in compacted thickness) by mechanical means to at least 90 percent relative compaction (per ASTM Test Method D1557).

If trenches are shallow and the use of conventional equipment may result in damage to the utilities; clean sand, having sand equivalent (SE) of 30 or greater, should be used to bed and shade the utilities. Sand backfill should be densified. The densification may be accomplished by jetting or flooding and then tamping to ensure adequate compaction. A representative from LGC should observe, probe, and test the backfill to verify compliance with the project specifications.

4.2 Lateral Earth Pressures for Retaining Walls

The following lateral earth pressures may be used for the design of any future site retaining walls. Due to the expansive nature of some of the on-site clayey alluvium soils, we recommend site retaining walls be backfilled with either the very low expansive bedrock sandy soils (with minus 3-inch rock) or approved select soils. Approved select soils should consist of clean, granular soils (less than 15 percent passing the No. 200 sieve) of very low expansion potential (expansion index 20 or less based on UBC. 18-2). The recommended lateral pressures for approved select soils for level or sloping backfill are presented in Table 2.

Table 2
Lateral Earth Pressures for Retaining Walls

Conditions	Equivalent Fluid Weight (pcf)		
	Level Backfill	2:1 Backfill Sloping Upwards	Seismic Earth Pressure (pcf) *
	Approved Select Material	Approved Select Material	
Active	35	50	15
At Rest	51	80	--

* For walls with greater than 6-feet in backfill height, the above seismic earth pressure should be added to the static pressures given in the table above. The seismic earth pressure should be considered as an inverted triangular distribution with the resultant acting at 0.6H in relation to the base of the retaining wall footing (where H is the retained height). The aforementioned incremental seismic load was determined in general accordance with the standard of practice in the industry (using the Mononobe-Okabe method for active and Woods method for at-rest) for determining earth pressures as a result of seismic events.

For design purposes, the recommended equivalent fluid pressure for each case for walls founded above the static ground water and backfilled with approved select soils is provided in Table 2. The equivalent fluid pressure values assume free-draining conditions. If conditions other than those assumed above are anticipated, the equivalent fluid pressure values should be provided on an individual-case basis by the geotechnical engineer. Surcharge loading effects from the adjacent structures should be evaluated by the geotechnical and structural engineers.

Retaining wall structures should be provided with appropriate drainage and appropriately waterproofed. The outlet pipe should be sloped to drain to a suitable outlet. Typical wall drainage design is illustrated on Figure 2. It should be noted that the recommended subdrain does not provide protection against seepage through the face of the wall and/or efflorescence. Efflorescence is generally a white crystalline powder (discoloration) that results when water, which contains soluble salts, migrates over a period of time through the face of a retaining wall and evaporates. If such seepage or efflorescence is undesirable, retaining walls should be waterproofed to reduce this potential.

Lateral earth pressures are provided as equivalent fluid unit weights, in psf/ft of depth or pcf. These values do not contain an appreciable factor of safety. A soil unit weight of 120 pcf may be assumed for calculating the actual weight of soil. For sliding resistance, a friction coefficient of 0.35 may be used at the concrete and soil interface. Wall footings should be designed in accordance with structural considerations.

Shallow foundations may be designed for a maximum allowable bearing capacity of 1,500 lb/ft^2 (gross), for continuous footings a minimum of 12-inches wide and 12-inches deep; and spread footings 24-inches wide and 12-inches deep, into certified compacted fill. A factor of safety greater than 3 was used in evaluating the above bearing capacity value. This value maybe increased by 300 psf for each additional foot in depth and 150 psf for each additional foot of width to a maximum value of 2,500 psf.

Lateral forces on footings may be resisted by passive earth resistance and friction at the bottom of the footing. Foundations may be designed for a coefficient of friction of 0.35, and a passive earth pressure of 250 (375 $lb/ft^2/ft$ with no factor of safety). The passive earth pressure incorporates a factor of safety of greater than 1.5.

All footing excavations should be cut square and level as much as possible, and should be free of sloughed materials including sand, rocks and gravel, and trash debris. Subgrade soils should be pre-moistened for the assumed very low to low or medium expansion potential (to be confirmed at the completion of grading). These allowable bearing pressures are applicable for level (ground slope equal to or flatter than 5:1[horizontal to vertical]) conditions only.

Bearing values indicated above are for total dead loads and frequently applied live loads. The above vertical bearing may be increased by one-third for short durations of loading which will include the effect of wind or seismic forces.

4.3 Preliminary Pavement Recommendation

Based on an assumed R-value of 15 and a Traffic Index (TI) of 8.5 according to the County of Riverside Roadway Design Requirements (Riverside County Standard No. 114) for a roadway right-of-way of 100 feet (Riverside County, 2023), we recommend the following preliminary minimum street sections for Ynez Road (as indicated in Table 3). These recommendations should be confirmed with R-value testing of representative near-surface soils at the completion of grading. Final street sections should be confirmed by the project civil engineer based upon the projected Traffic Index. In addition, additional sections can be provided based on other traffic indices.

Table 3 Preliminary Pavement Design Sections	
Traffic Index	8.5
Asphalt Concrete (inches)	6
Aggregate Base (inches)	15

Prior to placement of the street aggregate base material, the upper 12 inches of subgrade soils should be scarified, moisture-conditioned (or dried back) as necessary to at least optimum moisture content and compacted to a minimum 90 percent relative compaction based on American Standard of Testing and Materials (ASTM) Test Method D1557.

Caltrans Class 2 Aggregate Base (Class 2 AB) or Greenbook Crushed Miscellaneous Base (CMB) should then be placed and compacted to a minimum 95 percent relative compaction in accordance with ASTM Test Method D1557. The aggregate base should conform to and be placed in accordance with the latest revision of the California Department of Transportation Standard Specifications (Section 26), the "Greenbook" Standard Specifications for Public Works Construction specifications, and/or the local jurisdictional requirements. Asphalt Concrete should conform to and be placed in accordance with the "Greenbook" Standard Specifications for Public Works Construction and the local jurisdictional requirements.

If vehicular concrete paving is proposed, the Portland Cement Concrete Pavement (PCCP) may be designed using a minimum of 10-inches of PCCP over 8-inches of compacted aggregate base. The modulus of rupture of the concrete should be a minimum of 600 pounds per square inch (psi) at 28 days. Contraction joints should be placed at maximum 20-foot spacings. Where the outer edge of a concrete pavement connects to an asphalt pavement, the concrete slab should be thickened by 50 percent at a taper not to exceed a slope of 1 in 10.

If pavement is planned adjacent to landscaped areas, we recommend that appropriate measures be taken (such as keeping the amount of landscape irrigation to a minimum, installing area drains, installing cutoff walls, or other devices, etc.) to reduce the possible adverse effects of water on the pavement subgrade.

4.4 Corrosivity to Concrete and Metal

The National Association of Corrosion Engineers (NACE) defines corrosion as "a deterioration of a substance or its properties because of a reaction with its environment." From a geotechnical viewpoint, the "environment" is the prevailing foundation soils and the "substances" are the reinforced concrete foundations or various buried metallic elements such as rebar, piles, pipes, etc., which are in direct contact with or within close vicinity of the foundation soil.

In general, soil environments that are detrimental to concrete have high concentrations of soluble sulfates and/or pH values of less than 5.5. ACI 318R-14 Table 19.3.1.1 provides specific guidelines

for the concrete mix design when the soluble sulfate content of the soils exceeds 0.1 percent by weight or 1,000 ppm. The minimum amount of chloride ions in the soil environment that are corrosive to steel, either in the form of reinforcement protected by concrete cover, or plain steel substructures such as steel pipes or piles, is 500 ppm per California Test 532.

Based on representative soil testing, the on-site soils are classified as having a negligible/So sulfate exposure condition in accordance with ACI 318R-14 Table 19.3.1.1. As a preliminary recommendation due to the results of sulfate content testing, concrete in contact with on-site soils should be designed in accordance with ACI 318R-14 Table 19.3.1.1 for the negligible/So category. It is also our opinion that the on-site soils should be preliminarily considered corrosive to buried metals. The client and/or other members of the design team should consider this potential as they determine necessary. LGC is not a corrosion consultant and does not provide recommendations related to corrosion.

4.5 ***Curb, Gutter and Sidewalk Recommendations***

Concrete flatwork (such as curb, gutter and sidewalks) has a high potential for cracking due to changes in soil volume related to soil-moisture fluctuations. To reduce the potential for excessive cracking and lifting, concrete should be designed per the following recommendations. These guidelines will reduce the potential for irregular cracking and promote cracking along construction joints but will not eliminate all cracking or lifting. Thickening the concrete and/or adding reinforcement will further reduce cosmetic distress.

Curb and gutters should be designed per city standards, as necessary. The curb and gutters should be anticipated to be underlain by the design aggregate base section used for the street section. Sidewalks should be designed per city standards, as necessary. The sidewalk should be underlain by a minimum of 4-inches of aggregate base.

The upper 6-inches of the subgrade for the curb and gutter should be compacted to a minimum relative compaction of 90 percent, and the subgrade soil should be at or above the optimum moisture content. The upper 6-inches of the subgrade for the sidewalks should be compacted to a minimum relative compaction of 90 percent, and the subgrade soil should be at or above the optimum moisture content. Aggregate base material should be Crushed Aggregate Base or Crushed Miscellaneous Base per SSPWC The "Greenbook" Section 200-2. Aggregate base material should be compacted to a minimum relative compaction of 95 percent. Curb and gutter and sidewalks should be provided with joints and expansion joins per usual practice/standards.

4.6 Control of Surface Water and Drainage Control

Positive drainage of surface water away from slopes and pavement areas is very important. No water should be allowed to pond adjacent to the roadway. Overwatering of landscape and planter areas must be avoided. Surface water runoff relative to project design is the purview of the project civil engineer.

4.7 Construction Observation and Testing

The recommendations provided in this report are based on limited subsurface observations and geotechnical analysis. The interpolated subsurface conditions should be checked in the field during construction by a representative of LGC.

Geotechnical observation and testing should be performed by the geotechnical consultant during site excavations, subgrade for slab/foundation, backfill of utility trenches, preparation of any subgrade and placement of aggregate base, or when any unusual soil conditions are encountered at the site. Grading plans, foundation plans, and final project drawings should be reviewed by this office prior to construction.

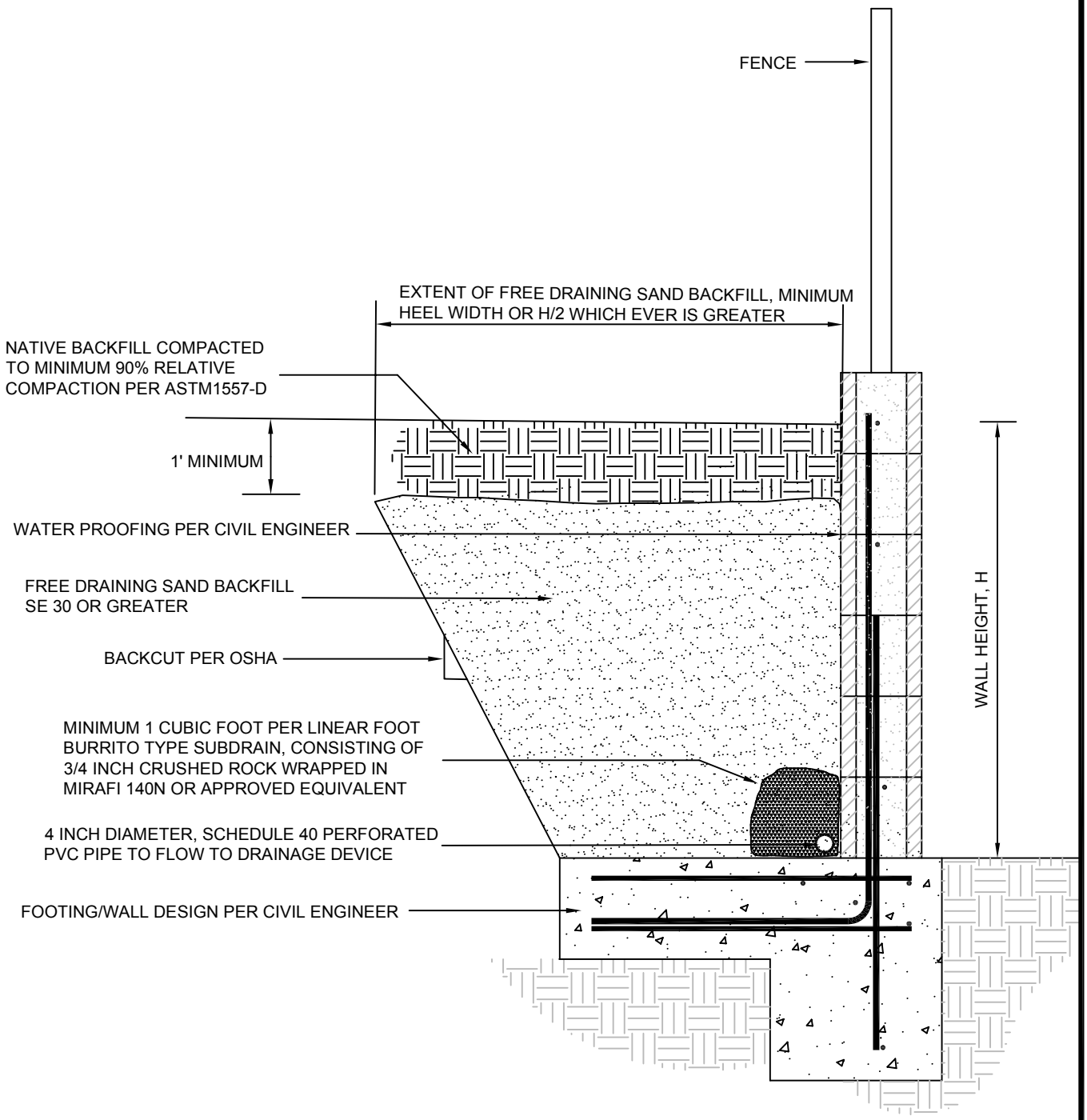
5.0 LIMITATIONS

Our services were performed using the degree of care and skill ordinarily exercised, under similar circumstances, by reputable engineers and geologists practicing in this or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report. The samples taken and submitted for laboratory testing, the observations made and the in-situ field testing performed are believed representative of the entire project; however, soil and geologic conditions revealed by excavation may be different than our preliminary findings. If this occurs, the changed conditions must be evaluated by the project soils engineer and geologist and design(s) adjusted as required or alternate design(s) recommended.

This report is issued with the understanding that it is the responsibility of the owner, or of his/her representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and/or project engineer and incorporated into the plans, and the necessary steps are taken to see that the contractor and/or subcontractor properly implements the recommendations in the field. The contractor and/or subcontractor should notify the owner if they consider any of the recommendations presented herein to be unsafe.

The findings of this report are valid as of the present date. However, changes in the conditions of a property can and do occur with the passage of time, whether they be due to natural processes or the works of man on this or adjacent properties.

In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control.



LGC

Figure 2
Retaining Wall Detail, Sand Backfill

Project Name	Ynez Road Widening
Project No.	174002-05
Eng.	BIH/RKW
Scale	Not To Scale
Date	October 16, 2024

APPENDIX A

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APPENDIX B

General Earthwork and Grading Specifications for Rough Grading

1.0 General

1.1 Intent: These General Earthwork and Grading Specifications are for the grading and earthwork shown on the approved grading plan(s) and/or indicated in the geotechnical report(s). These Specifications are a part of the recommendations contained in the geotechnical report(s). In case of conflict, the specific recommendations in the geotechnical report shall supersede these more general Specifications. Observations of the earthwork by the project Geotechnical Consultant during the course of grading may result in new or revised recommendations that could supersede these specifications or the recommendations in the geotechnical report(s).

1.2 The Geotechnical Consultant of Record: Prior to commencement of work, the owner shall employ a qualified Geotechnical Consultant of Record (Geotechnical Consultant). The Geotechnical Consultant shall be responsible for reviewing the approved geotechnical report(s) and accepting the adequacy of the preliminary geotechnical findings, conclusions, and recommendations prior to the commencement of the grading.

Prior to commencement of grading, the Geotechnical Consultant shall review the "work plan" prepared by the Earthwork Contractor (Contractor) and schedule sufficient personnel to perform the appropriate level of observation, mapping, and compaction testing.

During the grading and earthwork operations, the Geotechnical Consultant shall observe, map, and document the subsurface exposures to verify the geotechnical design assumptions. If the observed conditions are found to be significantly different than the interpreted assumptions during the design phase, the Geotechnical Consultant shall inform the owner, recommend appropriate changes in design to accommodate the observed conditions, and notify the review agency where required.

The Geotechnical Consultant shall observe the moisture-conditioning and processing of the subgrade and fill materials and perform relative compaction testing of fill to confirm that the attained level of compaction is being accomplished as specified. The Geotechnical Consultant shall provide the test results to the owner and the Contractor on a routine and frequent basis.

1.3 The Earthwork Contractor: The Earthwork Contractor (Contractor) shall be qualified, experienced, and knowledgeable in earthwork logistics, preparation and processing of ground to receive fill, moisture-conditioning and processing of fill, and compacting fill. The Contractor shall review and accept the plans, geotechnical report(s), and these Specifications prior to commencement of grading. The Contractor shall be solely

responsible for performing the grading in accordance with the project plans and specifications. The Contractor shall prepare and submit to the owner and the Geotechnical Consultant a work plan that indicates the sequence of earthwork grading, the number of "equipment" of work and the estimated quantities of daily earthwork contemplated for the site prior to commencement of grading. The Contractor shall inform the owner and the Geotechnical Consultant of changes in work schedules and updates to the work plan at least 24 hours in advance of such changes so that appropriate personnel will be available for observation and testing. The Contractor shall not assume that the Geotechnical Consultant is aware of all grading operations.

The Contractor shall have the sole responsibility to provide adequate equipment and methods to accomplish the earthwork in accordance with the applicable grading codes and agency ordinances, these Specifications, and the recommendations in the approved geotechnical report(s) and grading plan(s). If, in the opinion of the Geotechnical Consultant, unsatisfactory conditions, such as unsuitable soil, improper moisture condition, inadequate compaction, insufficient buttress key size, adverse weather, etc., are resulting in a quality of work less than required in these specifications, the Geotechnical Consultant shall reject the work and may recommend to the owner that construction be stopped until the conditions are rectified. It is the contractor's sole responsibility to provide proper fill compaction.

*2.0 **Preparation of Areas to be Filled***

2.1 Clearing and Grubbing: Vegetation, such as brush, grass, roots, and other deleterious material shall be sufficiently removed and properly disposed of in a method acceptable to the owner, governing agencies, and the Geotechnical Consultant.

The Geotechnical Consultant shall evaluate the extent of these removals depending on specific site conditions. Earth fill material shall not contain more than 1 percent of organic materials (by volume). No fill lift shall contain more than 10 percent of organic matter. Nesting of the organic materials shall not be allowed.

If potentially hazardous materials are encountered, the Contractor shall stop work in the affected area, and a hazardous material specialist shall be informed immediately for proper evaluation and handling of these materials prior to continuing to work in that area.

As presently defined by the State of California, most refined petroleum products (gasoline, diesel fuel, motor oil, grease, coolant, etc.) have chemical constituents that are considered to be hazardous waste. As such, the indiscriminate dumping or spillage of these fluids onto the ground may constitute a misdemeanor, punishable by fines and/or imprisonment, and shall not be allowed. The contractor is responsible for all hazardous waste relating to his work. The Geotechnical Consultant does not have expertise in this area. If hazardous waste is a concern, then the Client should acquire the services of a qualified environmental assessor.

2.2 ***Processing:*** Existing ground that has been declared satisfactory for support of fill by the Geotechnical Consultant shall be scarified to a minimum depth of 6 inches. Existing ground that is not satisfactory shall be overexcavated as specified in the following section. Scarification shall continue until soils are broken down and free from oversize material and the working surface is reasonably uniform, flat, and free from uneven features that would inhibit uniform compaction.

2.3 ***Overexcavation:*** In addition to removals and overexcavations recommended in the approved geotechnical report(s) and the grading plan, soft, loose, dry, saturated, spongy, organic-rich, highly fractured or otherwise unsuitable ground shall be overexcavated to competent ground as evaluated by the Geotechnical Consultant during grading.

2.4 ***Benching:*** Where fills are to be placed on ground with slopes steeper than 5:1 (horizontal to vertical units), the ground shall be stepped or benched. Please see the Standard Details for a graphic illustration. The lowest bench or key shall be a minimum of 15 feet wide and at least 2 feet deep, into competent material as evaluated by the Geotechnical Consultant. Other benches shall be excavated a minimum height of 4 feet into competent material or as otherwise recommended by the Geotechnical Consultant. Fill placed on ground sloping flatter than 5:1 shall also be benched or otherwise overexcavated to provide a flat subgrade for the fill.

2.5 ***Evaluation/Acceptance of Fill Areas:*** All areas to receive fill, including removal and processed areas, key bottoms, and benches, shall be observed, mapped, elevations recorded, and/or tested prior to being accepted by the Geotechnical Consultant as suitable to receive fill. The Contractor shall obtain a written acceptance from the Geotechnical Consultant prior to fill placement. A licensed surveyor shall provide the survey control for determining elevations of processed areas, keys, and benches.

3.0 Fill Material

3.1 ***General:*** Material to be used as fill shall be essentially free from organic matter and other deleterious substances evaluated and accepted by the Geotechnical Consultant prior to placement. Soils of poor quality, such as those with unacceptable gradation, high expansion potential, or low strength shall be placed in areas acceptable to the Geotechnical Consultant or mixed with other soils to achieve satisfactory fill material.

3.2 ***Oversize:*** Oversize material defined as rock, or other irreducible material with a maximum dimension greater than 8 inches, shall not be buried or placed in fill unless location, materials, and placement methods are specifically accepted by the Geotechnical Consultant. Placement operations shall be such that nesting of oversized material does not occur and such that oversize material is completely surrounded by compacted or densified fill. Oversize material shall not be placed within 10 vertical feet of finish grade or within 2 feet of future utilities or underground construction.

3.3 ***Import:*** If importing of fill material is required for grading, proposed import material shall meet the requirements of Section 3.1. The potential import source shall be given to the Geotechnical Consultant at least 48 hours (2 working days) before importing begins so that its suitability can be determined and appropriate tests performed.

4.0 Fill Placement and Compaction

4.1 ***Fill Layers:*** Approved fill material shall be placed in areas prepared to receive fill (per Section 3.0) in near-horizontal layers not exceeding 8 inches in loose thickness. The Geotechnical Consultant may accept thicker layers if testing indicates the grading procedures can adequately compact the thicker layers. Each layer shall be spread evenly and mixed thoroughly to attain relative uniformity of material and moisture throughout.

4.2 ***Fill Moisture Conditioning:*** Fill soils shall be watered, dried back, blended, and/or mixed, as necessary to attain a relatively uniform moisture content at or slightly over optimum. Maximum density and optimum soil moisture content tests shall be performed in accordance with the American Society of Testing and Materials (ASTM Test Method D1557-91).

4.3 ***Compaction of Fill:*** After each layer has been moisture-conditioned, mixed, and evenly spread, it shall be uniformly compacted to not less than 90 percent of maximum dry density (ASTM Test Method D1557-91). Compaction equipment shall be adequately sized and be either specifically designed for soil compaction or of proven reliability to efficiently achieve the specified level of compaction with uniformity.

4.4 ***Compaction of Fill Slopes:*** In addition to normal compaction procedures specified above, compaction of slopes shall be accomplished by backrolling of slopes with sheeps-foot rollers at increments of 3 to 4 feet in fill elevation, or by other methods producing satisfactory results acceptable to the Geotechnical Consultant. Upon completion of grading, relative compaction of the fill, out to the slope face, shall be at least 90 percent of maximum density per ASTM Test Method D1557-91.

4.5 ***Compaction Testing:*** Field tests for moisture content and relative compaction of the fill soils shall be performed by the Geotechnical Consultant. Location and frequency of tests shall be at the Consultant's discretion based on field conditions encountered. Compaction test locations will not necessarily be selected on a random basis. Test locations shall be selected to verify adequacy of compaction levels in areas that are judged to be prone to inadequate compaction (such as close to slope faces and at the fill/bedrock benches).

4.6 ***Frequency of Compaction Testing:*** Tests shall be taken at intervals not exceeding 2 feet in vertical rise and/or 1,000 cubic yards of compacted fill soils embankment. In addition, as a guideline, at least one test shall be taken on slope faces for each 5,000 square feet of slope face and/or each 10 feet of vertical height of slope. The Contractor shall assure that fill construction is such that the testing schedule can be accomplished by the Geotechnical Consultant. The Contractor shall stop or slow down the earthwork construction if these minimum standards are not met.

4.7 ***Compaction Test Locations:*** The Geotechnical Consultant shall document the approximate elevation and horizontal coordinates of each test location. The Contractor shall coordinate with the project surveyor to assure that sufficient grade stakes are established so that the Geotechnical Consultant can determine the test locations with sufficient accuracy. At a minimum, two grade stakes within a horizontal distance of 100 feet and vertically less than 5 feet apart from potential test locations shall be provided.

5.0 Subdrain Installation

Subdrain systems shall be installed in accordance with the approved geotechnical report(s), the grading plan, and the Standard Details. The Geotechnical Consultant may recommend additional subdrains and/or changes in subdrain extent, location, grade, or material depending on conditions encountered during grading. All subdrains shall be surveyed by a land surveyor/civil engineer for line and grade after installation and prior to burial. Sufficient time should be allowed by the Contractor for these surveys.

6.0 Excavation

Excavations, as well as over-excavation for remedial purposes, shall be evaluated by the Geotechnical Consultant during grading. Remedial removal depths shown on geotechnical plans are estimates only. The actual extent of removal shall be determined by the Geotechnical Consultant based on the field evaluation of exposed conditions during grading. Where fill-over-cut slopes are to be graded, the cut portion of the slope shall be made, evaluated, and accepted by the Geotechnical Consultant prior to placement of materials for construction of the fill portion of the slope, unless otherwise recommended by the Geotechnical Consultant.

7.0 Trench Backfills

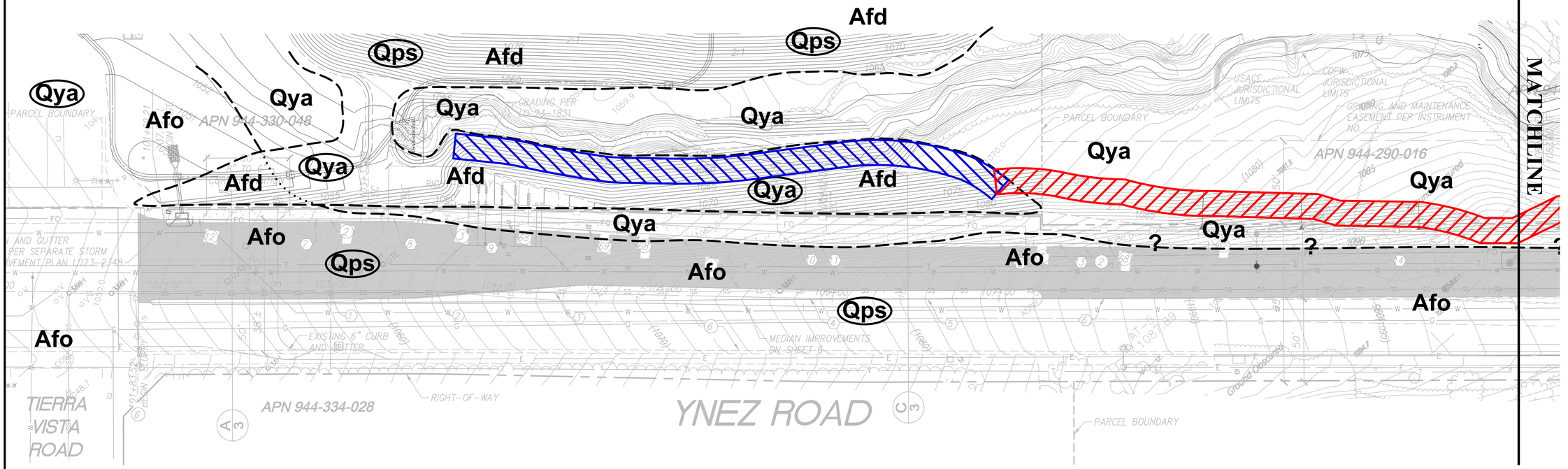
7.1 The Contractor shall follow all OHSA and Cal/OSHA requirements for safety of trench excavations.

7.2 All bedding and backfill of utility trenches shall be done in accordance with the applicable provisions of Standard Specifications of Public Works Construction. Bedding material shall have a Sand Equivalent greater than 30 (SE>30). The bedding shall be placed to 1 foot over the top of the conduit and densified by jetting. Backfill shall be placed and densified to a minimum of 90 percent of maximum from 1 foot above the top of the conduit to the surface.

7.3 The jetting of the bedding around the conduits shall be observed by the Geotechnical Consultant.

7.4 The Geotechnical Consultant shall test the trench backfill for relative compaction. At least one test should be made for every 300 feet of trench and 2 feet of fill.

7.5 Lift thickness of trench backfill shall not exceed those allowed in the Standard Specifications of Public Works Construction unless the Contractor can demonstrate to the Geotechnical Consultant that the fill lift can be compacted to the minimum relative compaction by his alternative equipment and method.



Geotechnical Map

Ynez Road Widening
Sta # 101+99.21 to 117+61.56
Temecula, California

LGC	Project Name	Ynez Road Widening
	Project No.	174002-05
	Eng. / Geol.	BIH/RKW
Plate 1	Scale	1" = 30'
	Date	October 16, 2024

0 15 30 60

Legend

- **Afd** - Artificial Fill, documented by LGC Valley during grading of Rancho Highlands
- **Afo** - Artificial Fill, older placed during construction of Ynez Road
- **Qya** - Quaternary-aged Young Alluvium, circled where buried
- **Qps** - Quaternary-aged Pauba Formation, circled where buried
- Approximate Location of Geologic Contact, dotted where buried, queried where uncertain
- Approximate Location of Existing Fill Slope Key
- Approximate Location of Recommended Fill Slope Key

Appendix E-1

Hydraulic Study for Ynez Road Improvements

JCL Engineering & Consulting, Inc

July 2, 2024

HYDRAULIC STUDY FOR YNEZ ROAD IMPROVEMENTS

CITY OF TEMECULA
CALIFORNIA

PREPARED FOR:

PROACTIVE ENGINEERING WEST
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DATE PREPARED:
JULY 2, 2024

This report has been prepared by or under the direction of the following registered civil engineer who attests to the technical information contained herein. The registered civil engineer has also judged the qualifications of any technical specialists providing engineering data upon which recommendations, conclusions, and decisions are based.

	7/02/2024	
Joseph L. Castaneda RCE 59835 Registered Civil Engineer	Date	Seal

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EXCERPT B: RANCHO HIGHLANDS APPROVED HYDROLOGY MAP
EXCERPT C: RANCHO HIGHLANDS APPROVED HYDROLOGY MODEL
EXCERPT D: RANCHO HIGHLANDS APPROVED STORM DRAIN PLANS
EXCERPT E: RANCHO HIGHLANDS LINE A HYDRAULIC MODEL

I. INTRODUCTION

The purpose of this study is to provide hydraulic analyses using HEC-RAS for the pre-project and post-project condition analyses for the proposed Ynez Road Improvements. The following task will be included in the report:

1. Pre-Project Condition Hydraulic Model that will assess the existing unnamed stream adjacent to Ynez Road.
2. Post-project Condition Hydraulic Model that will assess the existing unnamed stream adjacent to Ynez Road.
3. Comparative analyses between the HEC-RAS models to document any potential changes
4. Preparation of a report, which includes the hydraulic analyses, figures and design support.

II. PROJECT OVERVIEW

The Rancho Highlands project on behalf of the City of Temecula, is designing the proposed roadway improvement plans to extend Ynez Road to the intersection of Rancho Vista Road, as shown on Figure A. A hydraulic model using HEC-RAS has been prepared for the unnamed stream adjacent to the proposed improvements. The purpose of the HEC-RAS model is to assess any potential changes to the changes in the hydraulic operation of the stream adjacent to Ynez Road. Please note, this report did not study the flows tributary to the roadway cross section. The hydrology and hydraulic report for the Rancho Highlands Project assessed the offsite area tributary to the project that extended to Rancho Vista Road, see Excerpt C. The Rancho Highland Project proposed a catch basin and a storm drain pipe defined as Line B1, see Excerpt D Sheet 9A of 20, designed to intercept the tributary flows upstream of the proposed catch basin and generated by Ynez Road. Based on Figure D, the project will contribute an additional 0.5 acres to the project, which is highlighted in red, compared to the existing area. Line B1 has been designed as a 7 foot catch basin, which anticipated the Ynez Road extension.

III. PREVIOUS STUDIES ADJACENT TO YNEZ ROAD IMPROVEMENTS

Prior to commencing the hydraulic modelling for the unnamed stream, to be known as Stream A in this report, research of available plans and reports were obtained. The following data was used in the report:

1. Excerpt A, Tract Map 31344 which includes a storm drain system that discharges into Stream A. The total 100 year flow rate is 22.7 cfs. The 22.7 CFS connects to an existing 24” CMP pipe that crosses Rancho Vista Road.

2. Excerpt B, Rancho Highland Approved Offsite Hydrology Map. The hydrology map provides the nodes and areas that are tributary to Stream A, excluding the existing 24" CMP crossing Rancho Vista Road.
3. Excerpt C, Rancho Highland Approved Offsite Hydrology Model. The hydrology map provides the model that provides the peak flow calculations for the nodes shown on the hydrology map tributary to Stream A, excluding the existing 24" CMP crossing Rancho Vista Road.
4. Excerpt D, Rancho Highlands Storm Drain Improvement Plans that provides the downstream control for the hydraulic model performed as part of this study. Stream A will discharge into Line A Storm Drain shown on Sheet 3. The design of the Line A Wingwall has been designed to provide stability to the stream.
5. Excerpt E, Line A hydraulic model which provides the downstream water surface elevation and control for upstream hydraulic modelling.

Based on the data collected the flow rate at the upstream end of Stream A is 33.5 cfs which is equal to the 10.7 cfs flow rate for Node 102 plus the 22.7 cfs from the existing 24" CMP. The total flow rate downstream of Stream A is 58.7 cfs which is equal to the 36.0 cfs flow rate for Node 102 to Node 109 plus the 22.7 cfs from the existing 24" CMP.

IV. HYDRAULIC ANALYSES

This report has prepared two hydraulic models for the Ynez Road Improvement Plans as follows:

1. Pre-Project condition hydraulic model which assesses the existing Stream A using a peak flow rate that ranges from 33.5 cfs to 58.7 cfs. The hydraulic model was performed using the HEC-RAS 1D Program and the vertical datum is based on North American Vertical Datum 1988 (NAVD88). The model used 1 foot topographic mapping provided by Proactive Engineering Consultants, West.
2. The second model, defined as Post-Project Condition, represents the construction of Ynez Road Bridge which includes grading under along the Stream A Channel and a retaining wall. The goal of the Post-Project Condition is to demonstrate that the project does not adversely change the hydraulic conditions of Stream A.

Figure B is a HEC-RAS workmap that utilized a total of 34 cross sections to represent the Stream A system. The hydraulic model utilized flow rates from previous reports. The Manning's n values that were obtained from the model are based on the following:

1. The area within the incised channel utilized a Manning n Value of 0.040 to account for trees and shurbs.
2. Areas above the incised channel will use a Manning n value of 0.035.

In order to provide the most accurate model possible JLC provided flow rate, as shown

on Figure B at the following Stations:

1. Station 13+82 the HEC-RAS Model used a flow rate of 58.7 cfs to ensure that the model was conservative and included a full flow rate upstream of outlet point.
2. Station 19+54 the HEC-RAS Model used a flow rate of 41.7 cfs which is based on a flow rate of 22.7 cfs plus 19 cfs to account for approximately 50% of the flow rate tributary to Node 102 to 109.
3. Station 22+75 the HEC-RAS Model used a flow rate of 33.5 cfs which is based on a flow rate of 22.7 cfs plus 10.8 cfs.

The downstream control for the model is based on the Rancho Highland approved storm drain plans for Line A and the hydraulic model, included as Excerpt D and E. The downstream control is a water surface elevation of 1055.2. The HEC-RAS results are included in Appendix A.

Figure C is the workmap for the post-project condition which includes the Ynez Road improvements. The post-project condition hydraulic model utilized a total of 34 sections and the same flow rate conditions as the pre-project model. The results of the hydraulic model have been included in Appendix B. **Table A** has been provided to compare the difference in the change in water surface elevation and velocity between the post-project condition and the pre-project condition.

Table A: Water Surface & Velocity Comparison

	Water Surface			Velocity		
Section	Pre-Project	Post-Project	Difference	Pre-Project	Post-Project	Difference
1000	1055.2	1055.2	0.0	0.44	0.44	0.0
1029	1055.2	1055.2	0.0	1.13	1.13	0.0
1056	1055.2	1055.2	0.0	1.86	1.86	0.0
1106	1055.3	1055.3	0.0	2	2	0.0
1158	1055.3	1055.3	0.0	5.58	5.58	0.0
1208	1056.9	1056.9	0.0	5.67	5.67	0.0
1250	1058.0	1058.0	0.0	5.1	5.1	0.0
1289	1058.6	1058.6	0.0	3.1	3.1	0.0
1335	1060.0	1060.0	0.0	5.4	5.4	0.0
1382	1062.0	1062.0	0.0	5.5	5.5	0.0
1423	1063.9	1063.9	0.0	4.8	4.8	0.0
1459	1064.9	1064.9	0.0	3.9	3.9	0.0
1512	1066.0	1066.0	0.0	5.2	5.2	0.0
1541	1066.6	1066.6	0.0	2.9	2.9	0.0
1567	1066.9	1066.9	0.0	5.1	5.1	0.0
1593	1069.0	1069.0	0.0	5.3	5.3	0.0
1618	1071.8	1071.8	0.0	4.7	4.7	0.0
1697	1073.0	1073.0	0.0	2.8	2.8	0.0
1737	1073.2	1073.2	0.0	2.3	2.3	0.0

1757	1073.3	1073.3	0.0	3.0	3.0	0.0
1796	1073.6	1073.6	0.0	2.6	2.6	0.0
1835	1073.84	1073.84	0.0	4.81	4.81	0.0
1898	1075.23	1075.23	0.0	4.59	4.59	0.0
1954	1076.13	1076.13	0.0	3.78	3.78	0.0
2007	1077.73	1077.73	0.0	4.64	4.64	0.0
2042	1078.31	1078.31	0.0	2.48	2.48	0.0
2071	1078.78	1078.78	0.0	4.82	4.83	0.0
2090	1079.26	1079.27	0.0	4.14	4.14	0.0
2126	1080.64	1080.64	0.0	4.28	4.28	0.0
2136	1081.75	1081.75	0.0	4.61	4.61	0.0
2167	1083.77	1083.77	0.0	4.81	4.81	0.0
2192	1084.34	1084.34	0.0	3.72	3.72	0.0
2223	1084.68	1084.68	0.0	3.87	3.87	0.0
2250	1088.15	1088.15	0.0	5.25	5.25	0.0
2275	1090.14	1090.14	0.0	4.75	4.75	0.0

Based on the results of Table A, the HEC-RAS model indicates no change in water surface or change in velocities. As a result, the project improvements will not change the hydraulic conditions of Stream A or will not negatively impact how Stream A hydraulically operates. Velocity, which is a hydraulic condition within a stream, is typically used as a measure to determine potential scour. For example, if velocities increase in the system an increase in shear stress can occur which will potentially result in scour issues. The results indicate that the velocities within the system did not change; therefore, the project does not anticipate any scour issues induced by the project. The velocities resulting from the post-project model were compared to the maximum permissible velocity of 6 ft/s identified in the RCFC&WCD Hydraulic Design Manual for unreinforced vegetation lined channel, such area Stream A. The velocities within Stream A range from 2 ft/s to 5 ft/s. Please note, the project proposes a retaining wall at approximately Street Station 11+00. The velocities adjacent to the wall which are located between Section 17+37 to 19+54 have a velocity that ranges from 2.3 ft/s to 4.8 ft/s, which is below the maximum permissible velocity 6 ft/s.

After completing the hydraulic modelling, JLC reviewed the approved street improvement plans prepared by Proactive Engineering Consultants, West (PEC-W). Due to environmental jurisdictional issues, a retaining wall was needed to minimize disturbance to Stream A at Street Station 111+00. JLC carefully reviewed this area due to the height of the wall and the proximity to Stream A. The design of the wall will have a top of footing elevation that ranges at 1085.0. The face of the retaining wall has been setback approximately 30 feet from toe of the incised channel. The channel flowline is at elevation 1072.

Since scour and erosion are not anticipated due to the grading performed as part of the project, JLC performed a review of the topographic contours to assess potential long term scour issues that can be anticipated based on the existing natural terrain. Based on reviewing the topographic mapping, Stream A has vertical drop along the stream bed that appears to be related to head cutting. Even though the hydraulic parameters did not change between the pre-project and post-project conditions, JLC had to perform further investigation to understand the dynamic of Stream A. As a result, JLC assessed the abrupt vertical change and the potential head cutting that may migrate upstream. If the channel head cuts, Stream A may result in a 3 foot drop in the channel invert adjacent to the retaining wall. These types of conditions are not necessarily identified in hydraulic models and are investigated based on engineering judgment and experience. To mitigate the potential lateral scour and head cutting impacts, the retaining wall is proposing two mitigation measures that consist of the following:

1. A concrete cutoff wall that will protect lateral migration of the channel from eroding the compacted soil under the footing.
2. A ½ ton riprap apron placed adjacent to the concrete cutoff wall. The purpose of the riprap apron is to allow the riprap material to fill the stream bed side slopes should lateral erosion occur. The riprap is considered a self-healing method to stabilize the channel.

Based on the design, the proposed cutoff wall extends below the proposed footing key located at the toe of slope. The footing key, see Sheet 12 of the improvement plans, is 6.3 feet below the top of footing. The concrete cutoff wall has a depth of 12 feet below the key. As a result, the bottom of cutoff wall will be 18.3 feet (6.3 feet + 12 feet) below the top of footing which is equal to elevation 1066.7. Additionally, ½ ton riprap will be placed in front of the concrete cutoff wall. The riprap apron will provide a primary protection which will allow riprap to settle into any potential scour holes that is formed by both lateral erosion and headcutting. The concrete cutoff wall is a secondary protection measure.

V. CONCLUSIONS

The proposed Ynez Road has been assessed using the HEC-RAS model and the hydraulic analyses indicate that the channel dynamic will not occur due to the construction of Ynez Road. However, due to irregularities in the channel, scour associated with lateral erosion and headcutting was assessed. The scour mitigation measures for the retaining wall and shown on Sheet 12 of the plans have been designed to protect the project from lateral erosion and a potential of 5 feet of vertical change in channel invert. This is accomplished by providing a concrete cutoff wall and ½ ton riprap for protection.

VI. REFERENCES

1. Tract Map 31334, Street and Storm Drain Improvement Plans
2. Final Hydrology and Hydraulics Study For Rancho Highlands, dated September 2021
3. Storm Drain Improvement Plans for Rancho Highlands, dated September 2021
4. RCFC&WCD Hydraulic Design Manual, March 2024

FIGURES

FIGURE A: VICINITY MAP

VICINITY MAP

N

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A
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FIGURE A

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FIGURE B: PRE-PROJECT HEC RAS CROSS SECTION LOCATION

CITY OF TEMECULA YNEZ ROAD EXTENSION PROJECT

IN THE CITY OF TEMECULA, COUNTY OF SAN RIVERSIDE, STATE OF CALIFORNIA

PRE-PROJECT FLOODPLAIN MAP

FIGURE "B"

CITY OF TEMECULA
YNEZ ROAD EXTENSION

PRE-PROJECT HEC-RAS
FLOODPLAIN MAP

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Drawing Name: O:\271.01.18\Engineering\HEC-RAS\Exhibits\FIGURE B_PRE_PROJECT.dwg
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FIGURE C: PRE-PROJECT HEC RAS CROSS SECTION LOCATION

CITY OF TEMECULA YNEZ ROAD EXTENSION PROJECT

IN THE CITY OF TEMECULA, COUNTY OF SAN RIVERSIDE, STATE OF CALIFORNIA

POST-PROJECT FLOODPLAIN MAP

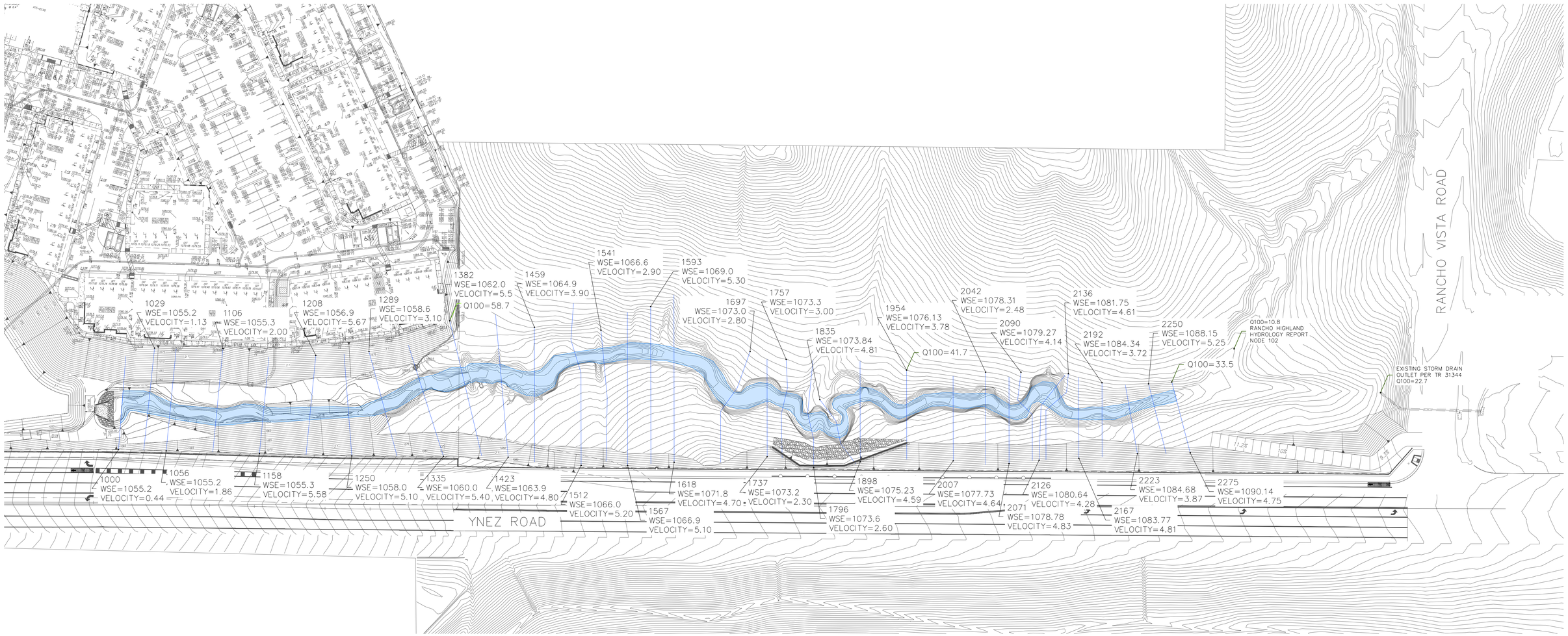

FIGURE "C"

CITY OF TEMECULA
YNEZ ROAD EXTENSION

POST-PROJECT HEC-RAS FLOODPLAIN MAP

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FIGURE D: YNEZ ROAD EXTENSION ADDITIONAL DRAINAGE AREA

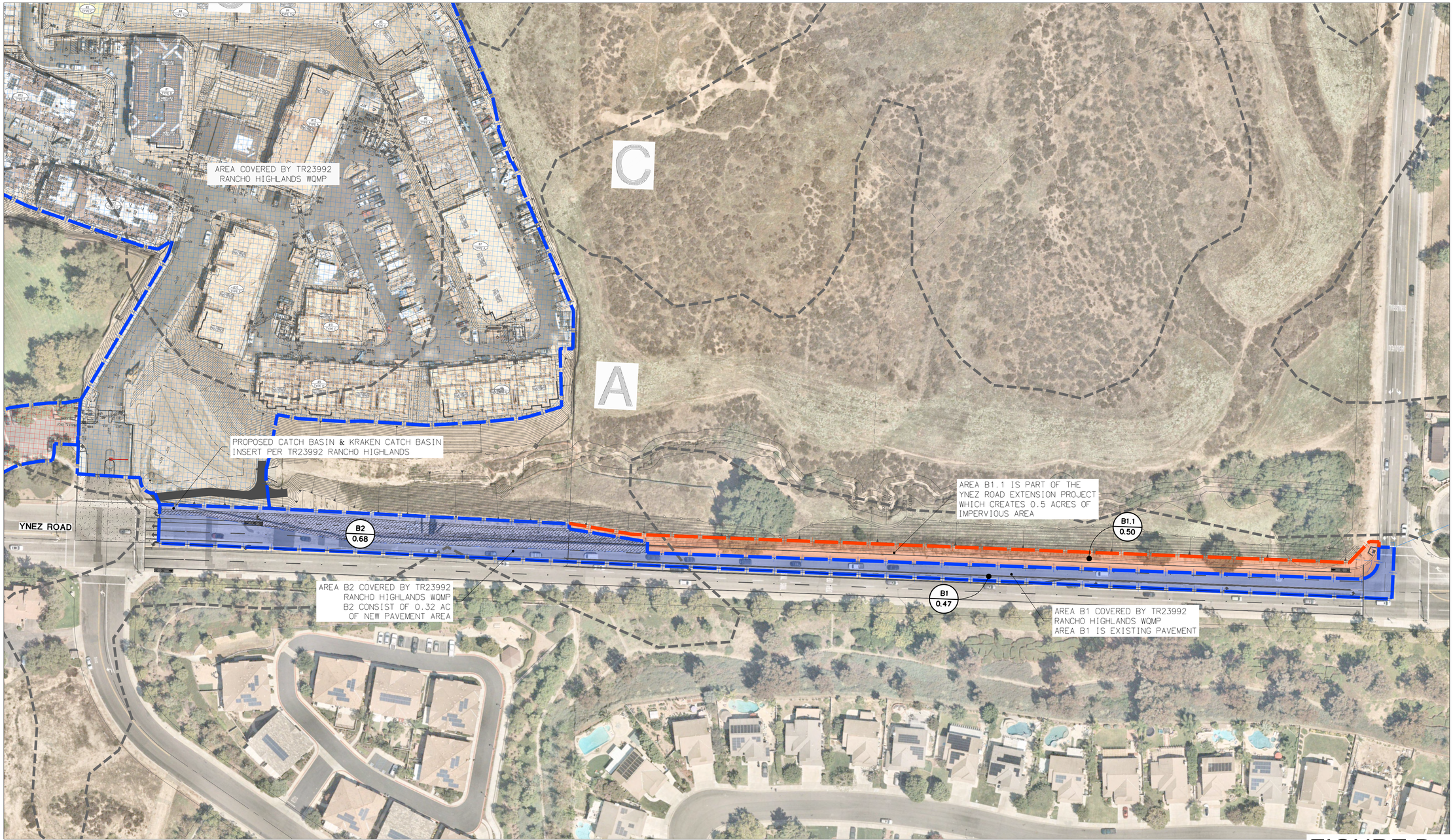

FIGURE D

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YNEZ ROAD EXTENSION

ADDITIONAL AREA FOR YNEZ ROAD

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TABLES

TABLE A: COMPARISON TABLE HEC-RAS RESULTS

TABLE A: YNEZ ROAD EXTENSIONTREET IMPROVEMENTS HEC-RAS RESULTS & COMPARATIVE ANALYSIS

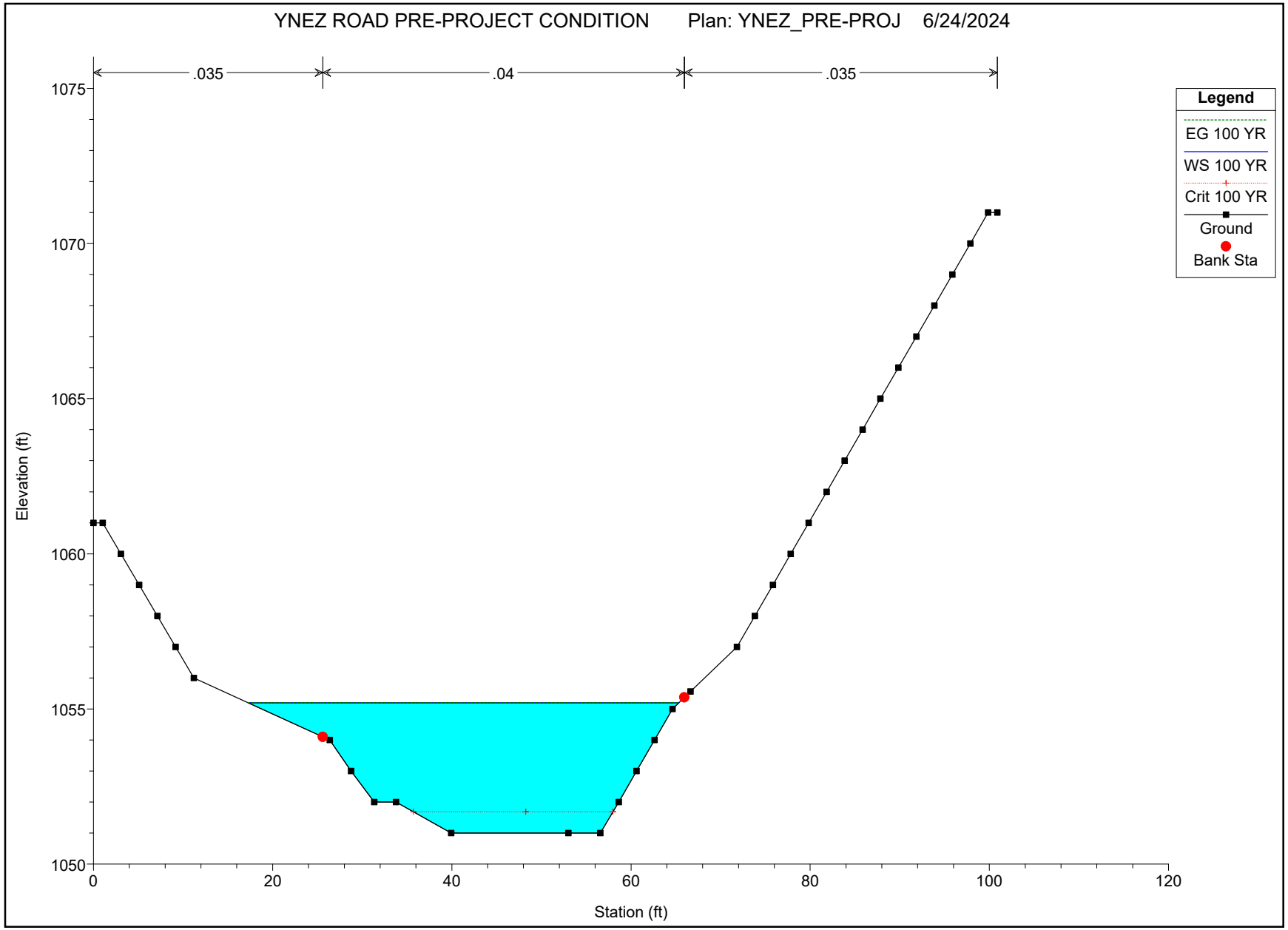
HEC-RAS SECTION NUMBER	EXISTING CONDITION WATER SURFACE ELEVATION	POST-PROJECT WATER SURFACE ELEVATION	Δ WATER SURFACE ELEVATION	EXISTING CONDITION VELOCITY	POST-PROJECT VELOCITY	ΔVELOCITY
1000	1055.2	1055.2	0	0.44	0.44	0
1029	1055.2	1055.2	0.0	1.13	1.13	0.0
1056	1055.2	1055.2	0.0	1.86	1.86	0.0
1106	1055.3	1055.3	0.0	2	2	0.0
1158	1055.3	1055.3	0.0	5.58	5.58	0.0
1208	1056.9	1056.9	0.0	5.67	5.67	0.0
1250	1058.0	1058.0	0.0	5.1	5.1	0.0
1289	1058.6	1058.6	0.0	3.1	3.1	0.0
1335	1060.0	1060.0	0.0	5.4	5.4	0.0
1382	1062.0	1062.0	0.0	5.5	5.5	0.0
1423	1063.9	1063.9	0.0	4.8	4.8	0.0
1459	1064.9	1064.9	0.0	3.9	3.9	0.0
1512	1066.0	1066.0	0.0	5.2	5.2	0.0
1541	1066.6	1066.6	0.0	2.9	2.9	0.0
1567	1066.9	1066.9	0.0	5.1	5.1	0.0
1593	1069.0	1069.0	0.0	5.3	5.3	0.0
1618	1071.8	1071.8	0.0	4.7	4.7	0.0
1697	1073.0	1073.0	0.0	2.8	2.8	0.0
1737	1073.2	1073.2	0.0	2.3	2.3	0.0
1757	1073.3	1073.3	0.0	3.0	3.0	0.0
1796	1073.6	1073.6	0.0	2.6	2.6	0.0
1835	1073.84	1073.84	0.0	4.81	4.81	0.0
1898	1075.23	1075.23	0.0	4.59	4.59	0.0
1954	1076.13	1076.13	0.0	3.78	3.78	0.0
2007	1077.73	1077.73	0.0	4.64	4.64	0.0
2042	1078.31	1078.31	0.0	2.48	2.48	0.0
2071	1078.78	1078.78	0.0	4.82	4.83	0.0
2090	1079.26	1079.27	0.0	4.14	4.14	0.0
2126	1080.64	1080.64	0.0	4.28	4.28	0.0
2136	1081.75	1081.75	0.0	4.61	4.61	0.0
2167	1083.77	1083.77	0.0	4.81	4.81	0.0
2192	1084.34	1084.34	0.0	3.72	3.72	0.0
2223	1084.68	1084.68	0.0	3.87	3.87	0.0
2250	1088.15	1088.15	0.0	5.25	5.25	0.0
2275	1090.14	1090.14	0.0	4.75	4.75	0.0

APPENDICES

APPENDIX A: PRE-PROJECT HEC-RAS HYDRAULIC MODEL

HEC-RAS Plan: YNEZ_PRE-PROJ River: YNEZ_RD_STREAM Reach: YNEZ RD Profile: 100 YR

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
YNEZ RD	1000	100 YR	58.70	1051.00	1055.20	1051.68	1055.20	0.000031	0.44	134.90	48.08	0.04
YNEZ RD	1029	100 YR	58.70	1052.00	1055.19		1055.21	0.000439	1.13	51.74	27.27	0.15
YNEZ RD	1056	100 YR	58.70	1052.00	1055.19		1055.24	0.001321	1.86	31.56	16.42	0.24
YNEZ RD	1106	100 YR	58.70	1053.00	1055.25		1055.32	0.001671	2.00	29.29	17.99	0.28
YNEZ RD	1158	100 YR	58.70	1054.00	1055.27	1055.27	1055.75	0.027295	5.58	10.52	10.99	1.01
YNEZ RD	1208	100 YR	58.70	1055.00	1056.87	1056.87	1057.37	0.026861	5.67	10.35	10.72	1.02
YNEZ RD	1250	100 YR	58.70	1056.00	1057.99	1057.91	1058.39	0.021617	5.09	11.54	11.85	0.91
YNEZ RD	1289	100 YR	58.70	1057.00	1058.62		1058.78	0.005111	3.14	18.70	13.19	0.46
YNEZ RD	1335	100 YR	58.70	1059.00	1060.02	1060.02	1060.48	0.027390	5.43	10.81	11.91	1.00
YNEZ RD	1382	100 YR	58.70	1061.00	1062.02	1062.02	1062.48	0.027000	5.46	10.75	11.73	1.01
YNEZ RD	1423	100 YR	41.70	1063.00	1063.92	1063.92	1064.28	0.027428	4.80	8.69	12.23	1.00
YNEZ RD	1459	100 YR	41.70	1064.00	1064.85		1065.09	0.017899	3.94	10.60	14.67	0.82
YNEZ RD	1512	100 YR	41.70	1065.00	1065.96	1065.96	1066.37	0.027169	5.18	8.06	9.71	1.00
YNEZ RD	1541	100 YR	41.70	1065.00	1066.56		1066.69	0.005116	2.91	14.32	11.58	0.46
YNEZ RD	1567	100 YR	41.70	1066.00	1066.92	1066.92	1067.32	0.027207	5.05	8.26	10.53	1.01
YNEZ RD	1593	100 YR	41.70	1068.00	1069.02	1069.02	1069.46	0.027234	5.28	7.89	9.23	1.01
YNEZ RD	1618	100 YR	41.70	1071.00	1071.78	1071.78	1072.12	0.027822	4.66	8.95	13.40	1.01
YNEZ RD	1697	100 YR	41.70	1072.00	1072.99		1073.12	0.007019	2.82	14.76	16.53	0.53
YNEZ RD	1737	100 YR	41.70	1072.00	1073.24		1073.32	0.003566	2.26	18.42	17.27	0.39
YNEZ RD	1757	100 YR	41.70	1072.00	1073.29		1073.43	0.006446	3.03	13.78	12.61	0.51
YNEZ RD	1796	100 YR	41.70	1072.00	1073.55		1073.65	0.004755	2.59	16.08	15.23	0.44
YNEZ RD	1835	100 YR	41.70	1073.00	1073.84	1073.84	1074.20	0.027630	4.81	8.67	12.17	1.00
YNEZ RD	1898	100 YR	41.70	1074.00	1075.23	1075.10	1075.56	0.017960	4.59	9.09	9.66	0.83
YNEZ RD	1954	100 YR	41.70	1075.00	1076.13		1076.35	0.011325	3.78	11.04	10.81	0.66
YNEZ RD	2007	100 YR	33.80	1077.00	1077.73	1077.73	1078.07	0.028526	4.64	7.28	10.96	1.00
YNEZ RD	2042	100 YR	33.80	1077.00	1078.31		1078.41	0.004259	2.48	13.65	12.09	0.41
YNEZ RD	2071	100 YR	33.80	1078.00	1078.78	1078.78	1079.14	0.028616	4.82	7.01	9.83	1.01
YNEZ RD	2090	100 YR	33.80	1078.00	1079.26	1079.04	1079.53	0.014101	4.14	8.16	8.10	0.73
YNEZ RD	2126	100 YR	33.80	1080.00	1080.64	1080.64	1080.92	0.028949	4.28	7.90	13.91	1.00
YNEZ RD	2136	100 YR	33.80	1081.00	1081.75	1081.75	1082.08	0.028545	4.61	7.33	11.25	1.01
YNEZ RD	2167	100 YR	33.80	1083.00	1083.77	1083.77	1084.13	0.028811	4.81	7.03	9.90	1.01
YNEZ RD	2192	100 YR	33.80	1083.00	1084.34		1084.56	0.010643	3.72	9.08	8.53	0.64
YNEZ RD	2223	100 YR	33.80	1083.00	1084.68		1084.91	0.011833	3.87	8.74	8.57	0.67
YNEZ RD	2250	100 YR	33.80	1087.00	1088.15	1088.15	1088.58	0.027695	5.25	6.44	7.61	1.01
YNEZ RD	2275	100 YR	33.80	1089.00	1090.14	1090.14	1090.49	0.027687	4.75	7.12	10.26	1.00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Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
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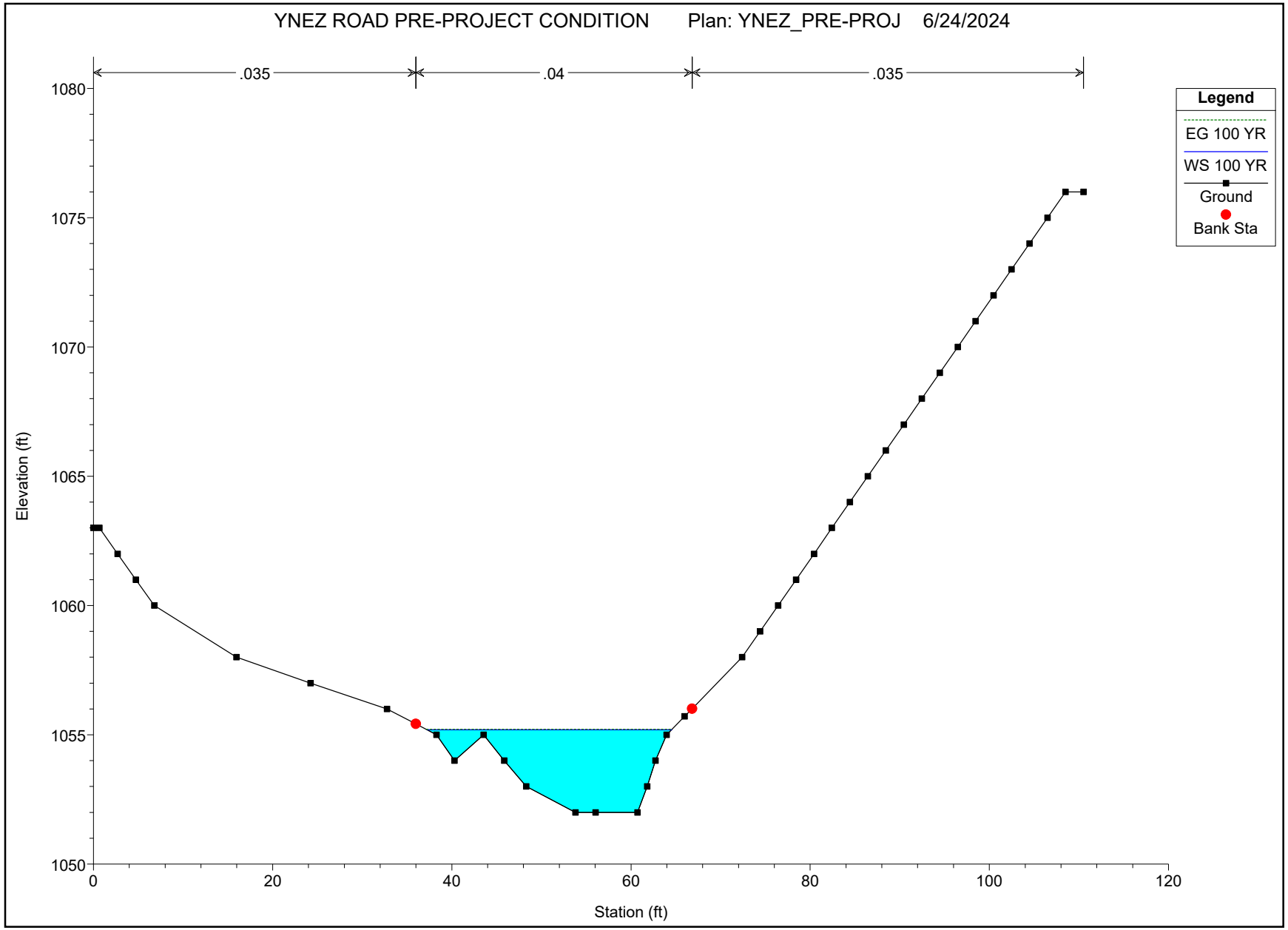
Station (ft)
1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Ground
Bank Sta
Elevation (ft)
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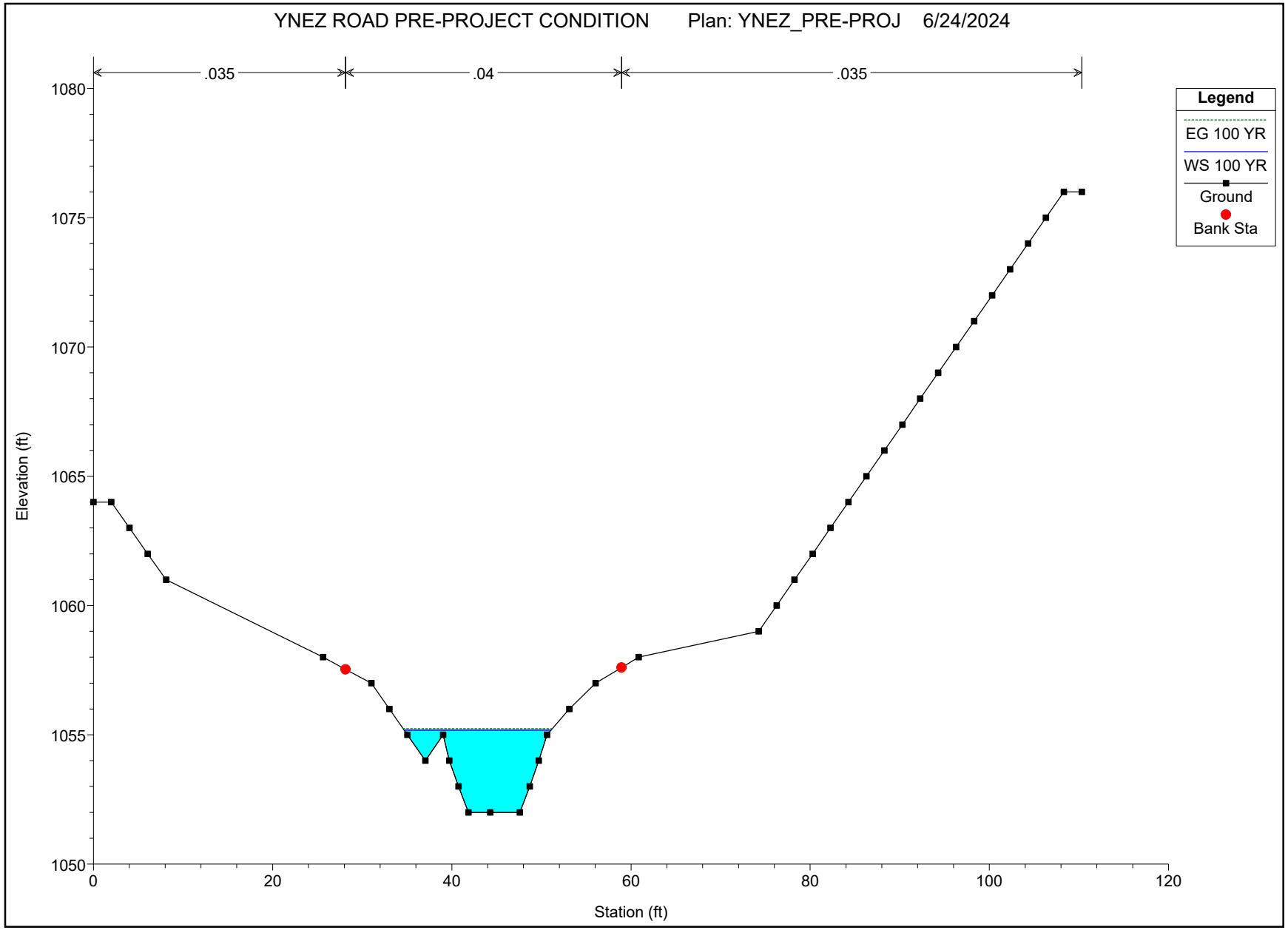
Station (ft)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Bank Sta
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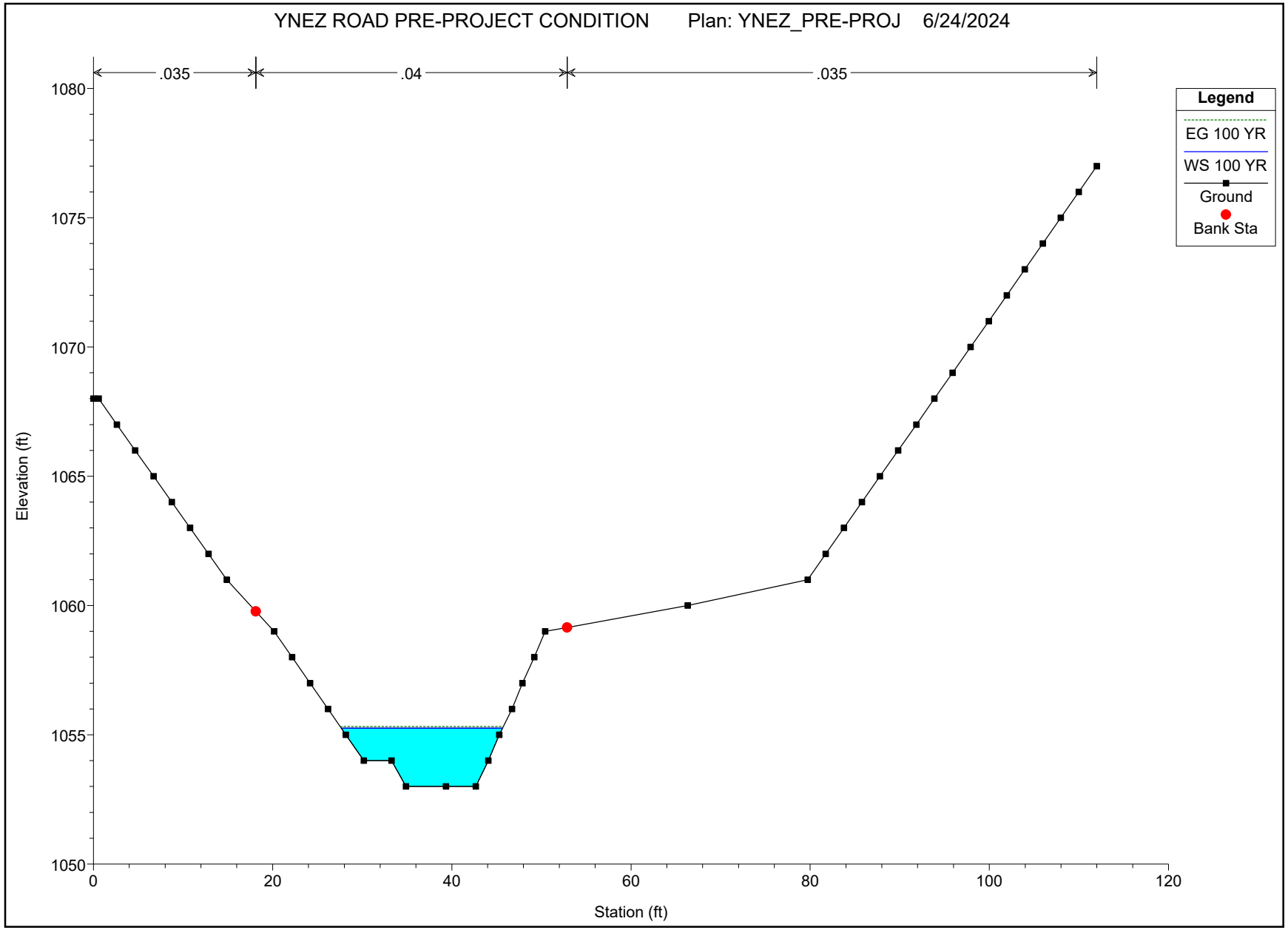
Station (ft)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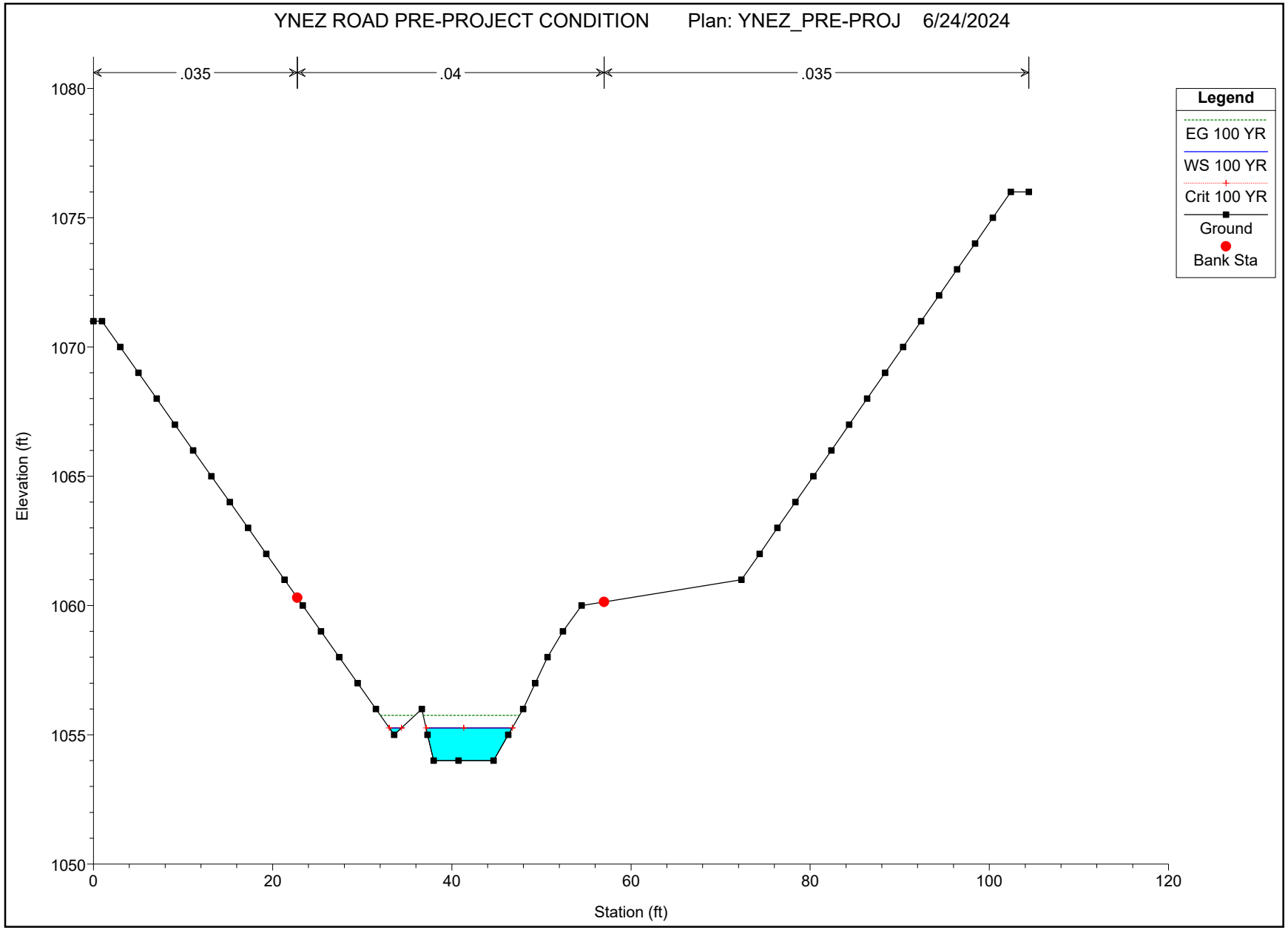
Station (ft)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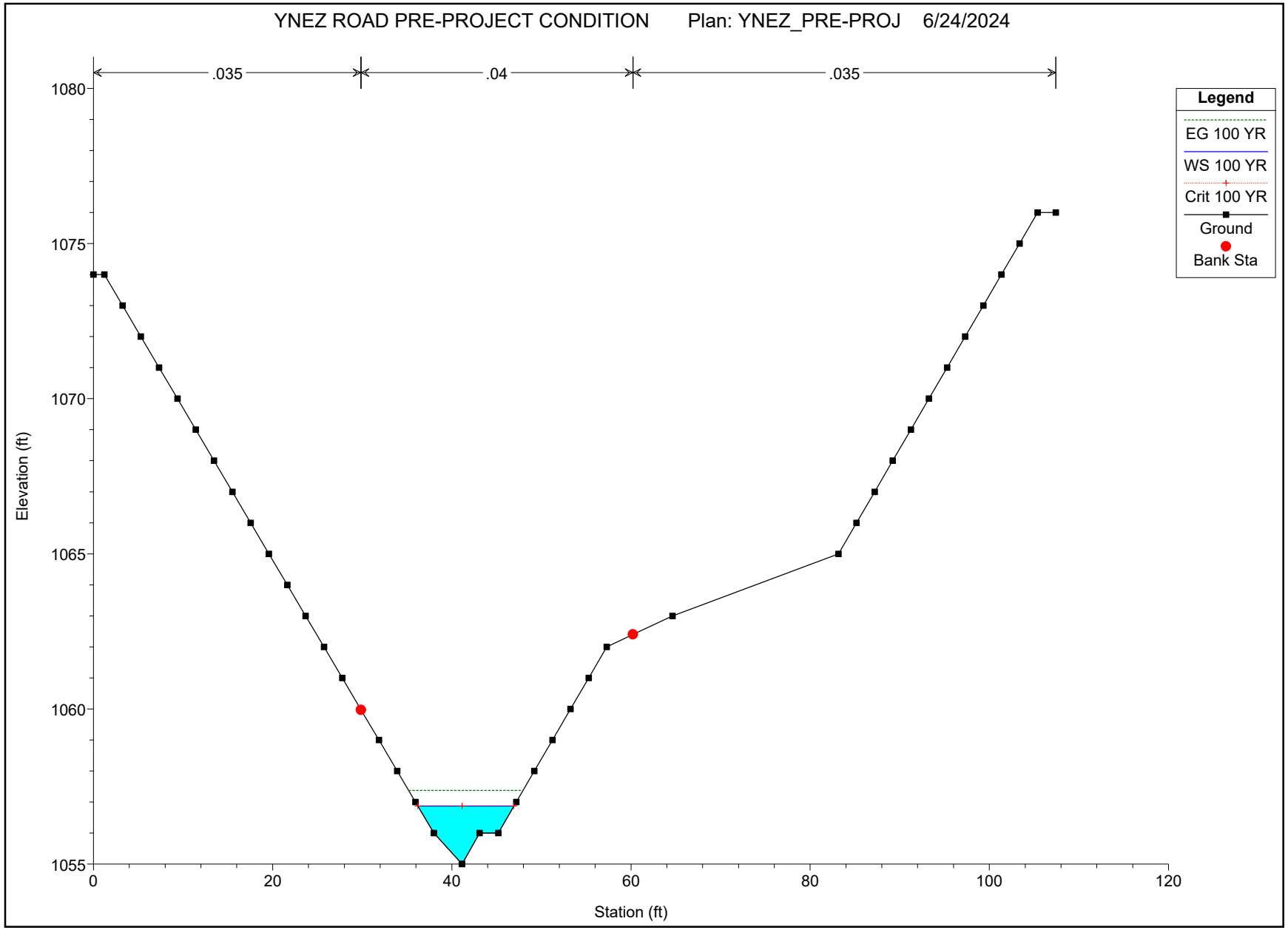
Station (ft)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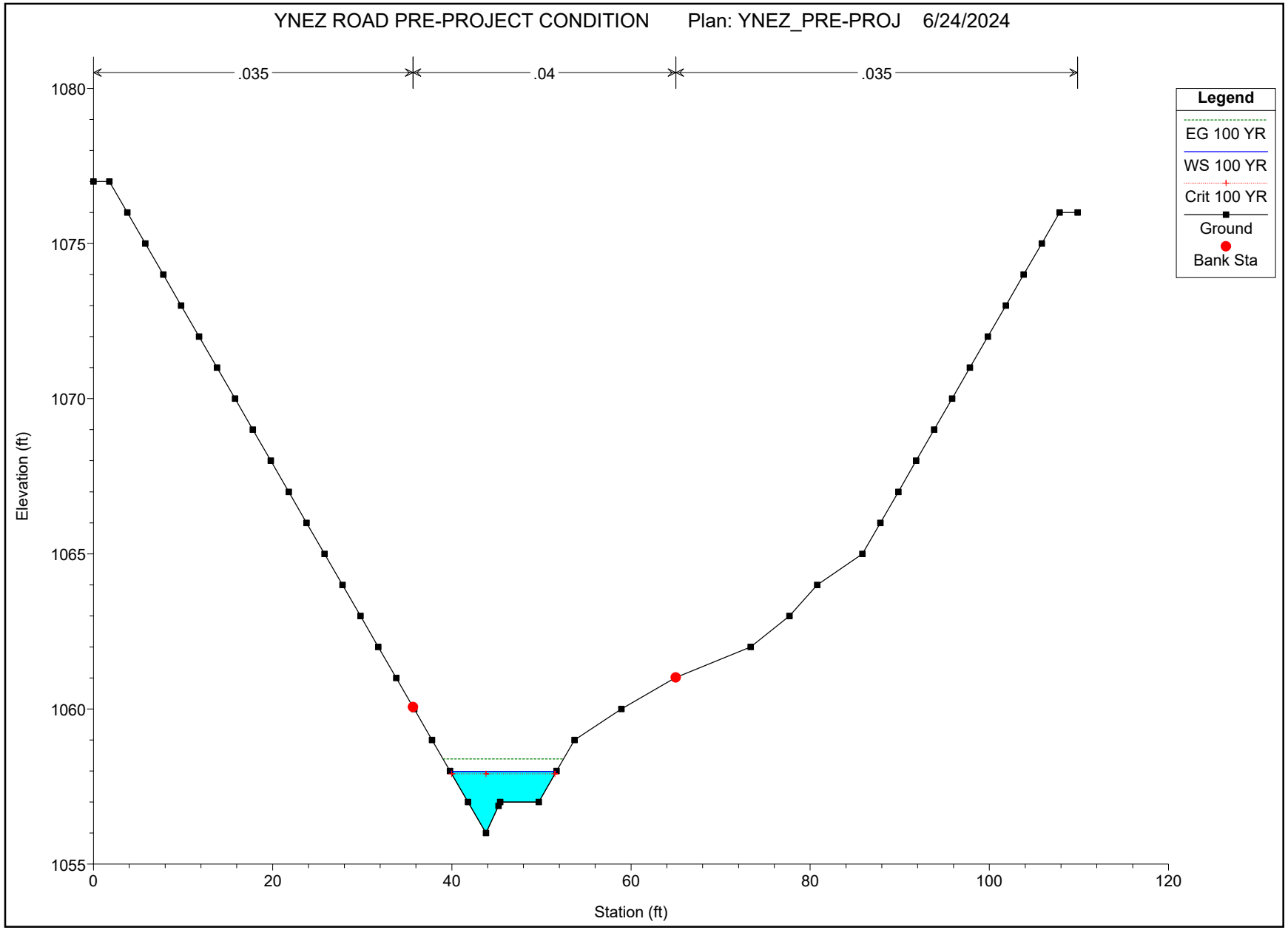
Station (ft)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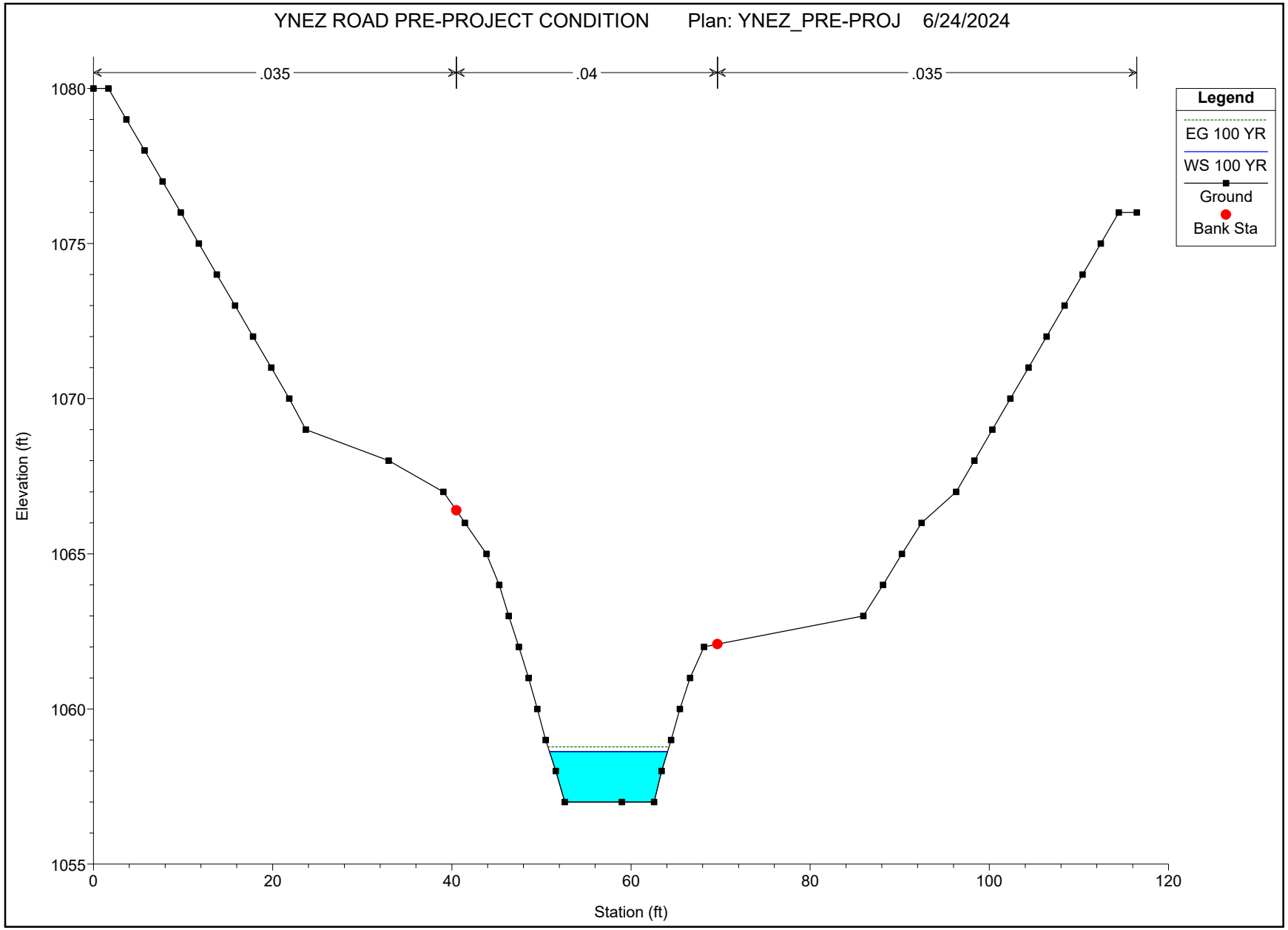
Station (ft)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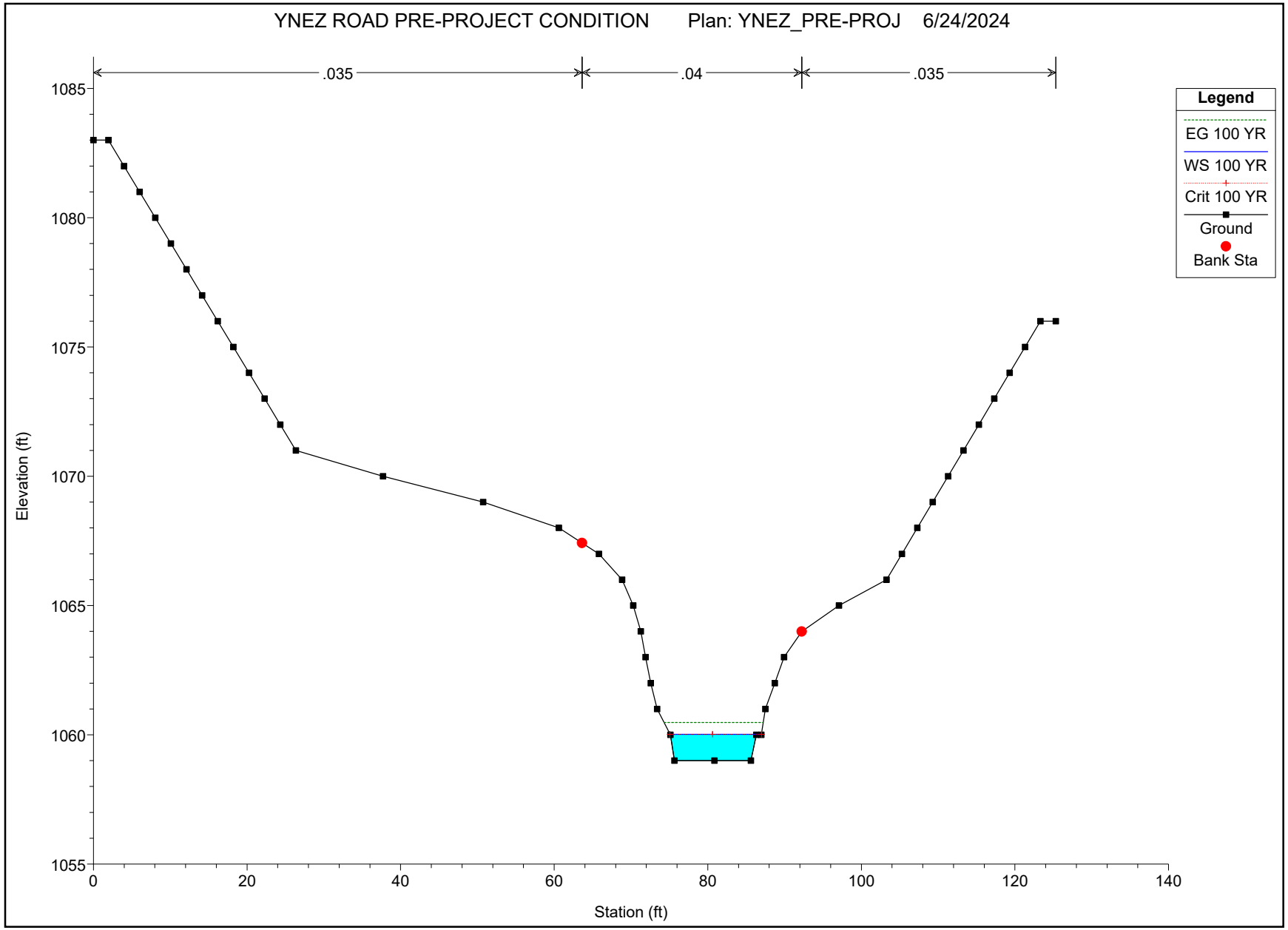
Station (ft)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Crit 100 YR
Ground
Bank Sta
Elevation (ft)
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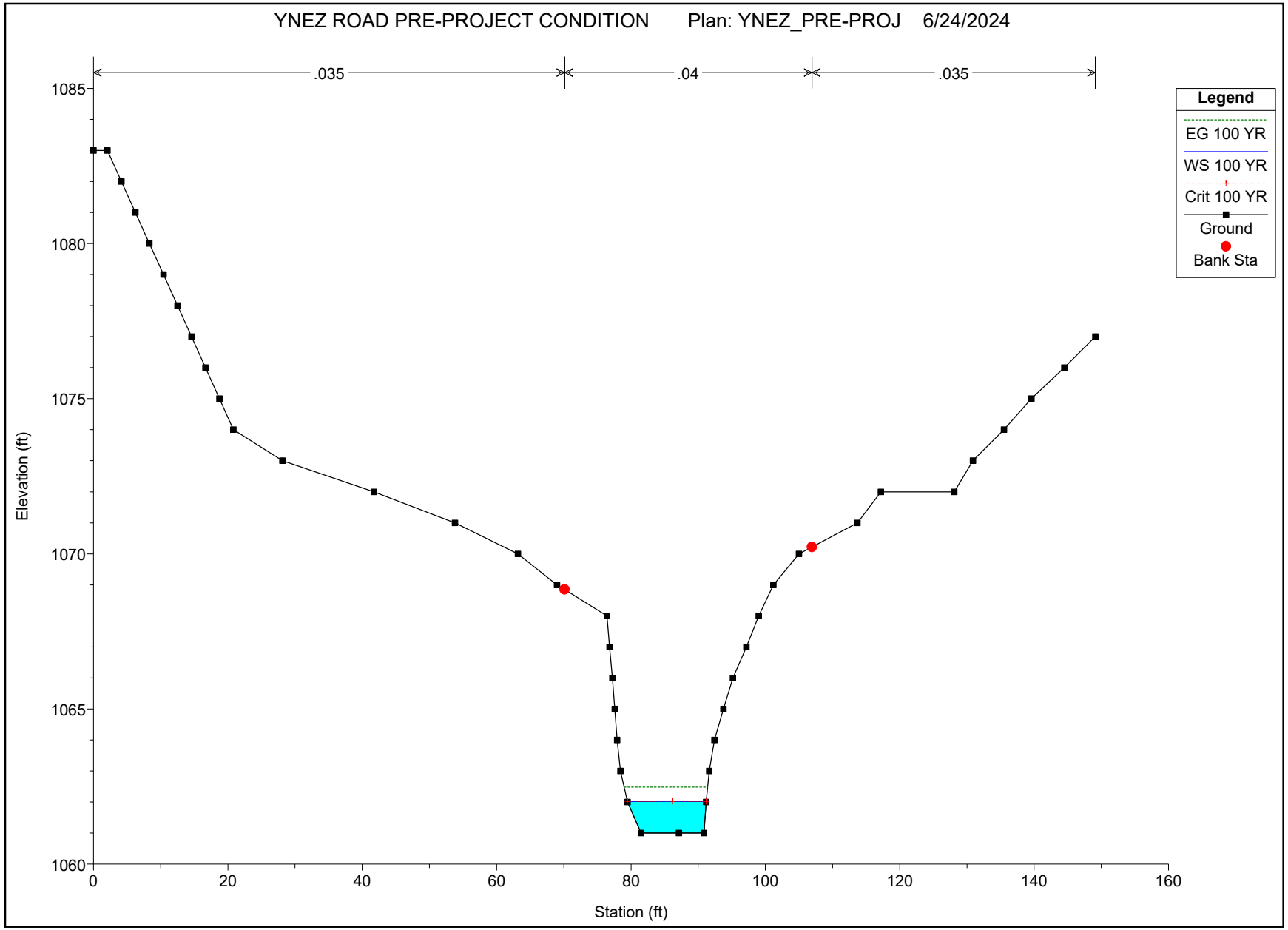
Station (ft)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Ground
Bank Sta
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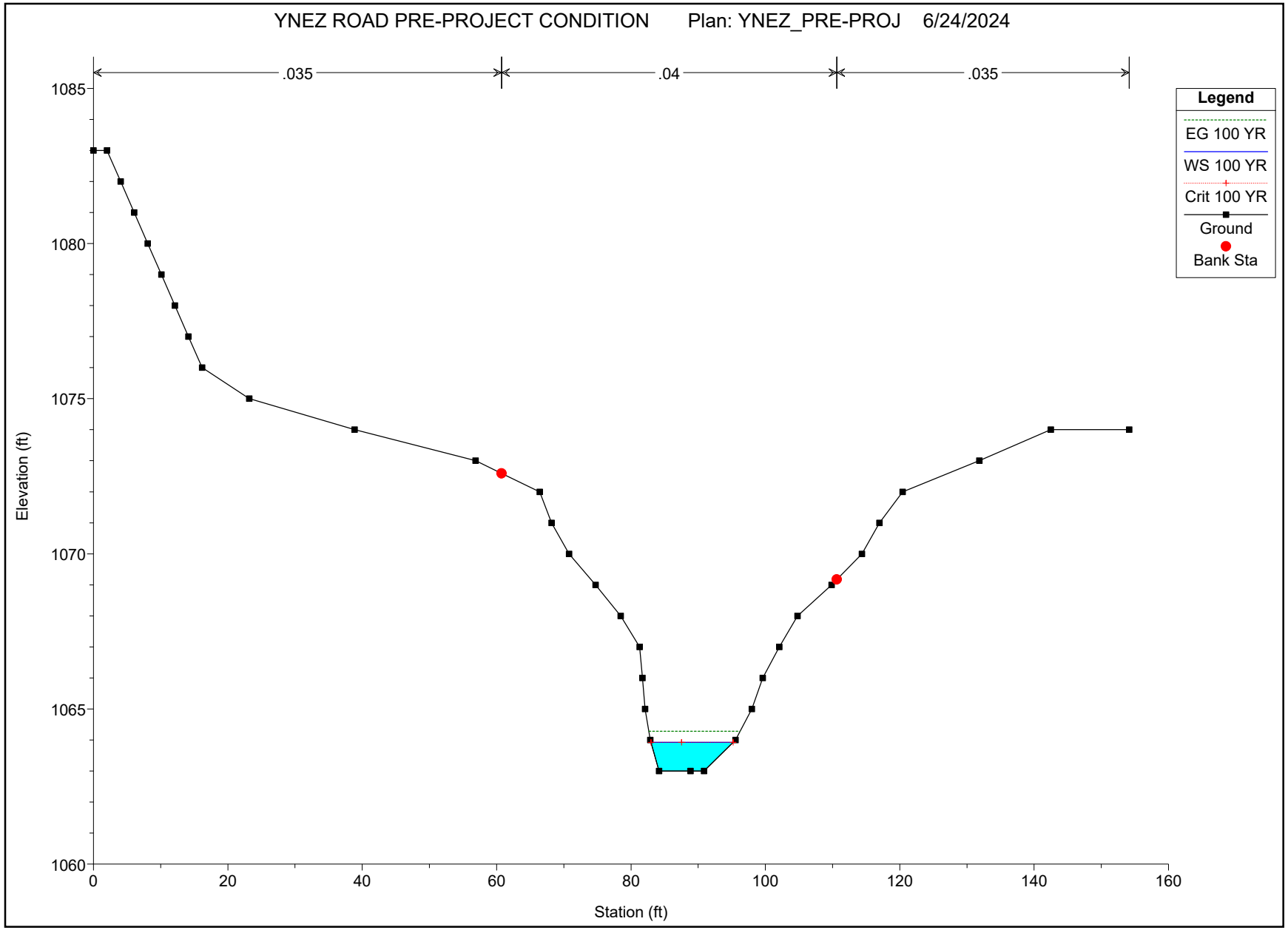
160
Station (ft)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Ground
Bank Sta
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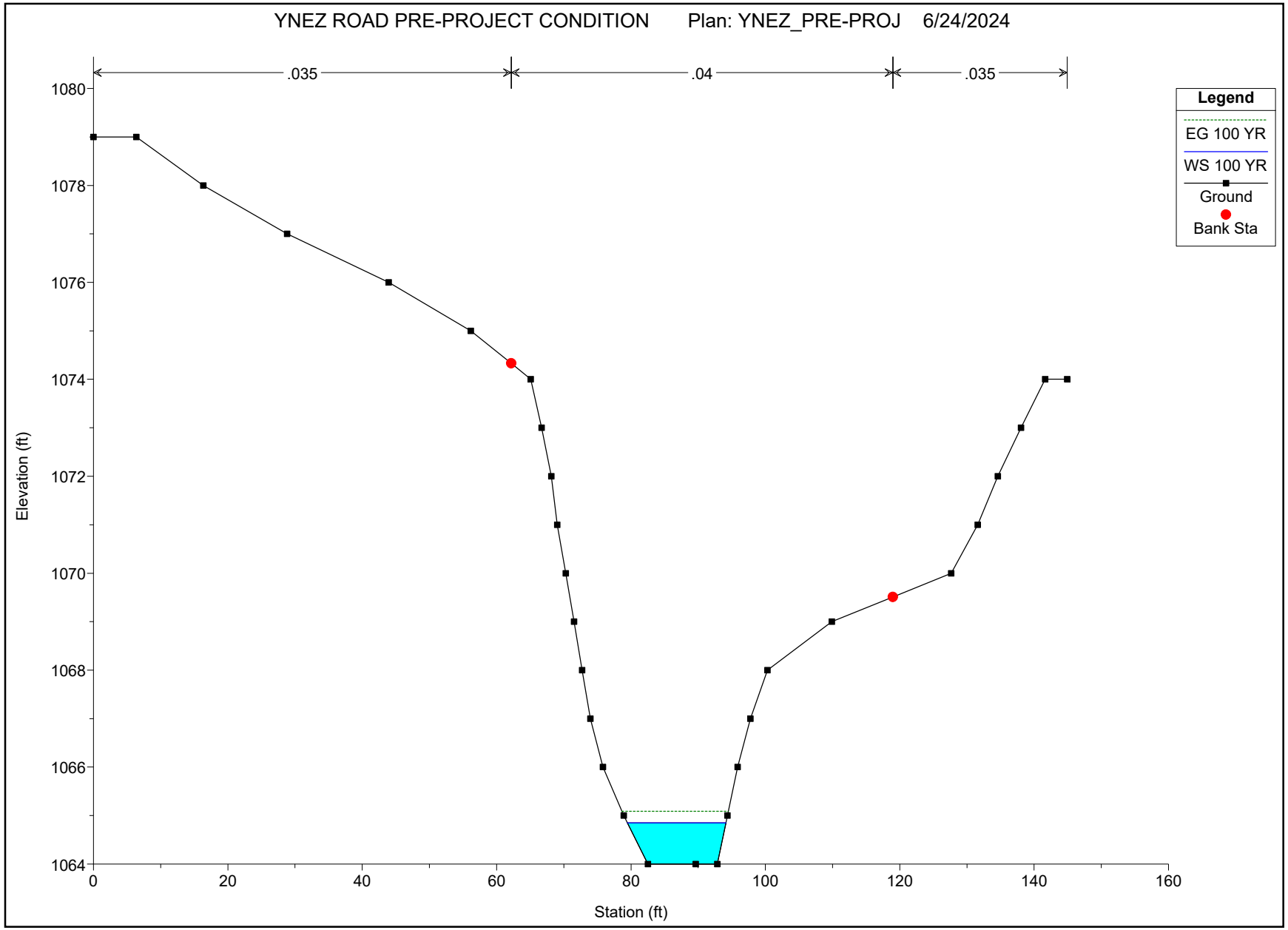
Station (ft)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WS 100 YR
Ground
Bank Sta
Elevation (ft)
1080
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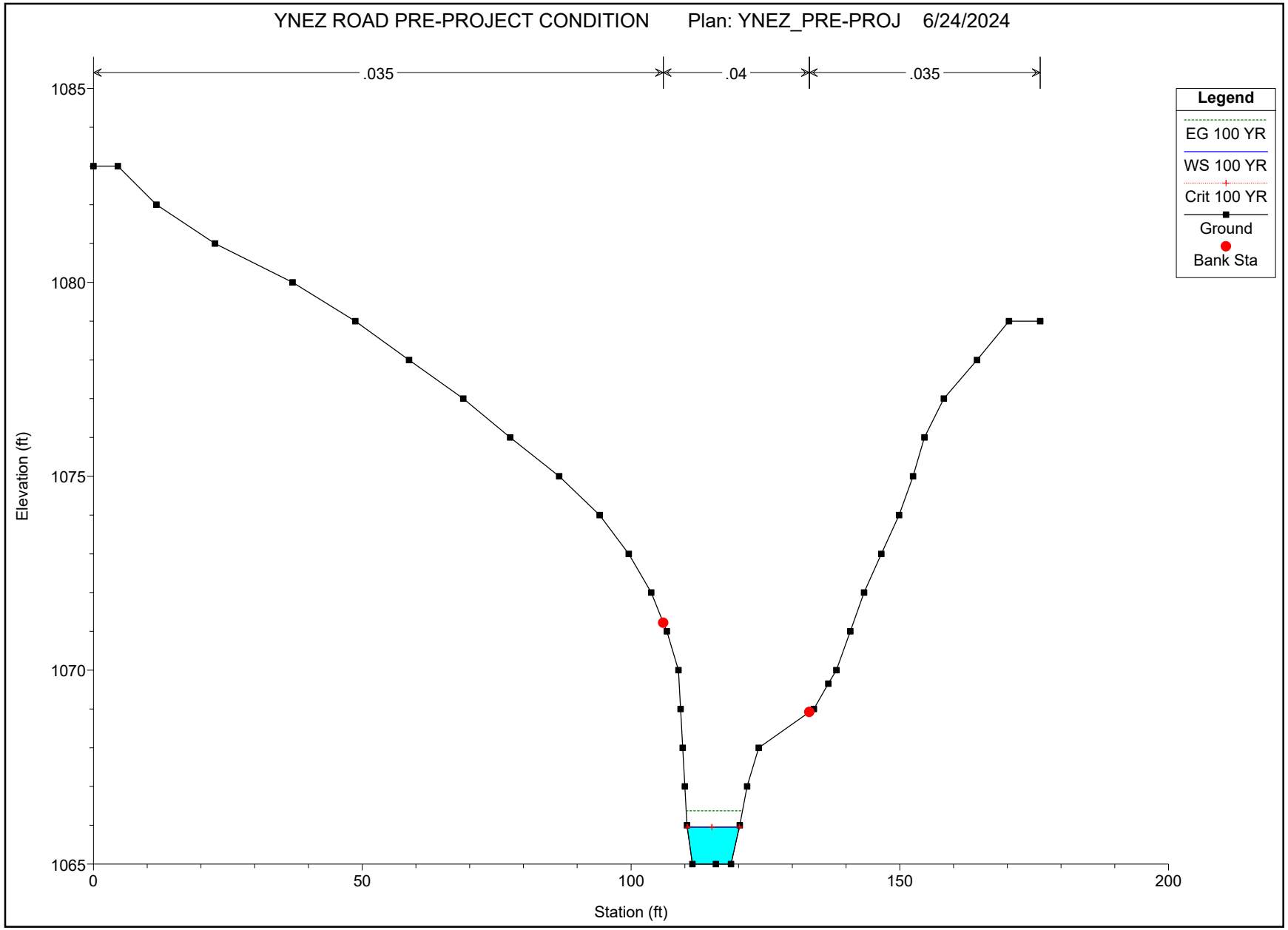
Station (ft)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WS 100 YR
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Ground
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Elevation (ft)
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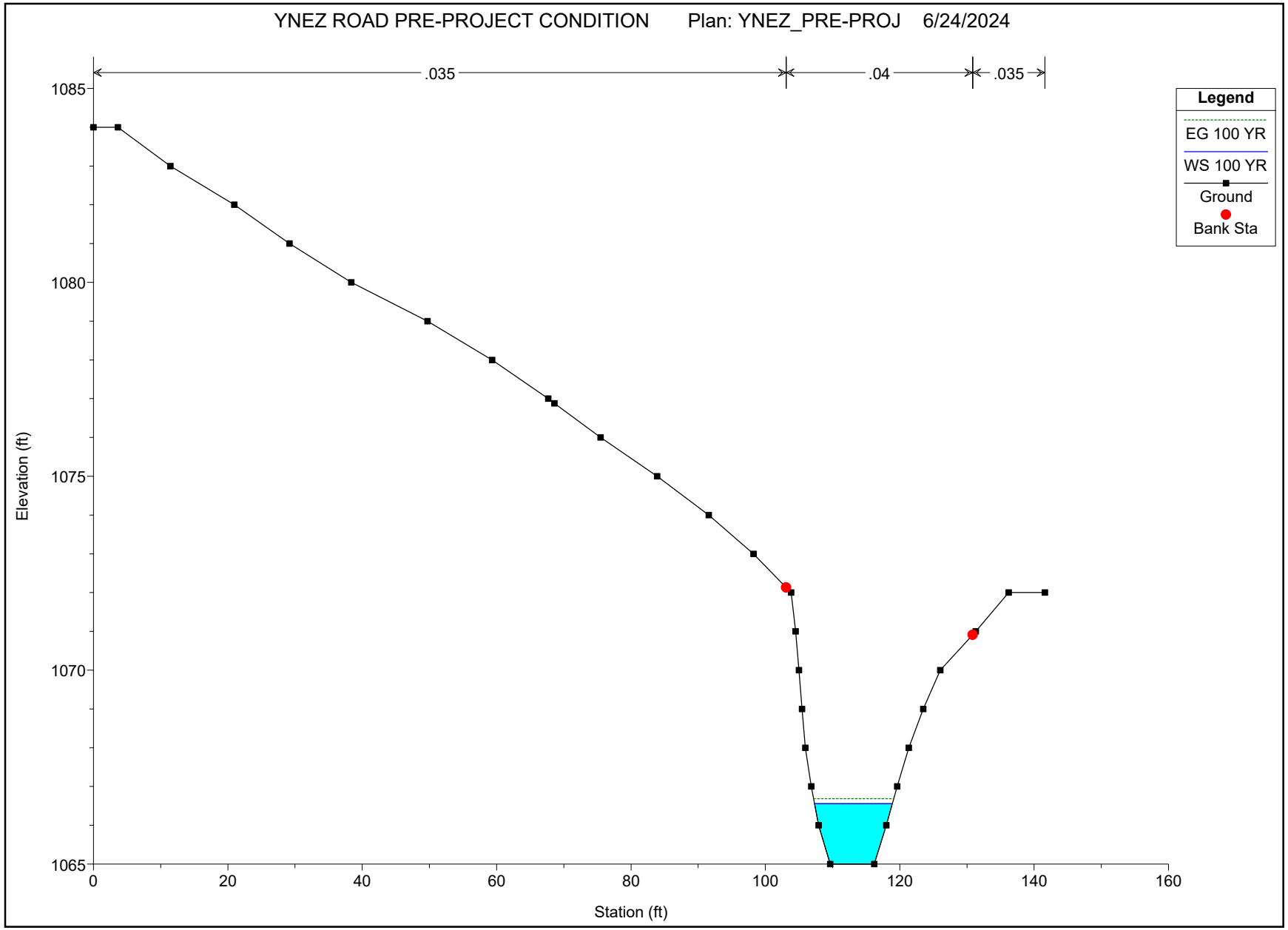
Station (ft)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Ground
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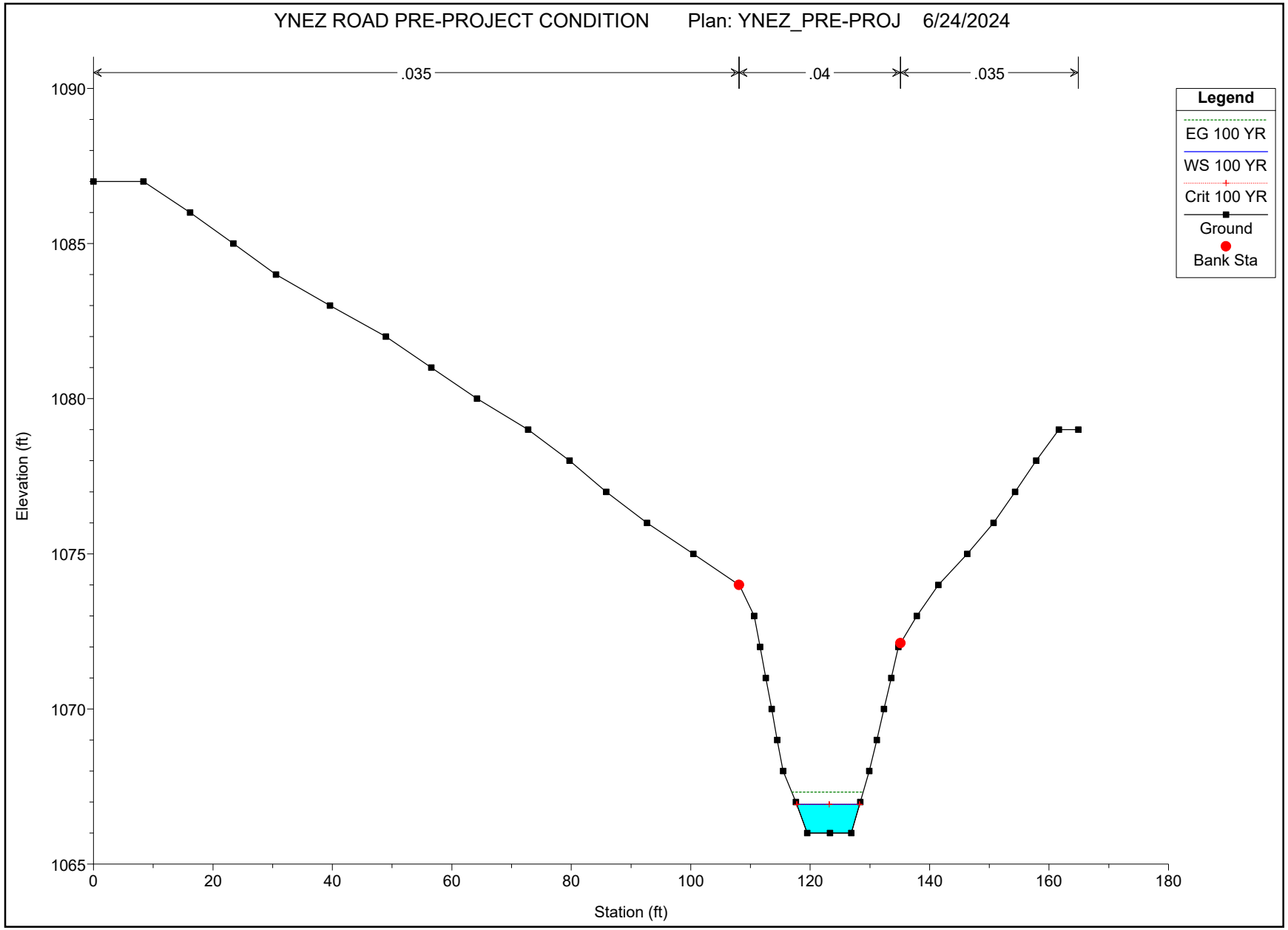
Station (ft)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WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
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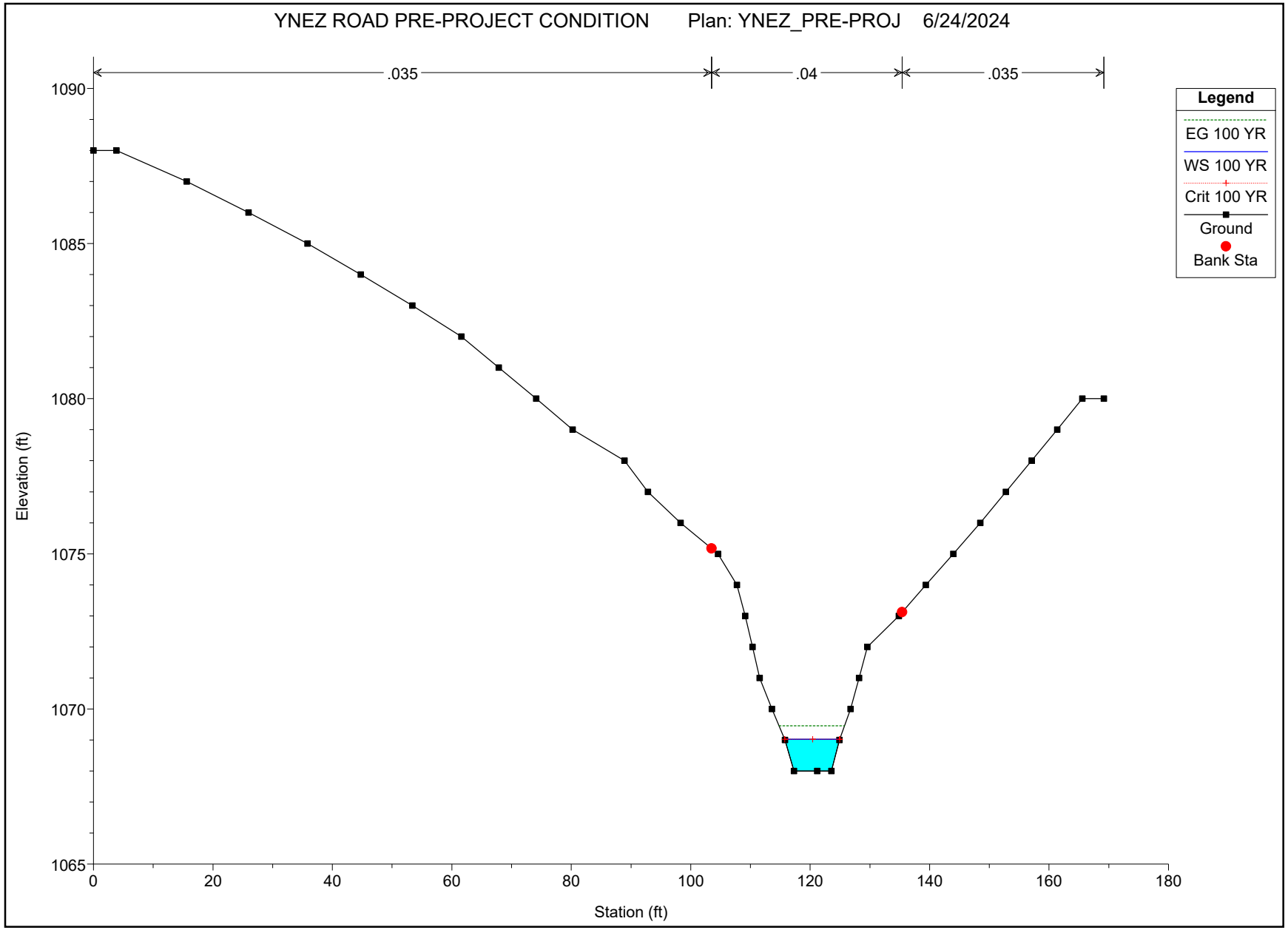
Station (ft)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Crit 100 YR
Ground
Bank Sta
Elevation (ft)
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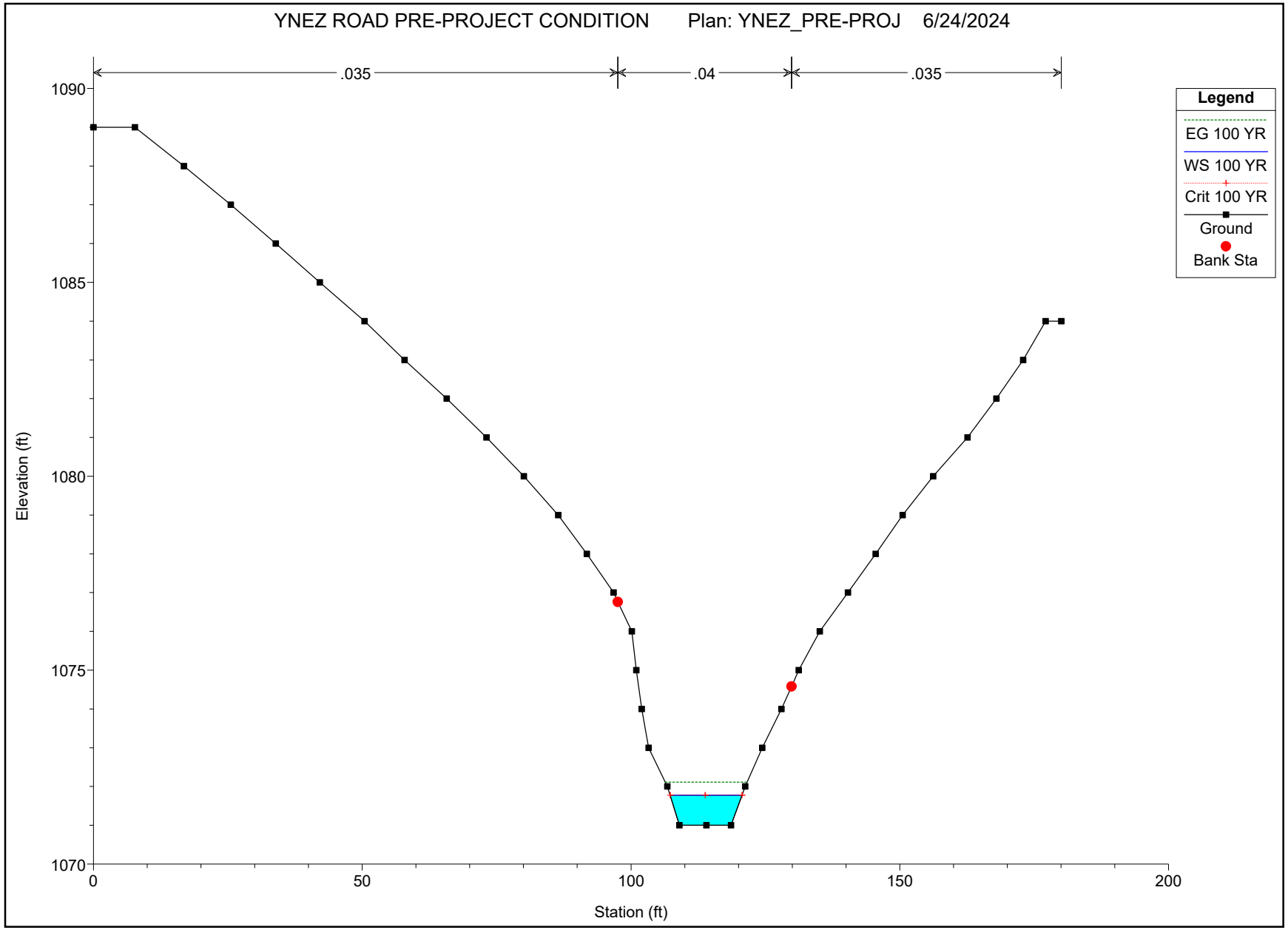
Station (ft)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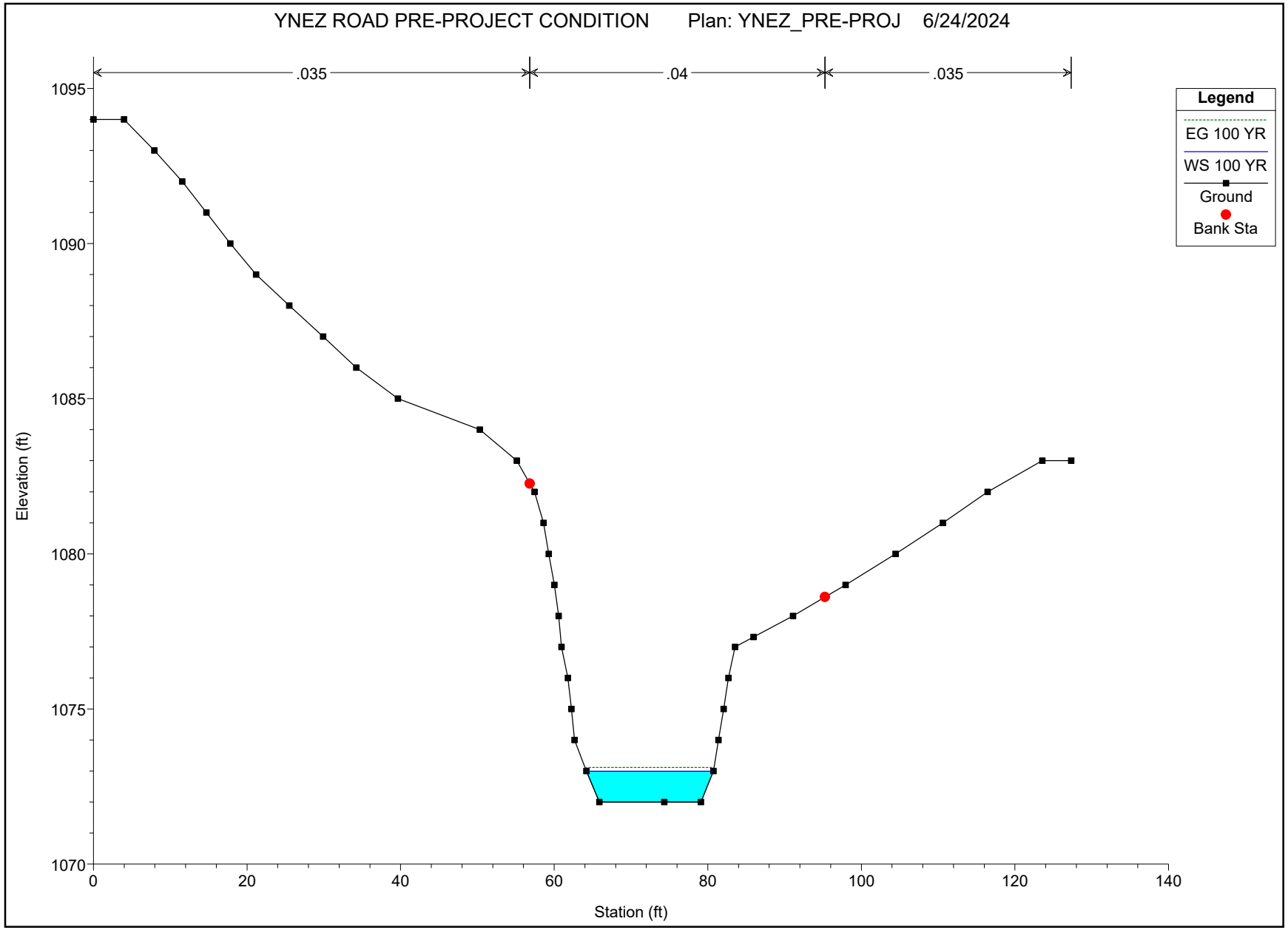
Station (ft)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Ground
Bank Sta
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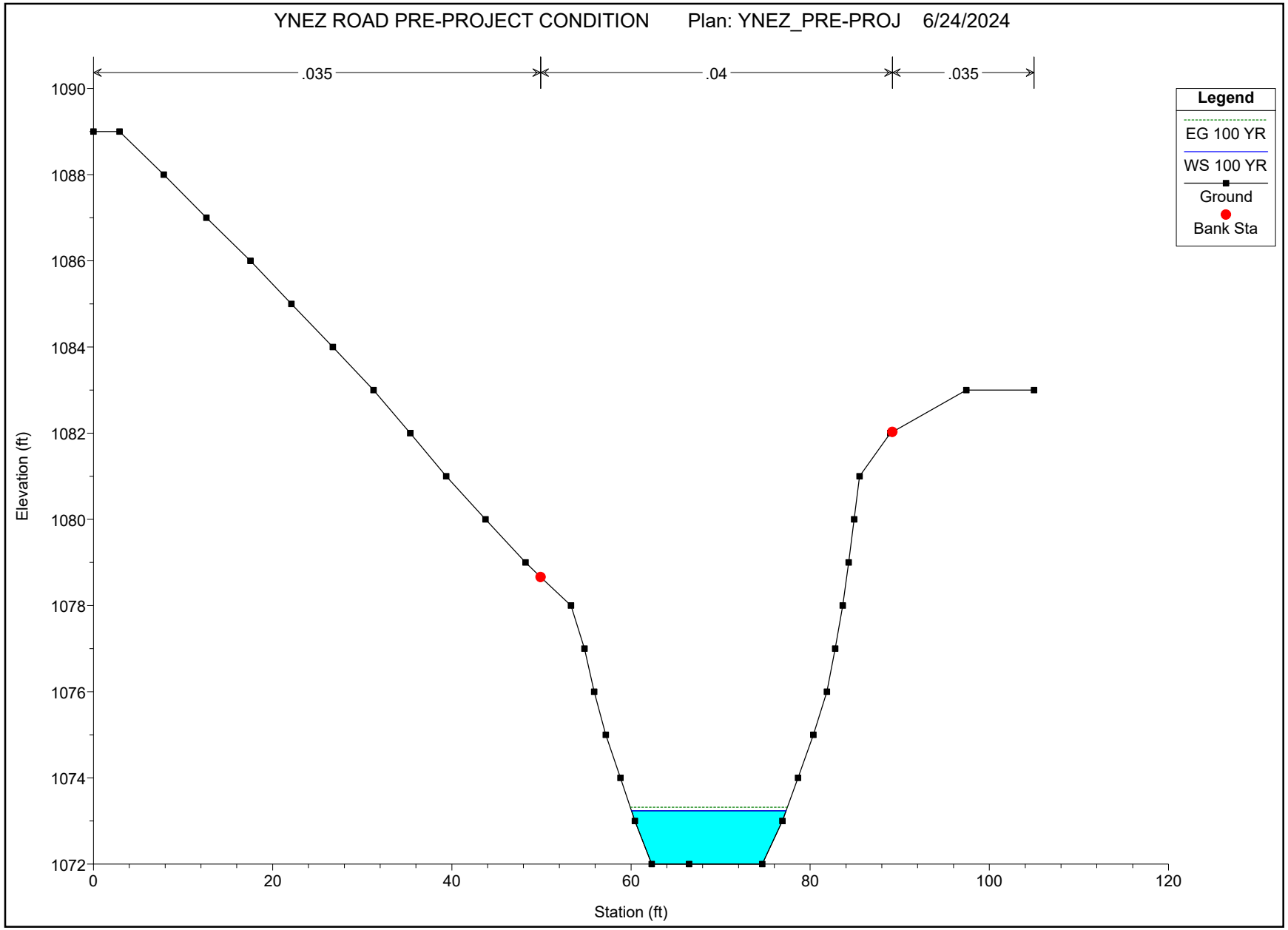
Station (ft)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WS 100 YR
Ground
Bank Sta
Elevation (ft)
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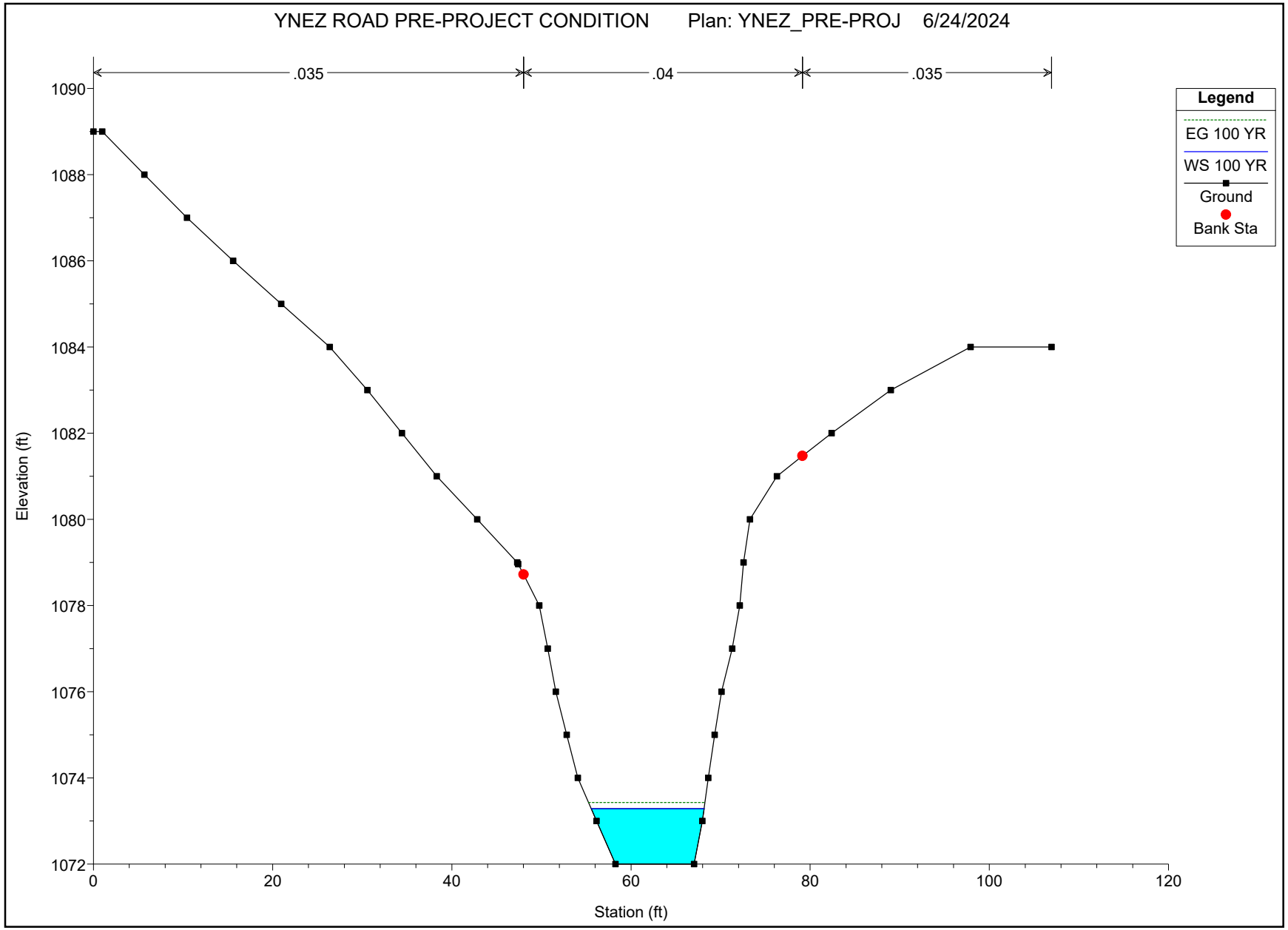
Station (ft)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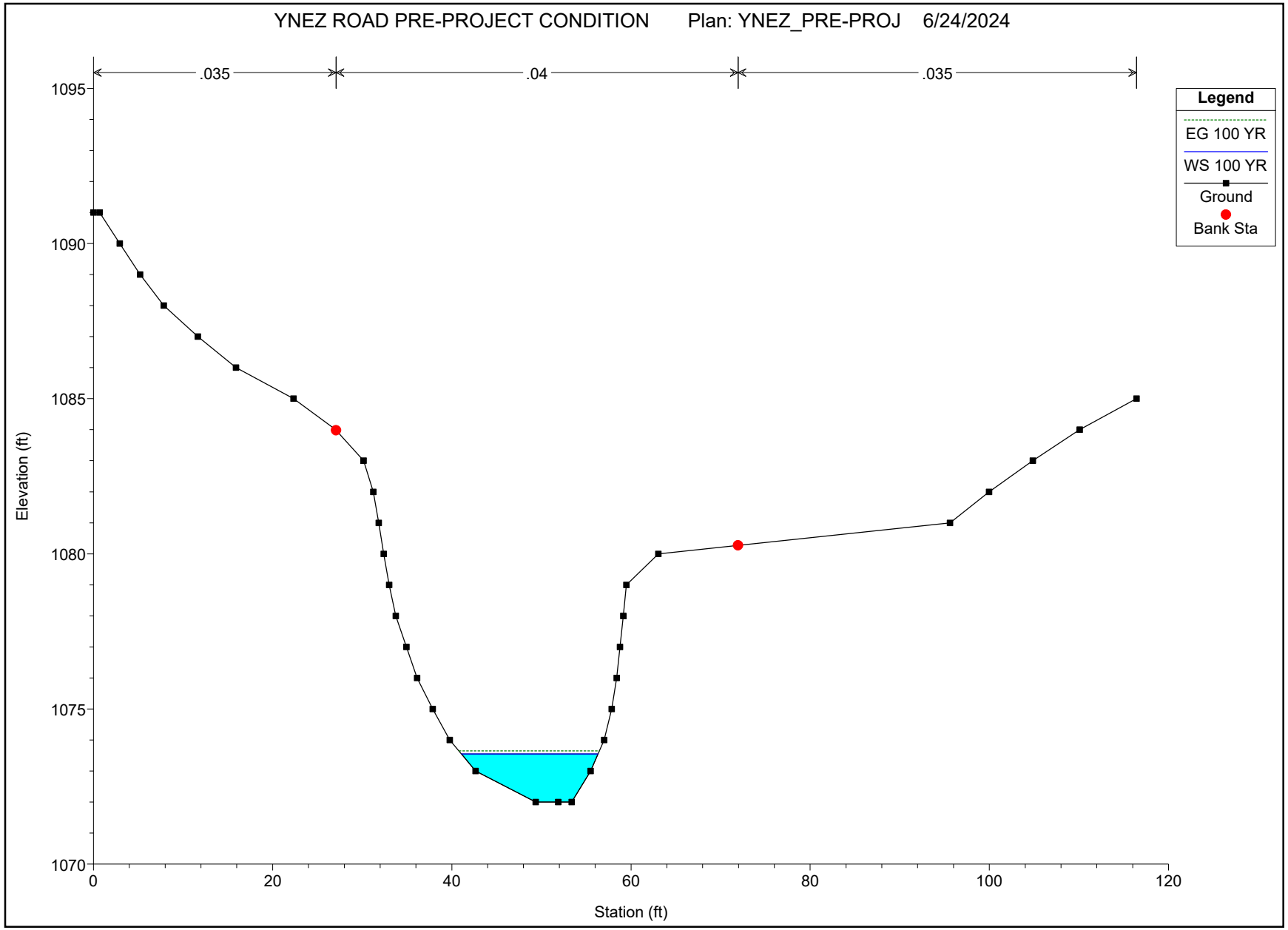
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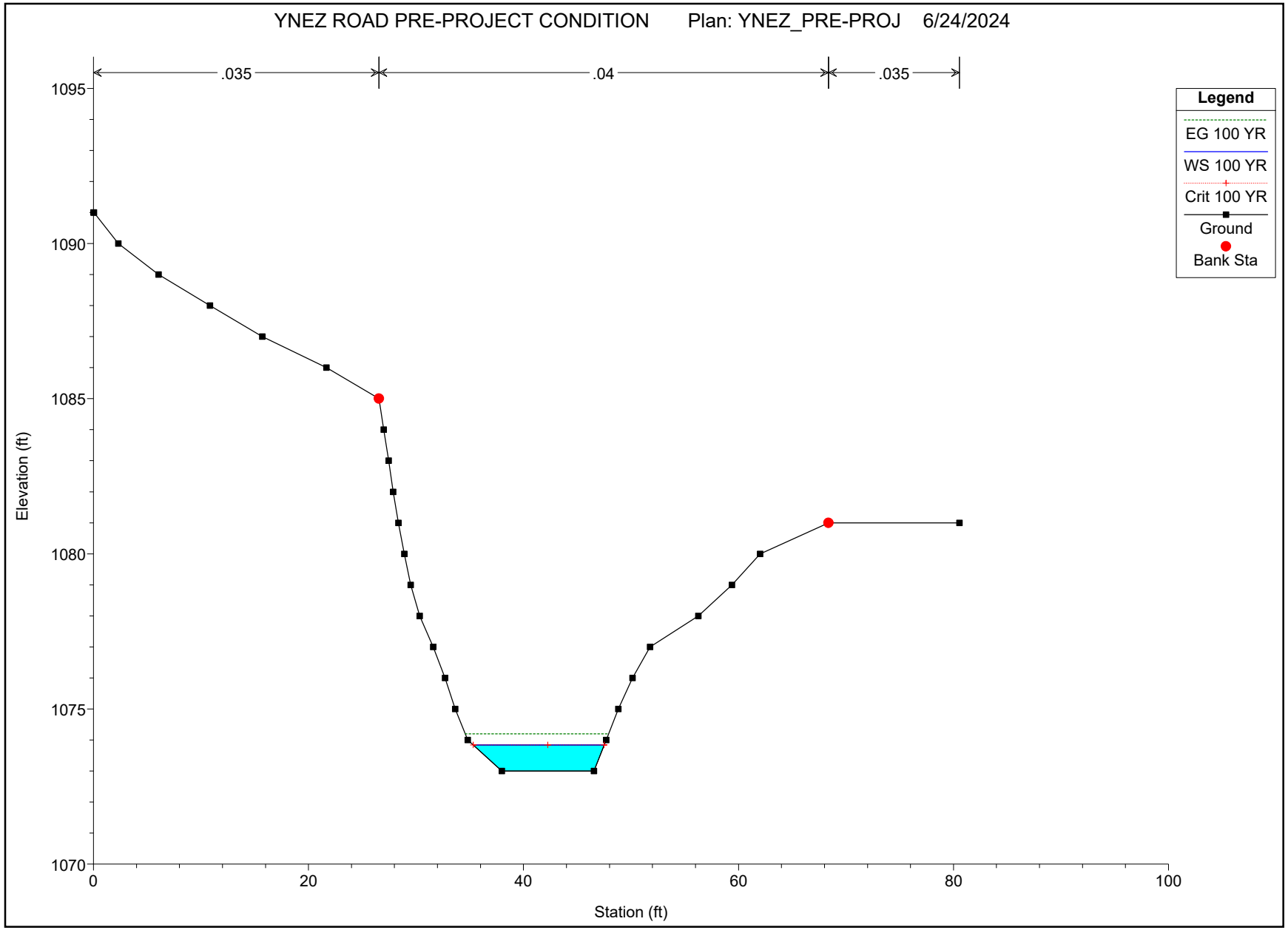
Station (ft)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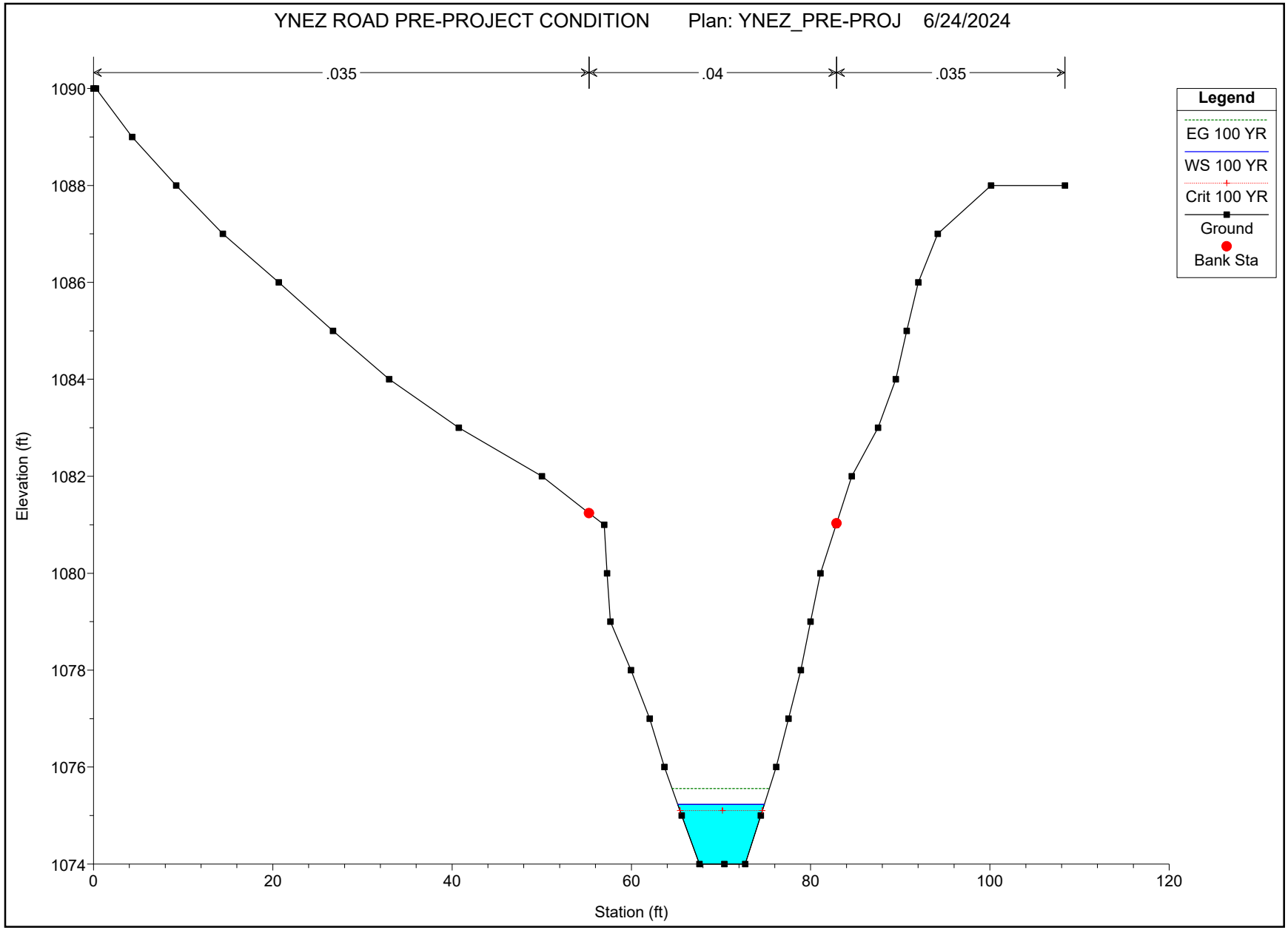
Station (ft)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Ground
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Elevation (ft)
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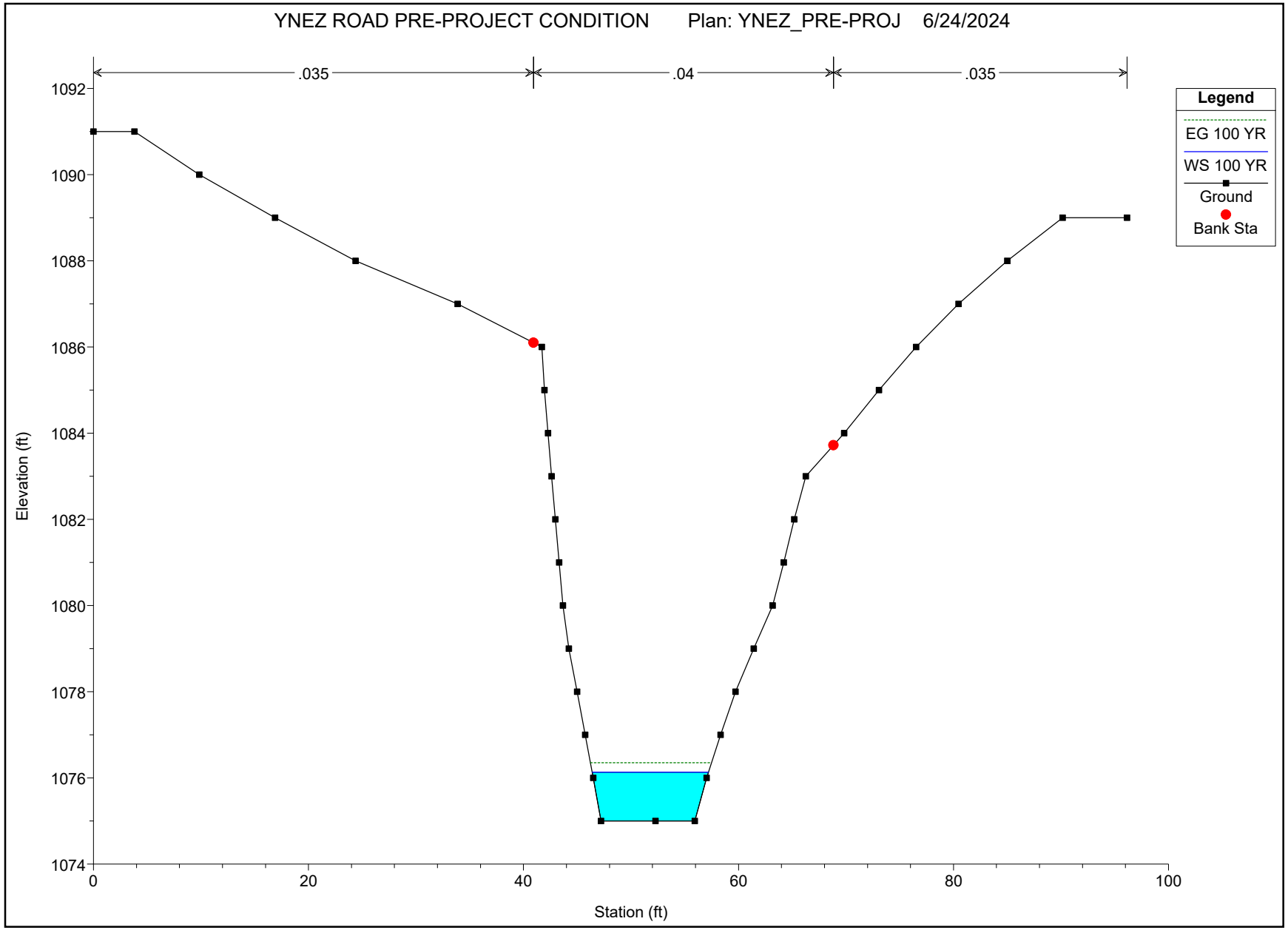
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WS 100 YR
Ground
Bank Sta
Elevation (ft)
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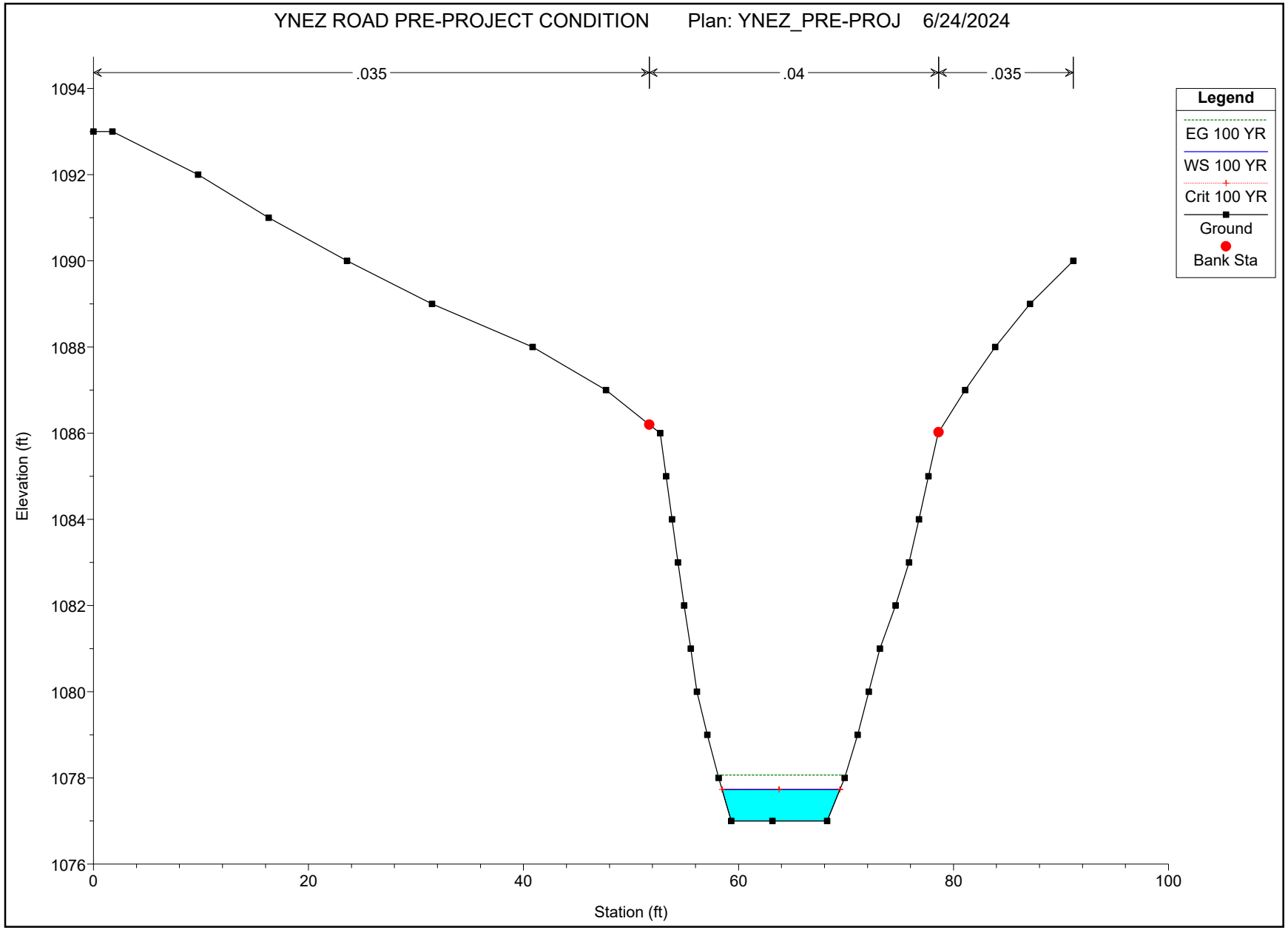
Station (ft)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WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
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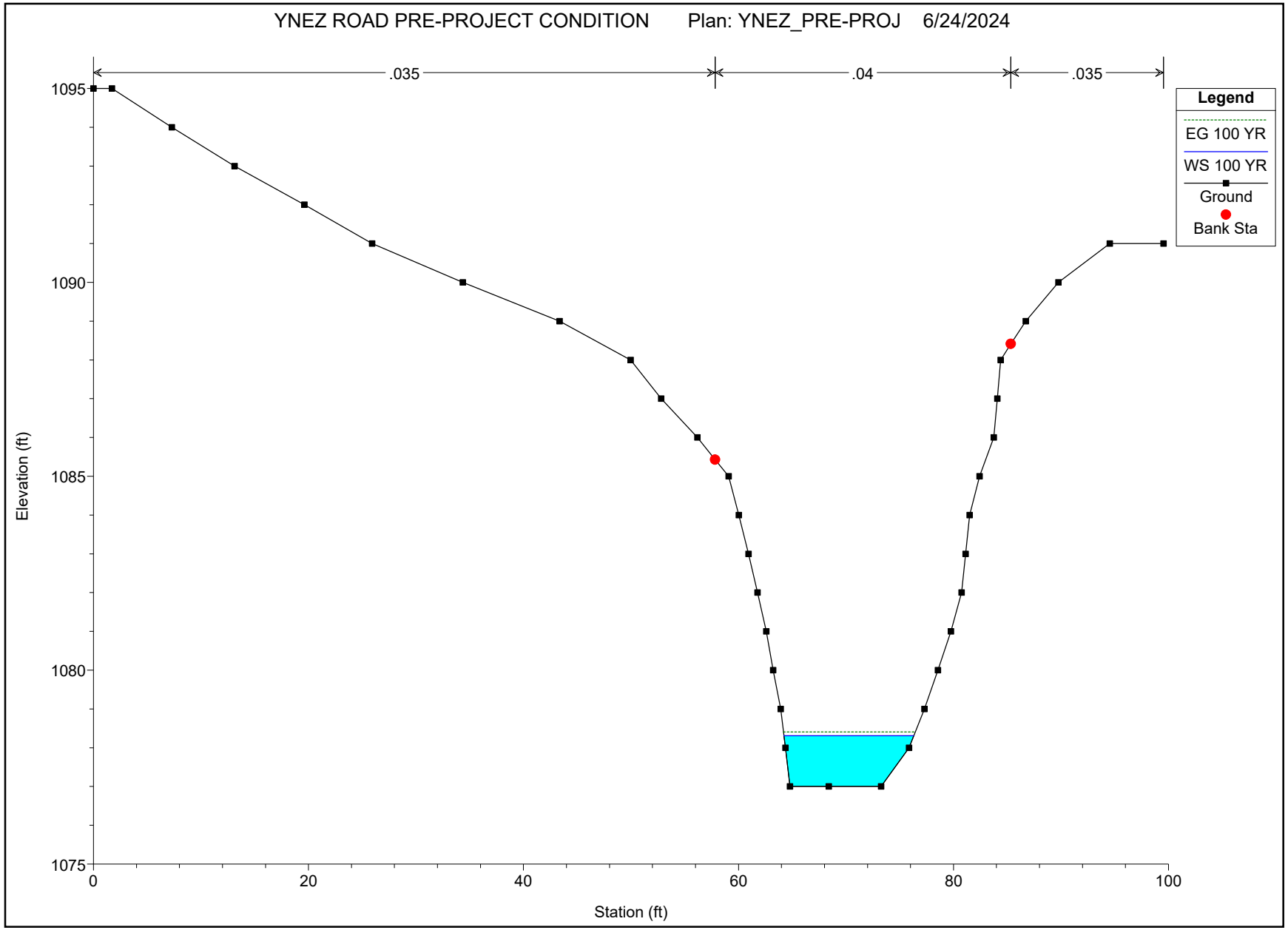
Station (ft)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WS 100 YR
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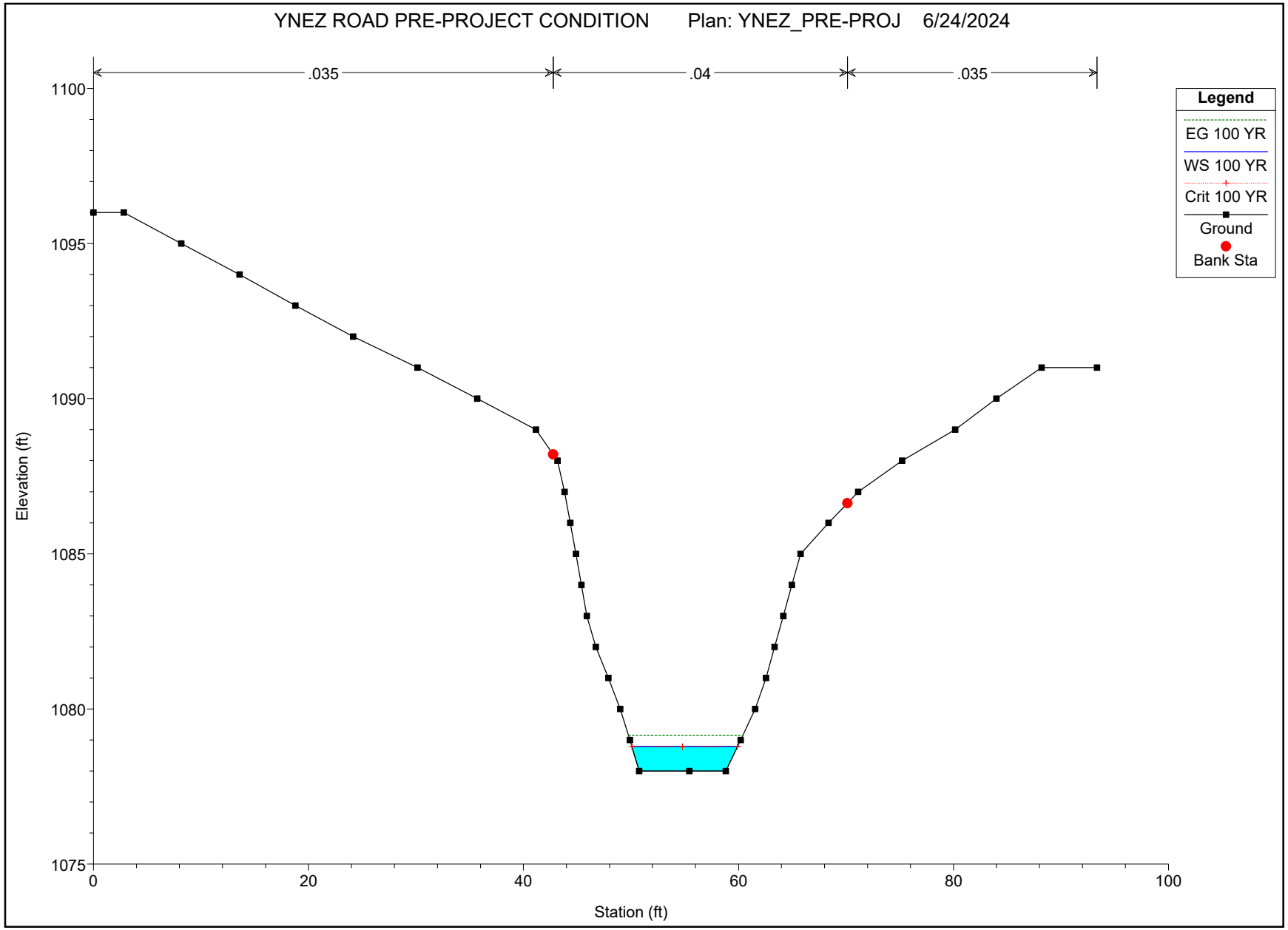
Station (ft)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Crit 100 YR
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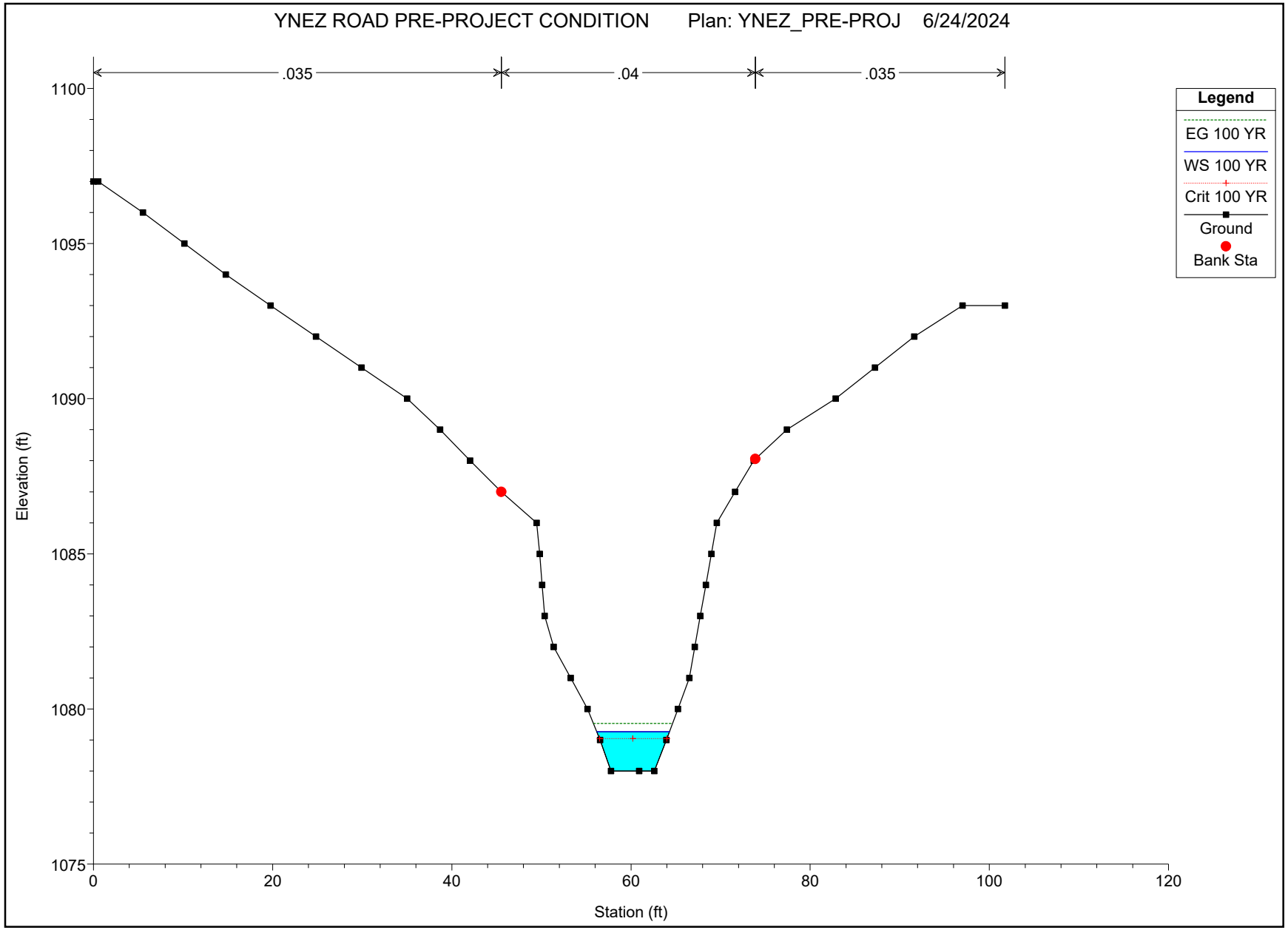
Station (ft)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WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
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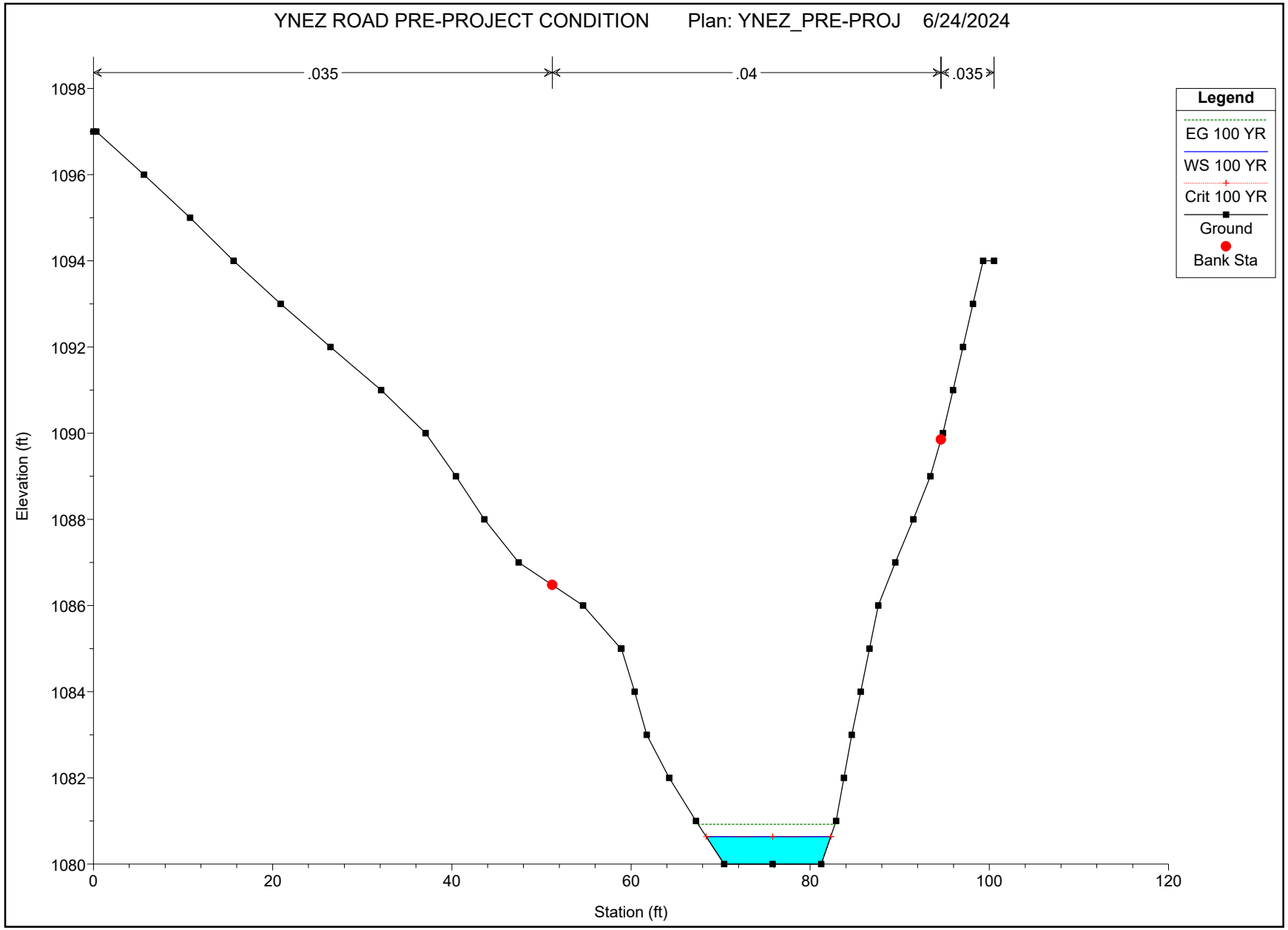
Station (ft)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.035
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WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1098
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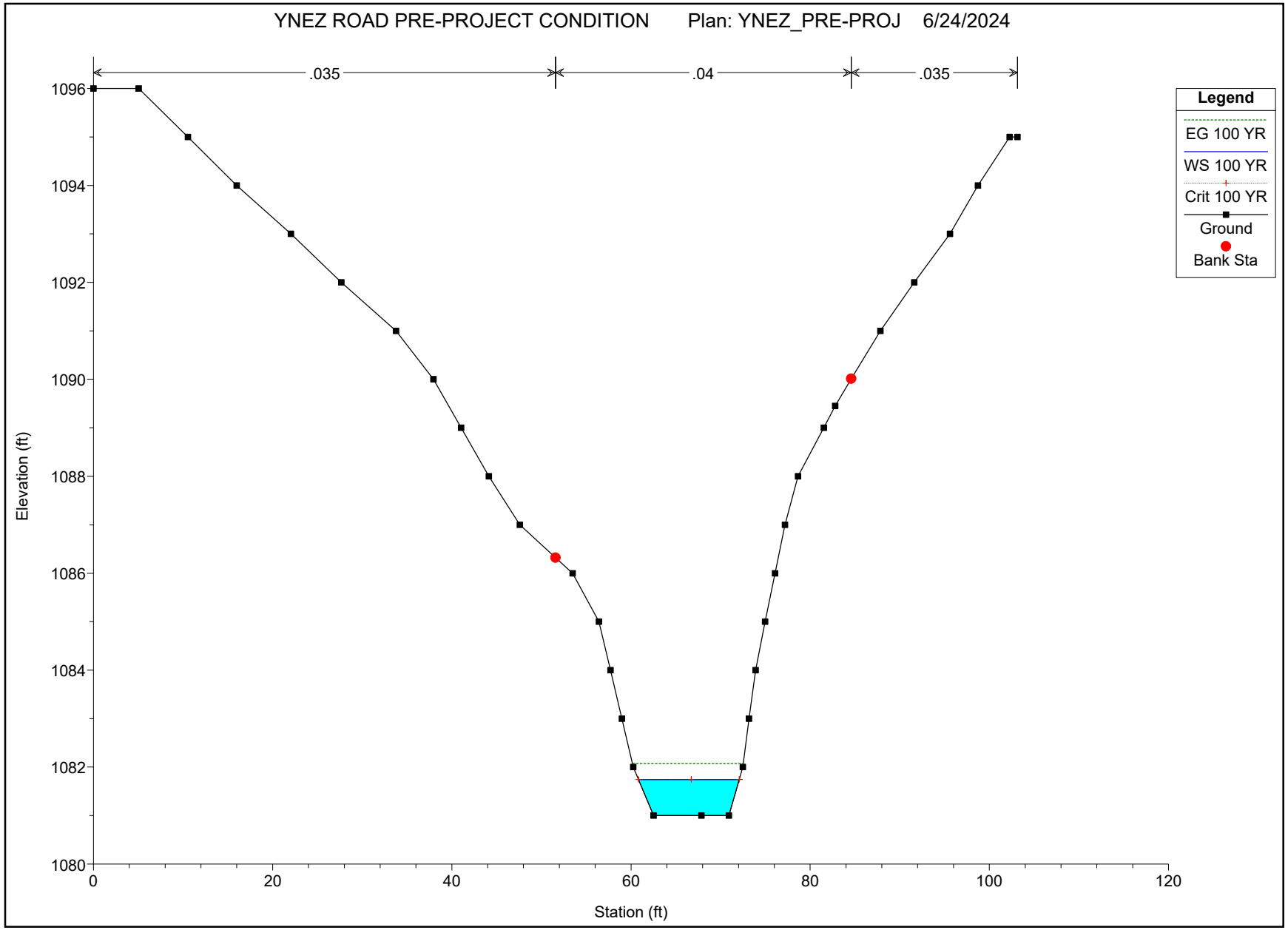
Station (ft)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Legend
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WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
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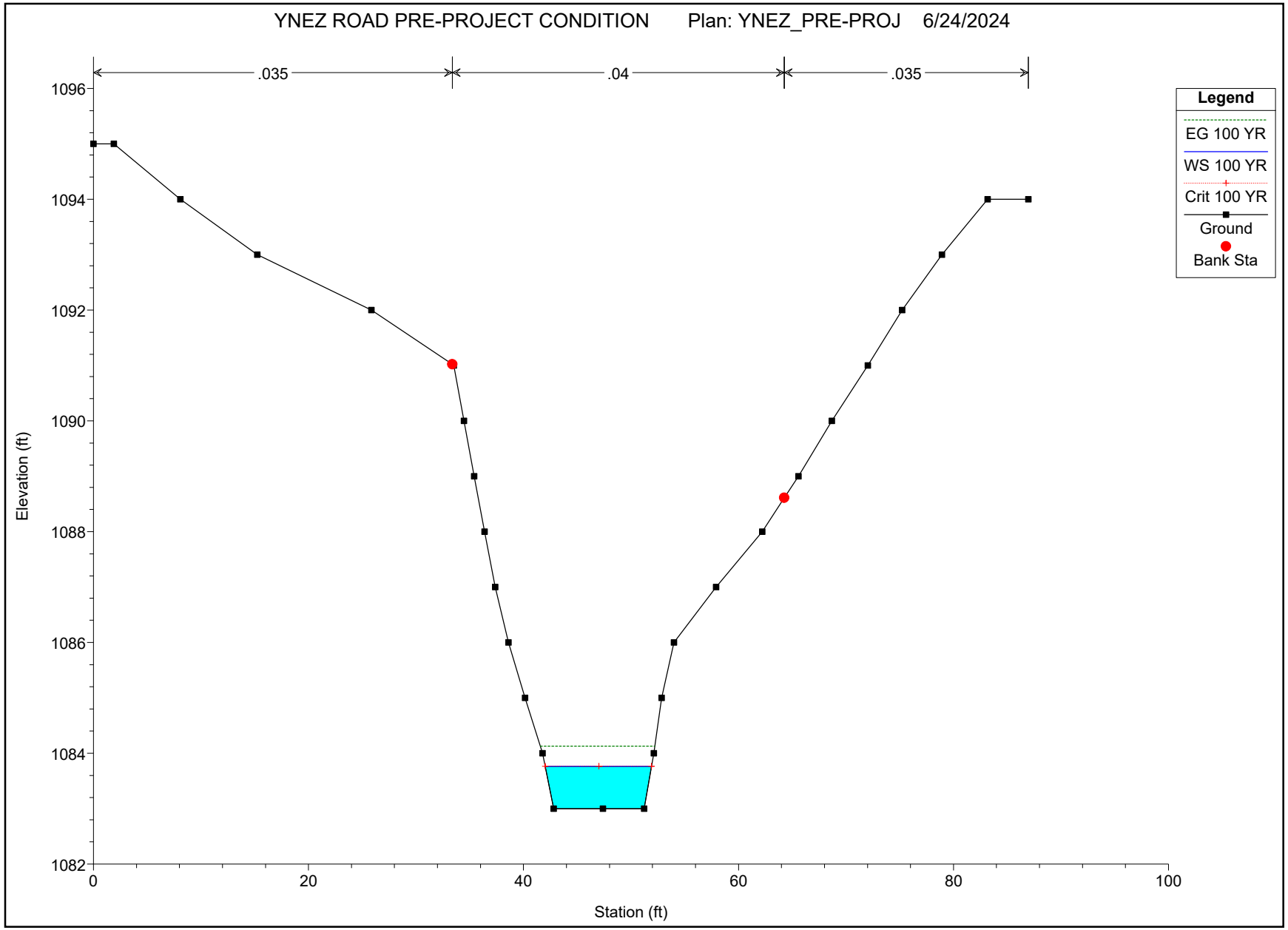
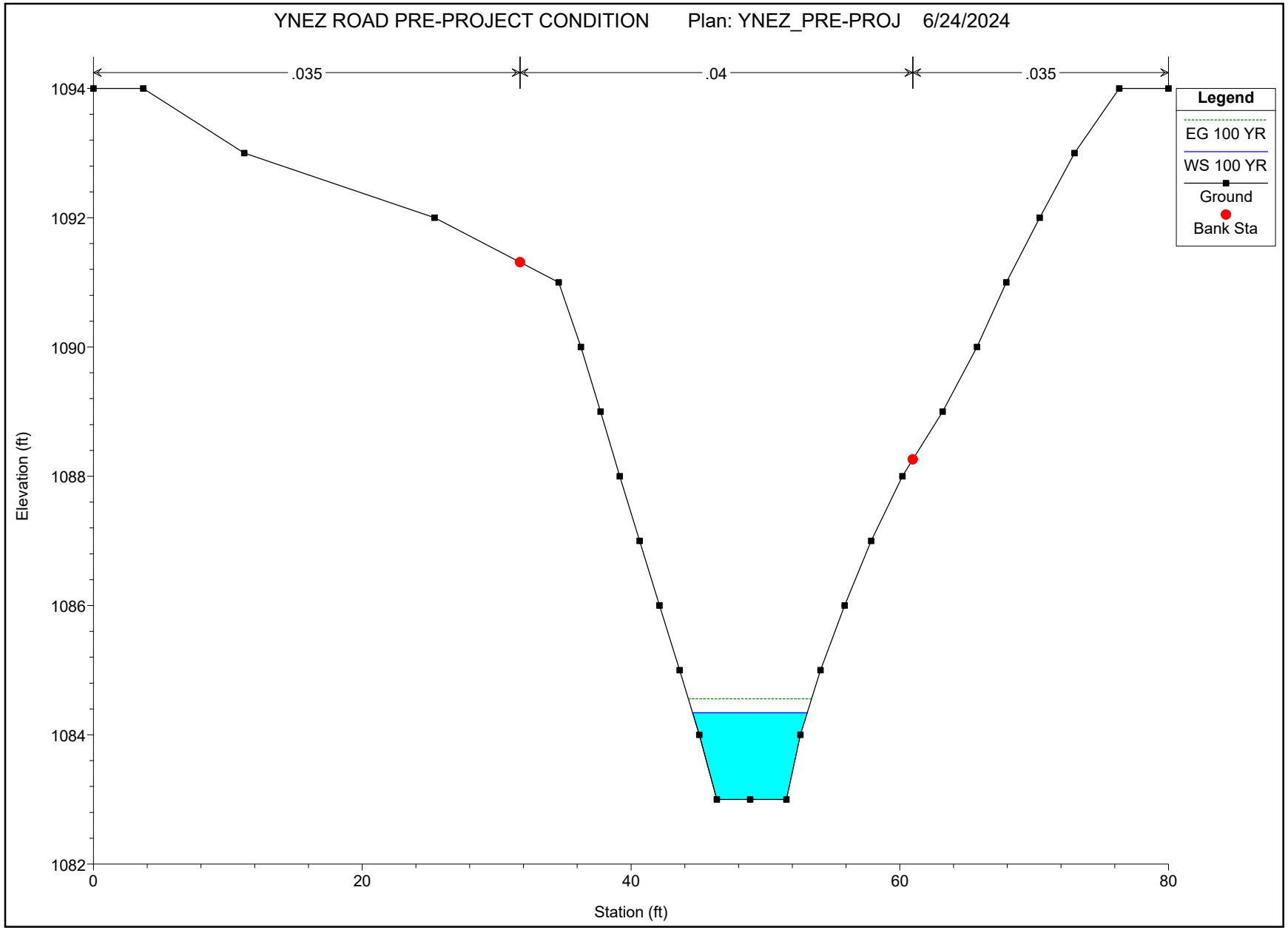
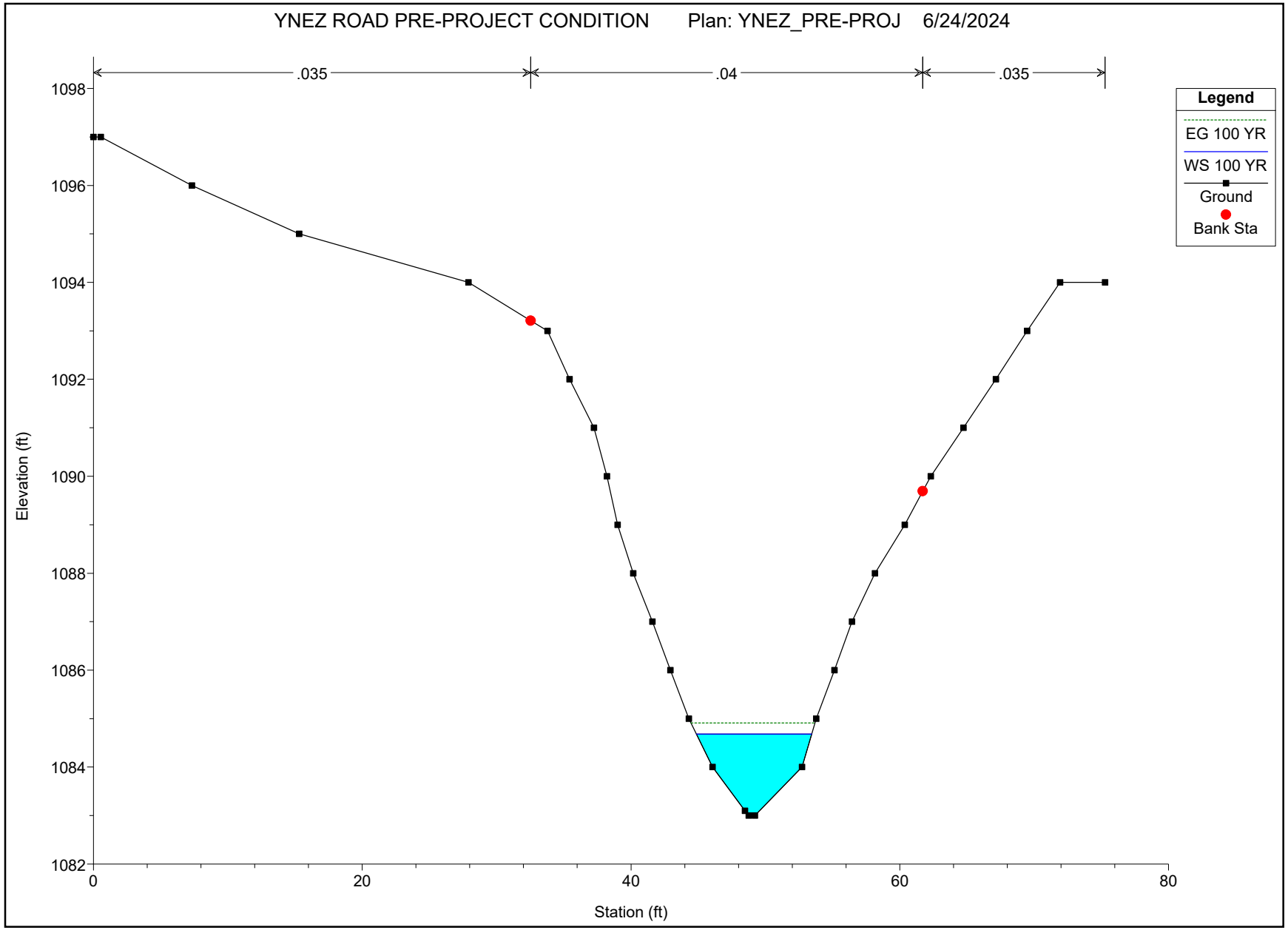
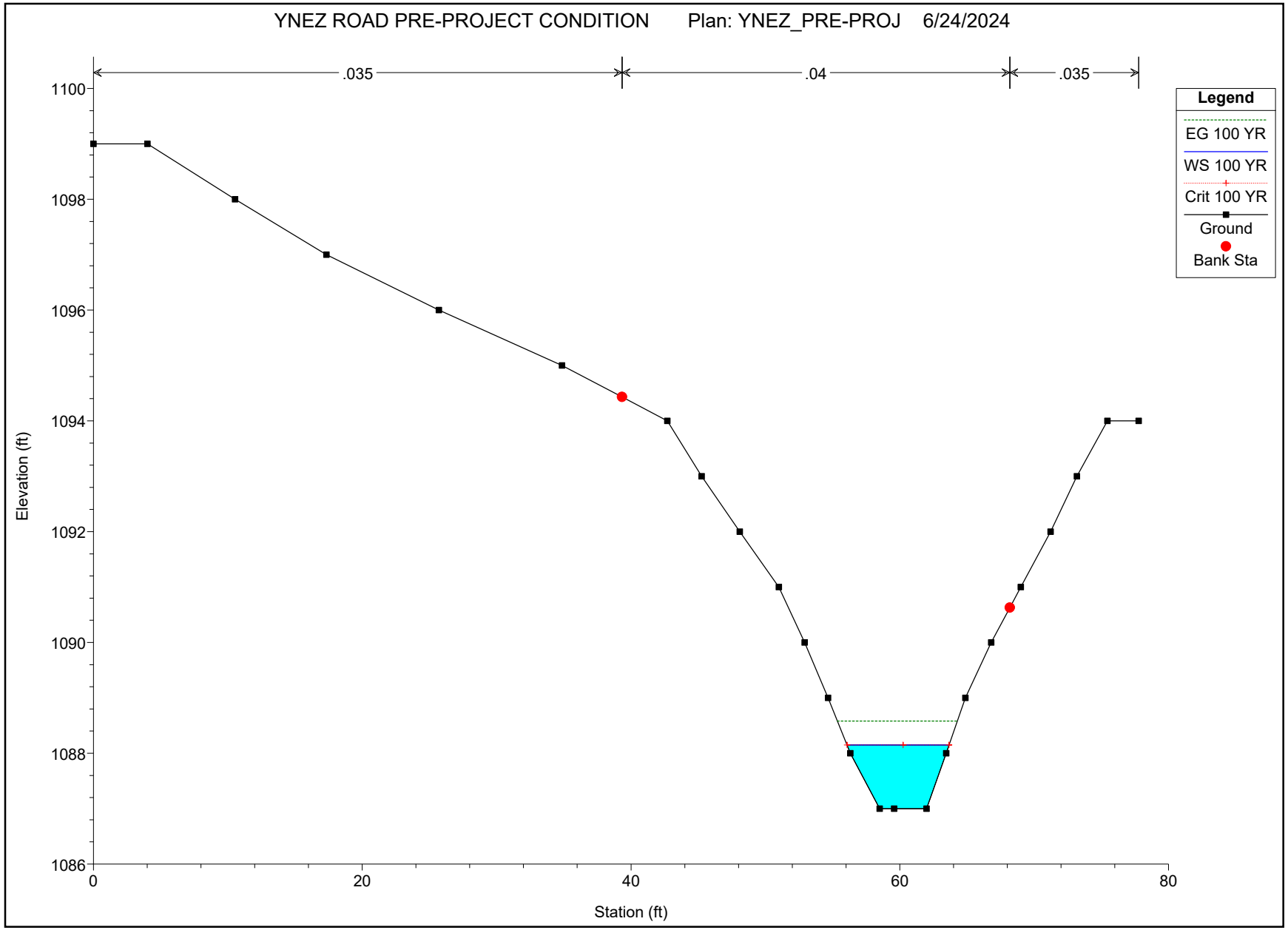
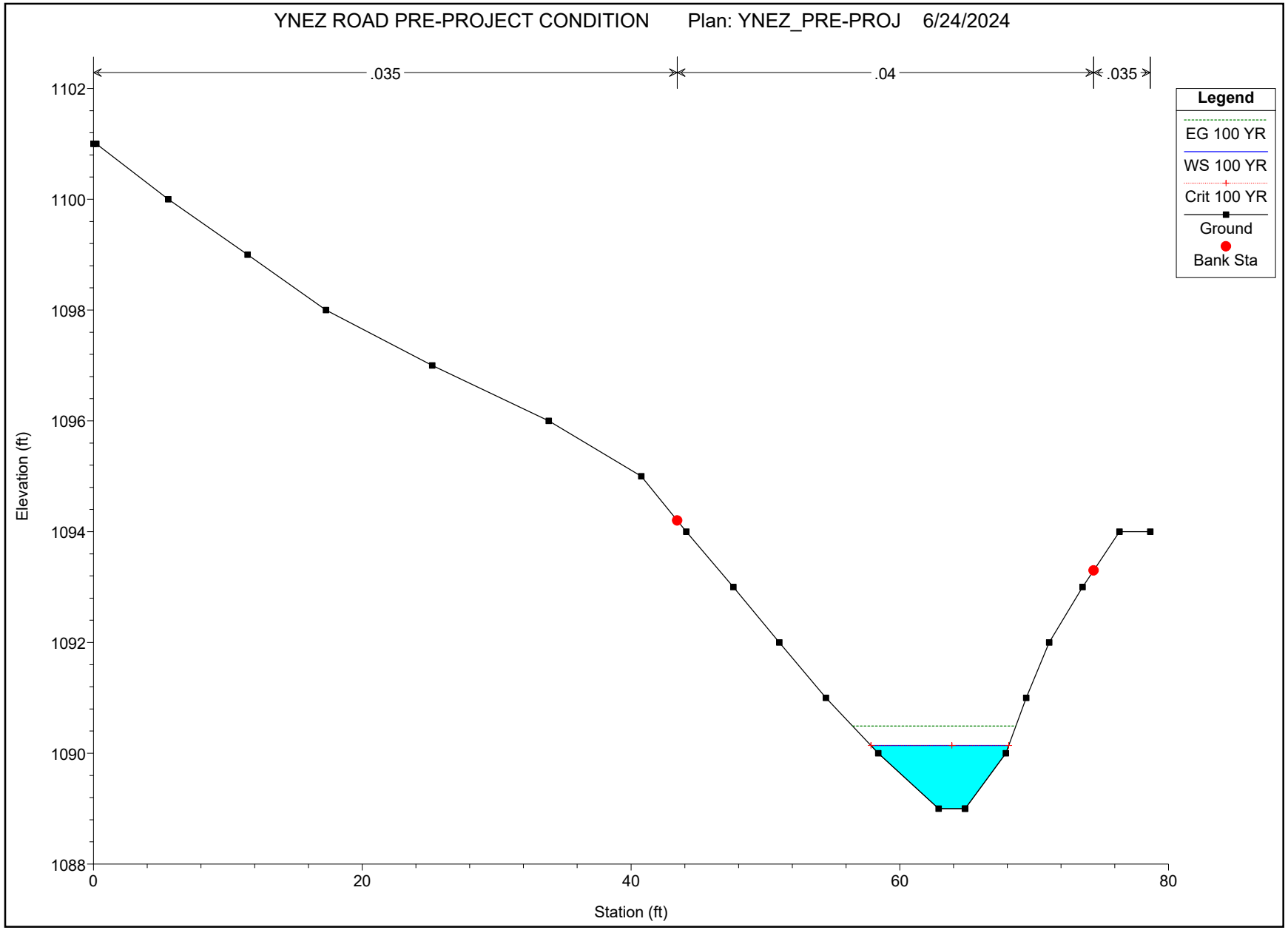
120
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1096
1094
1092
1090
1088
1086
1084
1082
0
20
40
60
80
100
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Ground
Bank Sta
Elevation (ft)
1094
1092
1090
1088
1086
1084
1082
0
20
40
60
80
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Ground
Bank Sta
Elevation (ft)
1098
1096
1094
1092
1090
1088
1086
1084
1082
0
20
40
60
80
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1100
1098
1096
1094
1092
1090
1088
1086
0
20
40
60
80
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1102
1100
1098
1096
1094
1092
1090
1088
0
20
40
60
80
Station (ft)

HEC-RAS HEC-RAS 6.4.1 June 2023
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X      X   X     X  X    X
X     X  X        X           X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X           X  X     X    X        X
X     X  X        X    X      X   X    X    X        X
X     X  XXXXXX    XXXX       X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: YNEZ ROAD PRE-PROJECT CONDITION
Project File : YNEZ RD_PRE_PROJECT.prj
Run Date and Time: 6/24/2024 6:17:40 AM

Project in English units

Project Description:
MODEL OF YNEZ ROAD EXTENSION
CAPITAL IMPROVEMENT PROJECT
CRS
Info=<SpatialReference> <CoordinateSystem Code="2230" Unit="US_survey_Foot"
AcadCode="CA83-VIF" /></SpatialReference>

PLAN DATA

Plan Title: YNEZ_PRE-PROJ
Plan File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ RD_PRE_PROJECT.p01

Geometry Title: YNEZ_PRE-PROJECT
Geometry File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ RD_PRE_PROJECT.g01

Flow Title   : YNEZ_PRE-PROJECT
Flow File   : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ RD_PRE_PROJECT.f01

Plan Description:
YNEZ_PRE-PROJECT CONDITION

Plan Summary Information:
Number of: Cross Sections =   35   Multiple Openings =   0
            Culverts   =   0   Inline Structures =   0
            Bridges   =   0   Lateral Structures =   0

Computational Information
    Water surface calculation tolerance = 0.01
    Critical depth calculation tolerance = 0.01
    Maximum number of iterations   = 20
    Maximum difference tolerance   = 0.33
    Flow tolerance factor   = 0.001

Computation Options
    Critical depth computed only where necessary

Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: YNEZ_PRE-PROJECT
Flow File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ RD_PRE_PROJECT.f01

Flow Data (cfs)

River	Reach	RS	100 YR
YNEZ_RD_STREAM	YNEZ RD	2275	33.8
YNEZ_RD_STREAM	YNEZ RD	1954	41.7
YNEZ_RD_STREAM	YNEZ RD	1382	58.7

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
YNEZ_RD_STREAM	YNEZ RD	100 YR	Normal S = 0.055535	Known WS = 1055.2

GEOMETRY DATA

Geometry Title: YNEZ_PRE-PROJECT
Geometry File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ RD_PRE_PROJECT.g01

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2275

INPUT
Description:
Station Elevation Data num= 24

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1101	.21	1101	5.56	1100	11.47	1099	17.3	1098
25.21	1097	33.87	1096	40.76	1095	43.44	1094.2	44.11	1094
47.62	1093	51.04	1092	54.51	1091	58.4	1090	62.9	1089
64.85	1089	64.87	1089	67.9	1090	69.42	1091	71.12	1092
73.61	1093	74.44	1093.3	76.36	1094	78.65	1094		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	43.44	.04	74.44	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
43.44	74.44	24.84	24.84	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2250

INPUT
Description:
Station Elevation Data num= 26

```
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1099    4.02    1099   10.54    1098   17.33    1097    25.7    1096
   34.86    1095   39.34 1094.43    42.7    1094   45.25    1093   48.09    1092
   51.01    1091   52.93    1090   54.66    1089   56.32    1088    58.5    1087
   59.58    1087      62    1087   63.46    1088   64.89    1089    66.8    1090
   68.19 1090.63      69    1091   71.22    1092   73.18    1093   75.46    1094
   77.78    1094

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   39.34     .04   68.19    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         39.34   68.19             26.76   26.76   26.76             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2223

INPUT
Description:
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1097     .55    1097    7.32    1096   15.31    1095    27.9    1094
   32.54 1093.21   33.79    1093   35.42    1092   37.25    1091   38.21    1090
   39.01    1089   40.17    1088   41.59    1087   42.93    1086   44.31    1085
   46.07    1084   48.48  1083.1   48.76    1083   49.22    1083   52.73    1084
   53.78    1085   55.15    1086   56.45    1087   58.15    1088   60.37    1089
   61.71 1089.69   62.31    1090   64.74    1091   67.15    1092   69.48    1093
   71.93    1094   75.28    1094

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   32.54     .04   61.71    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         32.54   61.71             31.24   31.24   31.24             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2192

INPUT
Description:
Station Elevation Data    num=      29
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1094     3.7    1094   11.22    1093   25.39    1092   31.74 1091.31
   34.61    1091   36.27    1090   37.73    1089   39.16    1088   40.64    1087
   42.13    1086   43.62    1085   45.09    1084   46.39    1083   48.87    1083
   51.56    1083   52.61    1084    54.1    1085    55.9    1086   57.88    1087
    60.2    1088   60.98 1088.26   63.19    1089   65.75    1090   67.94    1091
   70.42    1092      73    1093   76.34    1094      80    1094

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   31.74     .04   60.98    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         31.74   60.98             25.2    25.2    25.2             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
```

REACH: YNEZ RD RS: 2167

INPUT
Description:
Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1095	1.9	1095	8.09	1094	15.23	1093	25.85	1092
33.39	1091.02	33.52	1091	34.47	1090	35.42	1089	36.39	1088
37.37	1087	38.6	1086	40.14	1085	41.78	1084	42.8	1083
47.39	1083	51.23	1083	52.12	1084	52.86	1085	54	1086
57.92	1087	62.21	1088	64.26	1088.61	65.59	1089	68.68	1090
72.04	1091	75.23	1092	78.92	1093	83.18	1094	86.96	1094

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	33.39	.04	64.26	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
33.39	64.26	30.34	30.34	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2136

INPUT
Description:
Station Elevation Data num= 37

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1096	5.06	1096	10.54	1095	16	1094	22.03	1093
27.67	1092	33.78	1091	37.95	1090	41.04	1089	44.12	1088
47.6	1087	51.58	1086.32	53.48	1086	56.43	1085	57.71	1084
58.98	1083	60.26	1082	62.52	1081	67.86	1081	70.93	1081
72.48	1082	73.17	1083	73.91	1084	74.98	1085	76.08	1086
77.19	1087	78.65	1088	81.52	1089	82.8	1089.45	84.56	1090
84.58	1090.01	87.83	1091	91.63	1092	95.62	1093	98.72	1094
102.28	1095	103.13	1095						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	51.58	.04	84.58	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
51.58	84.58	10.63	10.63	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2126

INPUT
Description:
Station Elevation Data num= 39

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1097	.33	1097	5.63	1096	10.77	1095	15.65	1094
20.9	1093	26.46	1092	32.11	1091	37.08	1090	40.45	1089
43.63	1088	47.45	1087	51.21	1086.48	54.64	1086	58.89	1085
58.92	1085	60.42	1084	61.75	1083	64.27	1082	67.26	1081
70.41	1080	75.82	1080	81.24	1080	82.91	1081	83.78	1082
84.65	1083	85.64	1084	86.62	1085	87.59	1086	89.51	1087
91.51	1088	93.41	1089	94.61	1089.85	94.82	1090	95.95	1091
97.07	1092	98.17	1093	99.31	1094	100.52	1094		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	51.21	.04	94.61	.035

```
Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         51.21   94.61             35.78   35.78   35.78             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2090

INPUT
Description:
Station Elevation Data    num=      41
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1097     .54    1097    5.53    1096   10.16    1095   14.78    1094
   19.76    1093   24.85    1092   29.92    1091   35.02    1090   38.68    1089
   42.04    1088   45.52    1087   45.53    1087   49.47    1086    49.8    1085
   50.09    1084   50.38    1083   51.38    1082   53.27    1081   55.16    1080
   56.55    1079   57.77    1078    60.9    1078   62.61    1078   63.94    1079
   65.25    1080   66.52    1081   67.13    1082   67.74    1083   68.36    1084
   68.98    1085   69.58    1086   71.62    1087   73.69    1088    73.9 1088.06
   77.41    1089   82.85    1090   87.22    1091   91.62    1092   97.01    1093
  101.75    1093

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   45.53     .04    73.9    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         45.53    73.9             19.35   19.35   19.35             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2071

INPUT
Description:
Station Elevation Data    num=      38
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1096    2.82    1096    8.16    1095   13.59    1094   18.79    1093
   24.16    1092   30.14    1091    35.7    1090   41.16    1089   42.76  1088.2
   43.16    1088   43.82    1087   44.36    1086   44.87    1085   45.38    1084
   45.89    1083   46.74    1082   47.89    1081   48.99    1080   49.89    1079
   50.75    1078   55.42    1078   58.82    1078   60.21    1079   61.56    1080
   62.56    1081   63.36    1082   64.16    1083   64.96    1084   65.77    1085
   68.37    1086   70.13 1086.63   71.14    1087   75.23    1088   80.16    1089
      84    1090   88.19    1091   93.34    1091

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   42.76     .04   70.13    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         42.76   70.13             28.31   28.31   28.31             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2042

INPUT
Description:
Station Elevation Data    num=      39
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1095    1.71    1095     7.3    1094   13.13    1093   19.63    1092
```

```
   25.93    1091   34.36    1090   43.35    1089   49.96    1088    52.8    1087
   56.17    1086   57.83 1085.43   59.09    1085   60.04    1084   60.93    1083
   61.76    1082   62.59    1081   63.23    1080   63.92    1079   64.36    1078
   64.79    1077   68.39    1077   73.27    1077   75.87    1078   77.29    1079
   78.56    1080   79.77    1081   80.75    1082   81.13    1083    81.5    1084
   82.42    1085   83.74    1086   84.07    1087   84.38    1088   85.33 1088.41
   86.72    1089   89.77    1090   94.54    1091   99.54    1091

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   57.83     .04   85.33    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         57.83   85.33            35.18   35.18   35.18             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2007

INPUT
Description:
Station Elevation Data    num=      35
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1093    1.76    1093    9.74    1092    16.3    1091   23.58    1090
   31.48    1089   40.85    1088   47.67    1087    51.7  1086.2   52.71    1086
   53.26    1085   53.81    1084   54.38    1083   54.95    1082   55.55    1081
   56.13    1080   57.11    1079   58.17    1078   59.32    1077   63.15    1077
   68.25    1077   69.87    1078   71.09    1079   72.13    1080   73.15    1081
   74.61    1082   75.87    1083   76.78    1084   77.67    1085   78.57    1086
   78.61 1086.02   81.08    1087   83.88    1088   87.11    1089   91.14    1090

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035    51.7     .04   78.61    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          51.7   78.61            53.26   53.26   53.26             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1954

INPUT
Description:
Station Elevation Data    num=      37
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1091     3.8    1091    9.84    1090   16.89    1089   24.38    1088
   33.86    1087   40.94  1086.1    41.7    1086   41.96    1085   42.29    1084
   42.62    1083   42.96    1082   43.32    1081   43.66    1080   44.22    1079
   44.98    1078   45.73    1077   46.49    1076   47.21    1075   52.28    1075
   55.93    1075   57.03    1076   58.33    1077   59.72    1078   61.42    1079
   63.18    1080   64.21    1081   65.19    1082   66.27    1083   68.84 1083.72
   69.84    1084   73.06    1085   76.52    1086   80.47    1087   85.01    1088
   90.16    1089   96.14    1089

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   40.94     .04   68.84    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         40.94   68.84            55.85   55.85   55.85             .1       .3

CROSS SECTION
```

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1898

INPUT
Description:
Station Elevation Data num= 38

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1090	.26	1090	4.31	1089	9.22	1088	14.42	1087
20.66	1086	26.72	1085	32.97	1084	40.76	1083	50.03	1082
55.29	1081.24	56.97	1081	57.29	1080	57.65	1079	59.97	1078
62.04	1077	63.68	1076	65.62	1075	67.61	1074	70.37	1074
72.71	1074	74.43	1075	76.17	1076	77.53	1077	78.91	1078
80	1079	81.1	1080	82.84	1081	82.88	1081.03	82.89	1081.03
84.59	1082	87.53	1083	89.51	1084	90.73	1085	92.01	1086
94.17	1087	100.13	1088	108.36	1088				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	55.29	.04	82.89	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
55.29	82.89	62.15	62.15	62.15	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1835

INPUT
Description:
Station Elevation Data num= 30

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1091	.05	1091	2.31	1090	6.05	1089	10.83	1088
15.71	1087	21.68	1086	26.55	1085	26.99	1084	27.45	1083
27.89	1082	28.37	1081	28.91	1080	29.51	1079	30.34	1078
31.6	1077	32.7	1076	33.64	1075	34.81	1074	37.98	1073
46.55	1073	47.69	1074	48.83	1075	50.14	1076	51.77	1077
56.26	1078	59.4	1079	62.01	1080	68.37	1081	80.56	1081

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	26.55	.04	68.37	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
26.55	68.37	39.37	39.37	39.37	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1796

INPUT
Description:
Station Elevation Data num= 38

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1091	.7	1091	2.93	1090	5.21	1089	7.84	1088
11.66	1087	15.91	1086	22.34	1085	27.03	1084	27.08	1083.98
30.14	1083	31.24	1082	31.83	1081	32.41	1080	33.01	1079
33.75	1078	34.93	1077	36.13	1076	37.86	1075	39.78	1074
42.66	1073	49.37	1072	51.88	1072	53.39	1072	55.5	1073
57	1074	57.85	1075	58.4	1076	58.77	1077	59.13	1078
59.49	1079	63.06	1080	71.97	1080.27	95.6	1081	99.97	1082
104.85	1083	110.08	1084	116.42	1085				

Manning's n Values num= 3

```
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   27.08     .04   71.97    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         27.08   71.97             39.5    39.5    39.5             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1757

INPUT
Description:
Station Elevation Data    num=      36
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1089     .99    1089    5.69    1088   10.44    1087   15.59    1086
   20.95    1085   26.36    1084   30.58    1083   34.44    1082   38.31    1081
   42.83    1080   47.31    1079   47.41 1078.96   48.01 1078.72   49.76    1078
   50.71    1077   51.61    1076   52.83    1075   54.07    1074   56.16    1073
   58.28    1072   67.03    1072   67.98    1073   68.64    1074   69.33    1075
   70.11    1076   71.29    1077   72.14    1078   72.56    1079   73.27    1080
   76.28    1081   79.14 1081.47    82.4    1082   88.99    1083    97.9    1084
  106.95    1084

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   48.01     .04   79.14    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         48.01   79.14            19.55   19.55   19.55             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1737

INPUT
Description:
Station Elevation Data    num=      35
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1089    2.91    1089    7.85    1088    12.6    1087   17.52    1086
    22.1    1085   26.72    1084   31.27    1083   35.36    1082   39.38    1081
   43.76    1080   48.22    1079   49.92 1078.66   53.29    1078   54.81    1077
   55.89    1076   57.19    1075   58.82    1074   60.44    1073   62.31    1072
    66.5    1072   74.64    1072   76.91    1073   78.65    1074   80.37    1075
   81.87    1076    82.8    1077   83.64    1078    84.3    1079    84.9    1080
   85.52    1081   88.96    1082    89.2 1082.03   97.43    1083     105    1083

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   49.92     .04    89.2    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         49.92    89.2            40.35   40.35   40.35             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1697

INPUT
Description:
Station Elevation Data    num=      41
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1094    3.97    1094    7.92    1093   11.57    1092    14.7    1091
```

```
   17.82    1090   21.18    1089    25.5    1088   29.91    1087   34.21    1086
   39.66    1085   50.32    1084   55.11    1083   56.83 1082.26   57.43    1082
   58.61    1081   59.28    1080   60.02    1079   60.58    1078   60.95    1077
   61.79    1076   62.24    1075   62.64    1074   64.18    1073   65.89    1072
   74.33    1072   79.11    1072   80.73    1073    81.4    1074   82.07    1075
   82.69    1076   83.56    1077   85.94 1077.32   91.09    1078   95.25 1078.61
   97.94    1079  104.46    1080  110.62    1081  116.44    1082  123.58    1083
  127.33    1083

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   56.83     .04   95.25    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         56.83   95.25             78.83   78.83   78.83             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1618

INPUT
Description:
Station Elevation Data    num=      38
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1089    7.71    1089   16.81    1088   25.54    1087   33.92    1086
   42.11    1085   50.41    1084   57.87    1083   65.73    1082   73.12    1081
   80.08    1080   86.47    1079   91.77    1078   96.76    1077   97.56 1076.76
  100.14    1076  100.98    1075     102    1074   103.3    1073  106.77    1072
  109.02    1071  114.01    1071  118.63    1071  121.26    1072  124.42    1073
  128.01    1074  129.87 1074.58  131.21    1075  135.12    1076  140.36    1077
  145.53    1078  150.53    1079  156.24    1080  162.61    1081  167.97    1082
  172.94    1083  177.16    1084  180.07    1084

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   97.56     .04  129.87    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         97.56  129.87             25.72   25.72   25.72             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1593

INPUT
Description:
Station Elevation Data    num=      39
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1088    3.84    1088   15.63    1087   25.98    1086   35.85    1085
   44.75    1084    53.4    1083   61.61    1082   67.86    1081   74.13    1080
   80.24    1079    88.9    1078   92.85    1077   98.32    1076   103.5 1075.17
  104.58    1075  107.74    1074  109.13    1073  110.36    1072  111.53    1071
   113.6    1070  115.78    1069   117.3    1068  121.18    1068  123.54    1068
  124.92    1069  126.75    1070  128.21    1071  129.56    1072  134.86    1073
  135.41 1073.12  139.37    1074  143.98    1075  148.47    1076  152.77    1077
  157.07    1078  161.38    1079  165.58    1080  169.19    1080

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   103.5     .04  135.41    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         103.5  135.41             25.22   25.22   25.22             .1       .3
```

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1567

INPUT
Description:
Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1087	8.37	1087	16.19	1086	23.41	1085	30.58	1084
39.61	1083	48.95	1082	56.56	1081	64.2	1080	72.77	1079
79.72	1078	85.85	1077	92.66	1076	100.44	1075	108.1	1074
108.12	1074	110.62	1073	111.61	1072	112.59	1071	113.57	1070
114.48	1069	115.46	1068	117.61	1067	119.53	1066	123.3	1066
126.88	1066	128.4	1067	129.9	1068	131.16	1069	132.37	1070
133.57	1071	134.76	1072	135.13	1072.12	137.85	1073	141.47	1074
146.29	1075	150.71	1076	154.33	1077	157.85	1078	161.63	1079
164.91	1079								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	108.1	.04	135.13	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
108.1	135.13	26.49	26.49	26.49	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1541

INPUT
Description:
Station Elevation Data num= 33

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1084	3.62	1084	11.44	1083	20.96	1082	29.16	1081
38.38	1080	49.73	1079	59.35	1078	67.67	1077	68.61	1076.88
75.48	1076	83.91	1075	91.58	1074	98.24	1073	103.11	1072.13
103.85	1072	104.52	1071	104.99	1070	105.47	1069	105.96	1068
106.82	1067	107.94	1066	109.64	1065	116.19	1065	118.01	1066
119.61	1067	121.34	1068	123.49	1069	126.02	1070	130.85	1070.91
131.33	1071	136.2	1072	141.61	1072				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	103.11	.04	130.85	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
103.11	130.85	29.02	29.02	29.02	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1512

INPUT
Description:
Station Elevation Data num= 40

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1083	4.53	1083	11.73	1082	22.6	1081	37.05	1080
48.7	1079	58.71	1078	68.78	1077	77.53	1076	86.63	1075
94.15	1074	99.59	1073	103.78	1072	106.03	1071.22	106.67	1071
108.82	1070	109.22	1069	109.61	1068	110.01	1067	110.41	1066
111.44	1065	115.8	1065	118.61	1065	120.24	1066	121.59	1067
123.78	1068	133.2	1068.92	134.03	1069	136.69	1069.65	138.2	1070

```
   140.8    1071  143.35    1072  146.58    1073  149.86    1074  152.46    1075
  154.58    1076   158.2    1077  164.39    1078  170.32    1079  176.14    1079

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035  106.03     .04   133.2    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        106.03   133.2            52.35   52.35   52.35             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1459

INPUT
Description:
Station Elevation Data    num=      32
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1079    6.39    1079   16.36    1078   28.81    1077   43.93    1076
   56.18    1075   62.19 1074.33   65.09    1074   66.69    1073   68.13    1072
   69.01    1071    70.3    1070   71.54    1069   72.72    1068   73.96    1067
   75.83    1066   78.91    1065   82.51    1064   89.64    1064   92.85    1064
   94.36    1065   95.89    1066   97.79    1067  100.31    1068  109.89    1069
     119 1069.51  127.67    1070   131.6    1071   134.6    1072  138.06    1073
  141.66    1074  144.92    1074

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   62.19     .04     119    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         62.19     119            36.56   36.56   36.56             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1423

INPUT
Description:
Station Elevation Data    num=      38
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1083    2.02    1083    4.04    1082    6.06    1081    8.08    1080
    10.1    1079   12.12    1078   14.14    1077   16.16    1076   23.18    1075
   38.88    1074   56.87    1073   60.76 1072.59   66.42    1072   68.18    1071
   70.79    1070   74.75    1069   78.47    1068   81.27    1067    81.7    1066
    82.1    1065   82.86    1064   84.19    1063   88.85    1063   90.86    1063
   95.57    1064   97.98    1065    99.6    1066  102.06    1067  104.77    1068
  109.86    1069  110.62 1069.17  114.38    1070  116.99    1071  120.43    1072
  131.86    1073  142.48    1074  154.16    1074

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   60.76     .04  110.62    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         60.76  110.62            41.28   41.28   41.28             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1382

INPUT
```

Description:
Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1083	2.08	1083	4.17	1082	6.25	1081	8.33	1080
10.42	1079	12.5	1078	14.58	1077	16.67	1076	18.75	1075
20.83	1074	28.12	1073	41.76	1072	53.81	1071	63.18	1070
68.98	1069	70.1	1068.85	76.41	1068	76.82	1067	77.22	1066
77.6	1065	77.94	1064	78.43	1063	79.48	1062	81.49	1061
87.15	1061	90.86	1061	91.18	1062	91.66	1063	92.42	1064
93.76	1065	95.16	1066	97.16	1067	99.01	1068	101.19	1069
104.99	1070	106.94	1070.22	113.69	1071	117.2	1072	128.1	1072
130.88	1073	135.5	1074	139.61	1075	144.48	1076	149.13	1077

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	70.1	.04	106.94	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
70.1	106.94	46.77	46.77	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1335

INPUT
Description:
Station Elevation Data num= 49

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1083	1.95	1083	3.98	1082	6.02	1081	8.05	1080
10.08	1079	12.12	1078	14.15	1077	16.19	1076	18.22	1075
20.25	1074	22.29	1073	24.32	1072	26.36	1071	37.69	1070
50.76	1069	60.61	1068	63.62	1067.42	65.83	1067	68.83	1066
70.29	1065	71.27	1064	71.9	1063	72.58	1062	73.4	1061
75.12	1060	75.66	1059	80.87	1059	85.61	1059	86.32	1060
86.98	1060	87.5	1061	88.74	1062	89.92	1063	92.24	1063.99
92.26	1064	97.08	1065	103.29	1066	105.29	1067	107.3	1068
109.3	1069	111.3	1070	113.31	1071	115.31	1072	117.32	1073
119.32	1074	121.33	1075	123.33	1076	125.34	1076		

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	63.62	.04	92.24	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
63.62	92.24	45.57	45.57	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1289

INPUT
Description:
Station Elevation Data num= 49

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1080	1.67	1080	3.68	1079	5.7	1078	7.72	1077
9.74	1076	11.76	1075	13.78	1074	15.8	1073	17.82	1072
19.84	1071	21.86	1070	23.71	1069	32.96	1068	39.05	1067
40.5	1066.4	41.46	1066	43.87	1065	45.29	1064	46.34	1063
47.48	1062	48.58	1061	49.56	1060	50.48	1059	51.6	1058
52.61	1057	58.98	1057	62.57	1057	63.43	1058	64.49	1059
65.47	1060	66.6	1061	68.14	1062	69.67	1062.09	85.94	1063
88.14	1064	90.25	1065	92.45	1066	96.3	1067	98.32	1068
100.33	1069	102.35	1070	104.37	1071	106.38	1072	108.4	1073
110.42	1074	112.43	1075	114.45	1076	116.47	1076		

```
Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035    40.5     .04   69.67    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          40.5   69.67             39.03   39.03   39.03             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1250

INPUT
Description:
Station Elevation Data    num=      48
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1077    1.78    1077    3.78    1076    5.78    1075    7.79    1074
    9.79    1073   11.79    1072   13.79    1071   15.79    1070   17.79    1069
   19.79    1068   21.79    1067   23.79    1066    25.8    1065    27.8    1064
    29.8    1063    31.8    1062    33.8    1061   35.67 1060.06    35.8    1060
    37.8    1059    39.8    1058   41.81    1057   43.81    1056   45.21 1056.88
    45.4    1057    49.7    1057    51.7    1058    53.7    1059   58.93    1060
    64.9    1061   65.02 1061.01   73.36    1062   77.69    1063   80.79    1064
   85.84    1065   87.84    1066   89.84    1067   91.84    1068   93.84    1069
   95.84    1070   97.84    1071   99.84    1072  101.84    1073  103.84    1074
  105.85    1075  107.85    1076  109.85    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   35.67     .04   65.02    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         35.67   65.02             41.84   41.84   41.84             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1208

INPUT
Description:
Station Elevation Data    num=      46
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1074    1.22    1074    3.25    1073    5.29    1072    7.33    1071
    9.37    1070   11.42    1069   13.46    1068    15.5    1067   17.55    1066
   19.59    1065   21.64    1064   23.68    1063   25.73    1062   27.77    1061
   29.81    1060   29.87 1059.97   31.86    1059    33.9    1058   35.95    1057
   37.99    1056   41.11 1055.01   41.14    1055   43.09    1056   45.18    1056
   47.19    1057   49.21    1058   51.23    1059   53.25    1060   55.27    1061
   57.28    1062   60.22  1062.4   64.64    1063   83.16    1065   85.18    1066
    87.2    1067   89.22    1068   91.24    1069   93.26    1070   95.28    1071
   97.31    1072   99.33    1073  101.35    1074  103.37    1075  105.39    1076
  107.41    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   29.87     .04   60.22    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         29.87   60.22             50.63   50.63   50.63             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
```

REACH: YNEZ RD RS: 1158

INPUT
Description:
Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1071	.94	1071	2.98	1070	5.01	1069	7.05	1068
9.09	1067	11.13	1066	13.17	1065	15.21	1064	17.25	1063
19.29	1062	21.32	1061	22.75	1060.3	23.36	1060	25.4	1059
27.44	1058	29.48	1057	31.52	1056	33.56	1055	36.66	1056
37.3	1055	37.98	1054	40.74	1054	44.67	1054	46.29	1055
47.96	1056	49.31	1057	50.69	1058	52.4	1059	54.48	1060
56.99	1060.14	72.34	1061	74.35	1062	76.35	1063	78.35	1064
80.36	1065	82.36	1066	84.36	1067	86.37	1068	88.38	1069
90.38	1070	92.39	1071	94.39	1072	96.4	1073	98.4	1074
100.4	1075	102.41	1076	104.41	1076				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	22.75	.04	56.99	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
22.75	56.99	51.78	51.78	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1106

INPUT
Description:
Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1068	.58	1068	2.62	1067	4.66	1066	6.71	1065
8.75	1064	10.79	1063	12.83	1062	14.87	1061	18.13	1059.77
20.16	1059	22.17	1058	24.17	1057	26.18	1056	28.18	1055
30.19	1054	33.26	1054	34.87	1053	39.36	1053	42.69	1053
44.09	1054	45.3	1055	46.71	1056	47.89	1057	49.2	1058
50.43	1059	52.88	1059.15	66.32	1060	79.72	1061	81.74	1062
83.76	1063	85.78	1064	87.8	1065	89.83	1066	91.85	1067
93.87	1068	95.89	1069	97.91	1070	99.93	1071	101.94	1072
103.96	1073	105.97	1074	107.98	1075	109.99	1076	111.99	1077

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	18.13	.04	52.88	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
18.13	52.88	50.27	50.27	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1056

INPUT
Description:
Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1064	1.98	1064	4.02	1063	6.06	1062	8.1	1061
25.64	1058	28.14	1057.53	31.02	1057	33.03	1056	35.03	1055
37.04	1054	39.02	1055	39.71	1054	40.76	1053	41.87	1052
44.28	1052	47.58	1052	48.71	1053	49.7	1054	50.62	1055
53.11	1056	56.04	1057	58.95	1057.6	60.85	1058	74.25	1059
76.26	1060	78.26	1061	80.27	1062	82.27	1063	84.28	1064
86.28	1065	88.28	1066	90.29	1067	92.29	1068	94.3	1069

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    96.3    1070   98.31    1071  100.31    1072  102.31    1073  104.32    1074
  106.32    1075  108.33    1076  110.33    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   28.14     .04   58.95    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         28.14   58.95             26.32   26.32   26.32             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1029

INPUT
Description:
Station Elevation Data    num=      42
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1063     .65    1063     2.7    1062    4.74    1061    6.79    1060
   15.97    1058   24.23    1057   32.77    1056   35.99 1055.42    38.3    1055
   40.31    1054   43.55    1055   45.85    1054    48.3    1053    53.8    1052
   56.04    1052   60.72    1052   61.81    1053   62.73    1054   63.99    1055
   65.99 1055.71   66.82 1056.01   72.41    1058   74.41    1059   76.42    1060
   78.42    1061   80.43    1062   82.43    1063   84.44    1064   86.44    1065
   88.45    1066   90.45    1067   92.46    1068   94.46    1069   96.47    1070
   98.47    1071  100.48    1072  102.48    1073  104.49    1074  106.49    1075
   108.5    1076   110.5    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   35.99     .04   66.82    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         35.99   66.82             29.38   29.38   29.38             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1000

INPUT
Description:
Station Elevation Data    num=      37
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1061    1.02    1061    3.06    1060     5.1    1059    7.13    1058
    9.17    1057    11.2    1056    25.6  1054.1   26.36    1054   28.74    1053
   31.34    1052   33.76    1052   39.93    1051   53.02    1051   56.58    1051
   58.63    1052   60.63    1053   62.64    1054   64.64    1055   65.95 1055.37
   66.64 1055.56   71.82    1057   73.83    1058   75.83    1059   77.83    1060
   79.84    1061   81.84    1062   83.84    1063   85.85    1064   87.85    1065
   89.86    1066   91.86    1067   93.86    1068   95.87    1069   97.87    1070
   99.87    1071   100.9    1071

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035    25.6     .04   65.95    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          25.6   65.95               0       0       0             .1       .3



SUMMARY OF MANNING'S N VALUES

River:YNEZ_RD_STREAM
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Reach	River Sta.	n1	n2	n3
YNEZ RD	2275	.035	.04	.035
YNEZ RD	2250	.035	.04	.035
YNEZ RD	2223	.035	.04	.035
YNEZ RD	2192	.035	.04	.035
YNEZ RD	2167	.035	.04	.035
YNEZ RD	2136	.035	.04	.035
YNEZ RD	2126	.035	.04	.035
YNEZ RD	2090	.035	.04	.035
YNEZ RD	2071	.035	.04	.035
YNEZ RD	2042	.035	.04	.035
YNEZ RD	2007	.035	.04	.035
YNEZ RD	1954	.035	.04	.035
YNEZ RD	1898	.035	.04	.035
YNEZ RD	1835	.035	.04	.035
YNEZ RD	1796	.035	.04	.035
YNEZ RD	1757	.035	.04	.035
YNEZ RD	1737	.035	.04	.035
YNEZ RD	1697	.035	.04	.035
YNEZ RD	1618	.035	.04	.035
YNEZ RD	1593	.035	.04	.035
YNEZ RD	1567	.035	.04	.035
YNEZ RD	1541	.035	.04	.035
YNEZ RD	1512	.035	.04	.035
YNEZ RD	1459	.035	.04	.035
YNEZ RD	1423	.035	.04	.035
YNEZ RD	1382	.035	.04	.035
YNEZ RD	1335	.035	.04	.035
YNEZ RD	1289	.035	.04	.035
YNEZ RD	1250	.035	.04	.035
YNEZ RD	1208	.035	.04	.035
YNEZ RD	1158	.035	.04	.035
YNEZ RD	1106	.035	.04	.035
YNEZ RD	1056	.035	.04	.035
YNEZ RD	1029	.035	.04	.035
YNEZ RD	1000	.035	.04	.035

SUMMARY OF REACH LENGTHS

River: YNEZ_RD_STREAM

Reach	River Sta.	Left	Channel	Right
YNEZ RD	2275	24.84	24.84	24.84
YNEZ RD	2250	26.76	26.76	26.76
YNEZ RD	2223	31.24	31.24	31.24
YNEZ RD	2192	25.2	25.2	25.2
YNEZ RD	2167	30.34	30.34	30.34
YNEZ RD	2136	10.63	10.63	10.63
YNEZ RD	2126	35.78	35.78	35.78
YNEZ RD	2090	19.35	19.35	19.35
YNEZ RD	2071	28.31	28.31	28.31
YNEZ RD	2042	35.18	35.18	35.18
YNEZ RD	2007	53.26	53.26	53.26
YNEZ RD	1954	55.85	55.85	55.85
YNEZ RD	1898	62.15	62.15	62.15
YNEZ RD	1835	39.37	39.37	39.37
YNEZ RD	1796	39.5	39.5	39.5
YNEZ RD	1757	19.55	19.55	19.55
YNEZ RD	1737	40.35	40.35	40.35
YNEZ RD	1697	78.83	78.83	78.83
YNEZ RD	1618	25.72	25.72	25.72
YNEZ RD	1593	25.22	25.22	25.22

YNEZ RD	1567	26.49	26.49	26.49
YNEZ RD	1541	29.02	29.02	29.02
YNEZ RD	1512	52.35	52.35	52.35
YNEZ RD	1459	36.56	36.56	36.56
YNEZ RD	1423	41.28	41.28	41.28
YNEZ RD	1382	46.77	46.77	46.77
YNEZ RD	1335	45.57	45.57	45.57
YNEZ RD	1289	39.03	39.03	39.03
YNEZ RD	1250	41.84	41.84	41.84
YNEZ RD	1208	50.63	50.63	50.63
YNEZ RD	1158	51.78	51.78	51.78
YNEZ RD	1106	50.27	50.27	50.27
YNEZ RD	1056	26.32	26.32	26.32
YNEZ RD	1029	29.38	29.38	29.38
YNEZ RD	1000	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: YNEZ_RD_STREAM

Reach	River Sta.	Contr.	Expan.
YNEZ RD	2275	.1	.3
YNEZ RD	2250	.1	.3
YNEZ RD	2223	.1	.3
YNEZ RD	2192	.1	.3
YNEZ RD	2167	.1	.3
YNEZ RD	2136	.1	.3
YNEZ RD	2126	.1	.3
YNEZ RD	2090	.1	.3
YNEZ RD	2071	.1	.3
YNEZ RD	2042	.1	.3
YNEZ RD	2007	.1	.3
YNEZ RD	1954	.1	.3
YNEZ RD	1898	.1	.3
YNEZ RD	1835	.1	.3
YNEZ RD	1796	.1	.3
YNEZ RD	1757	.1	.3
YNEZ RD	1737	.1	.3
YNEZ RD	1697	.1	.3
YNEZ RD	1618	.1	.3
YNEZ RD	1593	.1	.3
YNEZ RD	1567	.1	.3
YNEZ RD	1541	.1	.3
YNEZ RD	1512	.1	.3
YNEZ RD	1459	.1	.3
YNEZ RD	1423	.1	.3
YNEZ RD	1382	.1	.3
YNEZ RD	1335	.1	.3
YNEZ RD	1289	.1	.3
YNEZ RD	1250	.1	.3
YNEZ RD	1208	.1	.3
YNEZ RD	1158	.1	.3
YNEZ RD	1106	.1	.3
YNEZ RD	1056	.1	.3
YNEZ RD	1029	.1	.3
YNEZ RD	1000	.1	.3

Profile Output Table - Standard Table 1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)				

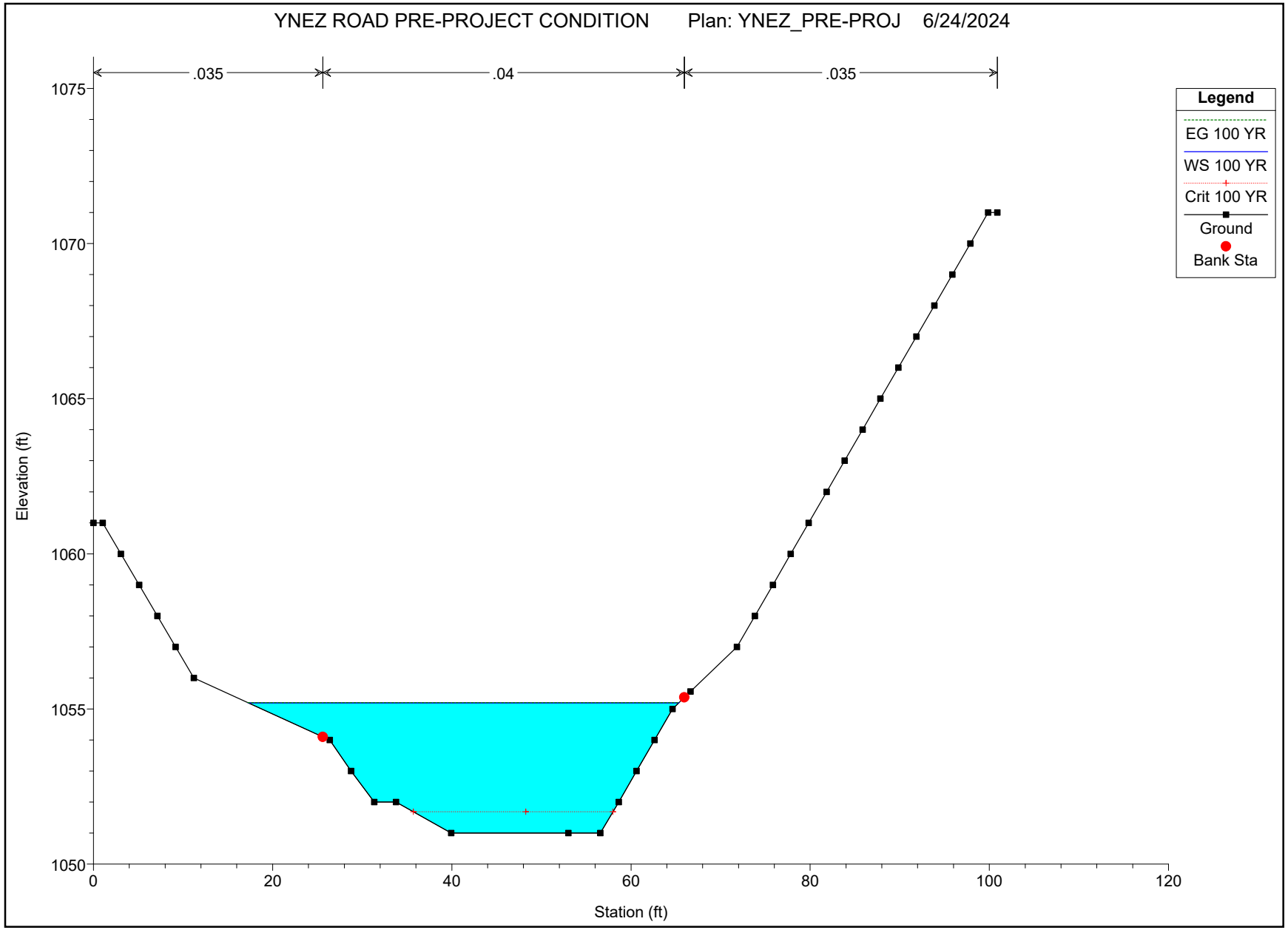
(ft/s)	(sq ft)	(ft)							
YNEZ RD	1000	100 YR	58.70	1051.00	1055.20	1051.68	1055.20	0.000031	
0.44	134.90	48.08	0.04						
YNEZ RD	1029	100 YR	58.70	1052.00	1055.19		1055.21	0.000439	
1.13	51.74	27.27	0.15						
YNEZ RD	1056	100 YR	58.70	1052.00	1055.19		1055.24	0.001321	
1.86	31.56	16.42	0.24						
YNEZ RD	1106	100 YR	58.70	1053.00	1055.25		1055.32	0.001671	
2.00	29.29	17.99	0.28						
YNEZ RD	1158	100 YR	58.70	1054.00	1055.27	1055.27	1055.75	0.027295	
5.58	10.52	10.99	1.01						
YNEZ RD	1208	100 YR	58.70	1055.00	1056.87	1056.87	1057.37	0.026861	
5.67	10.35	10.72	1.02						
YNEZ RD	1250	100 YR	58.70	1056.00	1057.99	1057.91	1058.39	0.021617	
5.09	11.54	11.85	0.91						
YNEZ RD	1289	100 YR	58.70	1057.00	1058.62		1058.78	0.005111	
3.14	18.70	13.19	0.46						
YNEZ RD	1335	100 YR	58.70	1059.00	1060.02	1060.02	1060.48	0.027390	
5.43	10.81	11.91	1.00						
YNEZ RD	1382	100 YR	58.70	1061.00	1062.02	1062.02	1062.48	0.027000	
5.46	10.75	11.73	1.01						
YNEZ RD	1423	100 YR	41.70	1063.00	1063.92	1063.92	1064.28	0.027428	
4.80	8.69	12.23	1.00						
YNEZ RD	1459	100 YR	41.70	1064.00	1064.85		1065.09	0.017899	
3.94	10.60	14.67	0.82						
YNEZ RD	1512	100 YR	41.70	1065.00	1065.96	1065.96	1066.37	0.027169	
5.18	8.06	9.71	1.00						
YNEZ RD	1541	100 YR	41.70	1065.00	1066.56		1066.69	0.005116	
2.91	14.32	11.58	0.46						
YNEZ RD	1567	100 YR	41.70	1066.00	1066.92	1066.92	1067.32	0.027207	
5.05	8.26	10.53	1.01						
YNEZ RD	1593	100 YR	41.70	1068.00	1069.02	1069.02	1069.46	0.027234	
5.28	7.89	9.23	1.01						
YNEZ RD	1618	100 YR	41.70	1071.00	1071.78	1071.78	1072.12	0.027822	
4.66	8.95	13.40	1.01						
YNEZ RD	1697	100 YR	41.70	1072.00	1072.99		1073.12	0.007019	
2.82	14.76	16.53	0.53						
YNEZ RD	1737	100 YR	41.70	1072.00	1073.24		1073.32	0.003566	
2.26	18.42	17.27	0.39						
YNEZ RD	1757	100 YR	41.70	1072.00	1073.29		1073.43	0.006446	
3.03	13.78	12.61	0.51						
YNEZ RD	1796	100 YR	41.70	1072.00	1073.55		1073.65	0.004755	
2.59	16.08	15.23	0.44						
YNEZ RD	1835	100 YR	41.70	1073.00	1073.84	1073.84	1074.20	0.027630	
4.81	8.67	12.17	1.00						
YNEZ RD	1898	100 YR	41.70	1074.00	1075.23	1075.10	1075.56	0.017960	
4.59	9.09	9.66	0.83						
YNEZ RD	1954	100 YR	41.70	1075.00	1076.13		1076.35	0.011325	
3.78	11.04	10.81	0.66						
YNEZ RD	2007	100 YR	33.80	1077.00	1077.73	1077.73	1078.07	0.028526	
4.64	7.28	10.96	1.00						
YNEZ RD	2042	100 YR	33.80	1077.00	1078.31		1078.41	0.004259	
2.48	13.65	12.09	0.41						
YNEZ RD	2071	100 YR	33.80	1078.00	1078.78	1078.78	1079.14	0.028616	
4.82	7.01	9.83	1.01						
YNEZ RD	2090	100 YR	33.80	1078.00	1079.26	1079.04	1079.53	0.014101	
4.14	8.16	8.10	0.73						
YNEZ RD	2126	100 YR	33.80	1080.00	1080.64	1080.64	1080.92	0.028949	
4.28	7.90	13.91	1.00						
YNEZ RD	2136	100 YR	33.80	1081.00	1081.75	1081.75	1082.08	0.028545	
4.61	7.33	11.25	1.01						
YNEZ RD	2167	100 YR	33.80	1083.00	1083.77	1083.77	1084.13	0.028811	
4.81	7.03	9.90	1.01						
YNEZ RD	2192	100 YR	33.80	1083.00	1084.34		1084.56	0.010643	
3.72	9.08	8.53	0.64						
YNEZ RD	2223	100 YR	33.80	1083.00	1084.68		1084.91	0.011833	

3.87	8.74	8.57		0.67					
YNEZ RD	2250	100	YR	33.80	1087.00	1088.15	1088.15	1088.58	0.027695
5.25	6.44	7.61		1.01					
YNEZ RD	2275	100	YR	33.80	1089.00	1090.14	1090.14	1090.49	0.027687
4.75	7.12	10.26		1.00					

APPENDIX B: POST-PROJECT HEC-RAS HYDRAULIC MODEL

HEC-RAS Plan: YNEZ_PRE-PROJ River: YNEZ_RD_STREAM Reach: YNEZ RD Profile: 100 YR

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
YNEZ RD	1000	100 YR	58.70	1051.00	1055.20	1051.68	1055.20	0.000031	0.44	134.90	48.08	0.04
YNEZ RD	1029	100 YR	58.70	1052.00	1055.19		1055.21	0.000439	1.13	51.74	27.27	0.15
YNEZ RD	1056	100 YR	58.70	1052.00	1055.19		1055.24	0.001321	1.86	31.56	16.42	0.24
YNEZ RD	1106	100 YR	58.70	1053.00	1055.25		1055.32	0.001671	2.00	29.29	17.99	0.28
YNEZ RD	1158	100 YR	58.70	1054.00	1055.27	1055.27	1055.75	0.027295	5.58	10.52	10.99	1.01
YNEZ RD	1208	100 YR	58.70	1055.00	1056.87	1056.87	1057.37	0.026861	5.67	10.35	10.72	1.02
YNEZ RD	1250	100 YR	58.70	1056.00	1057.99	1057.91	1058.39	0.021617	5.09	11.54	11.85	0.91
YNEZ RD	1289	100 YR	58.70	1057.00	1058.62		1058.78	0.005111	3.14	18.70	13.19	0.46
YNEZ RD	1335	100 YR	58.70	1059.00	1060.02	1060.02	1060.48	0.027390	5.43	10.81	11.91	1.00
YNEZ RD	1382	100 YR	58.70	1061.00	1062.02	1062.02	1062.48	0.027000	5.46	10.75	11.73	1.01
YNEZ RD	1423	100 YR	41.70	1063.00	1063.92	1063.92	1064.28	0.027428	4.80	8.69	12.23	1.00
YNEZ RD	1459	100 YR	41.70	1064.00	1064.85		1065.09	0.017899	3.94	10.60	14.67	0.82
YNEZ RD	1512	100 YR	41.70	1065.00	1065.95	1065.95	1066.37	0.027337	5.19	8.04	9.70	1.00
YNEZ RD	1541	100 YR	41.70	1065.00	1066.56		1066.69	0.005108	2.91	14.33	11.58	0.46
YNEZ RD	1567	100 YR	41.70	1066.00	1066.92	1066.92	1067.32	0.027207	5.05	8.26	10.53	1.01
YNEZ RD	1593	100 YR	41.70	1068.00	1069.02	1069.02	1069.46	0.027234	5.28	7.89	9.23	1.01
YNEZ RD	1618	100 YR	41.70	1071.00	1071.78	1071.78	1072.12	0.027822	4.66	8.95	13.40	1.01
YNEZ RD	1697	100 YR	41.70	1072.00	1072.99		1073.12	0.007019	2.82	14.76	16.53	0.53
YNEZ RD	1737	100 YR	41.70	1072.00	1073.24		1073.32	0.003566	2.26	18.42	17.27	0.39
YNEZ RD	1757	100 YR	41.70	1072.00	1073.29		1073.43	0.006446	3.03	13.78	12.61	0.51
YNEZ RD	1796	100 YR	41.70	1072.00	1073.55		1073.65	0.004755	2.59	16.08	15.23	0.44
YNEZ RD	1835	100 YR	41.70	1073.00	1073.84	1073.84	1074.20	0.027630	4.81	8.67	12.17	1.00
YNEZ RD	1898	100 YR	41.70	1074.00	1075.23	1075.10	1075.56	0.017960	4.59	9.09	9.66	0.83
YNEZ RD	1954	100 YR	41.70	1075.00	1076.13		1076.35	0.011325	3.78	11.04	10.81	0.66
YNEZ RD	2007	100 YR	33.80	1077.00	1077.73	1077.73	1078.07	0.028526	4.64	7.28	10.96	1.00
YNEZ RD	2042	100 YR	33.80	1077.00	1078.31		1078.41	0.004259	2.48	13.65	12.09	0.41
YNEZ RD	2071	100 YR	33.80	1078.00	1078.78	1078.78	1079.14	0.028751	4.83	7.00	9.83	1.01
YNEZ RD	2090	100 YR	33.80	1078.00	1079.27	1079.04	1079.53	0.014072	4.14	8.17	8.10	0.73
YNEZ RD	2126	100 YR	33.80	1080.00	1080.64	1080.64	1080.92	0.028949	4.28	7.90	13.91	1.00
YNEZ RD	2136	100 YR	33.80	1081.00	1081.75	1081.75	1082.08	0.028545	4.61	7.33	11.25	1.01
YNEZ RD	2167	100 YR	33.80	1083.00	1083.77	1083.77	1084.13	0.028811	4.81	7.03	9.90	1.01
YNEZ RD	2192	100 YR	33.80	1083.00	1084.34		1084.56	0.010643	3.72	9.08	8.53	0.64
YNEZ RD	2223	100 YR	33.80	1083.00	1084.68		1084.91	0.011833	3.87	8.74	8.57	0.67
YNEZ RD	2250	100 YR	33.80	1087.00	1088.15	1088.15	1088.58	0.027695	5.25	6.44	7.61	1.01
YNEZ RD	2275	100 YR	33.80	1089.00	1090.14	1090.14	1090.49	0.027687	4.75	7.12	10.26	1.00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Crit 100 YR
Ground
Bank Sta
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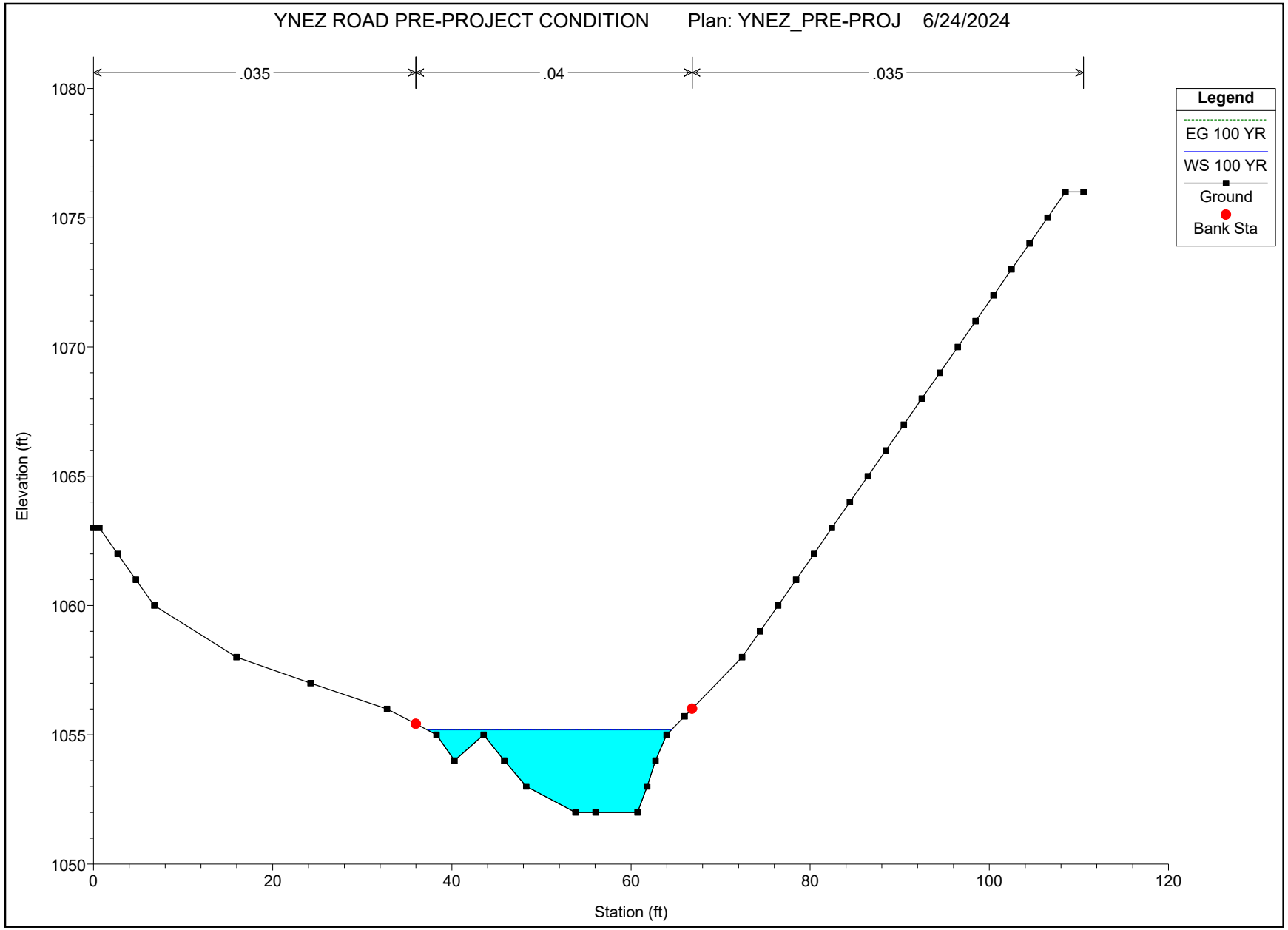
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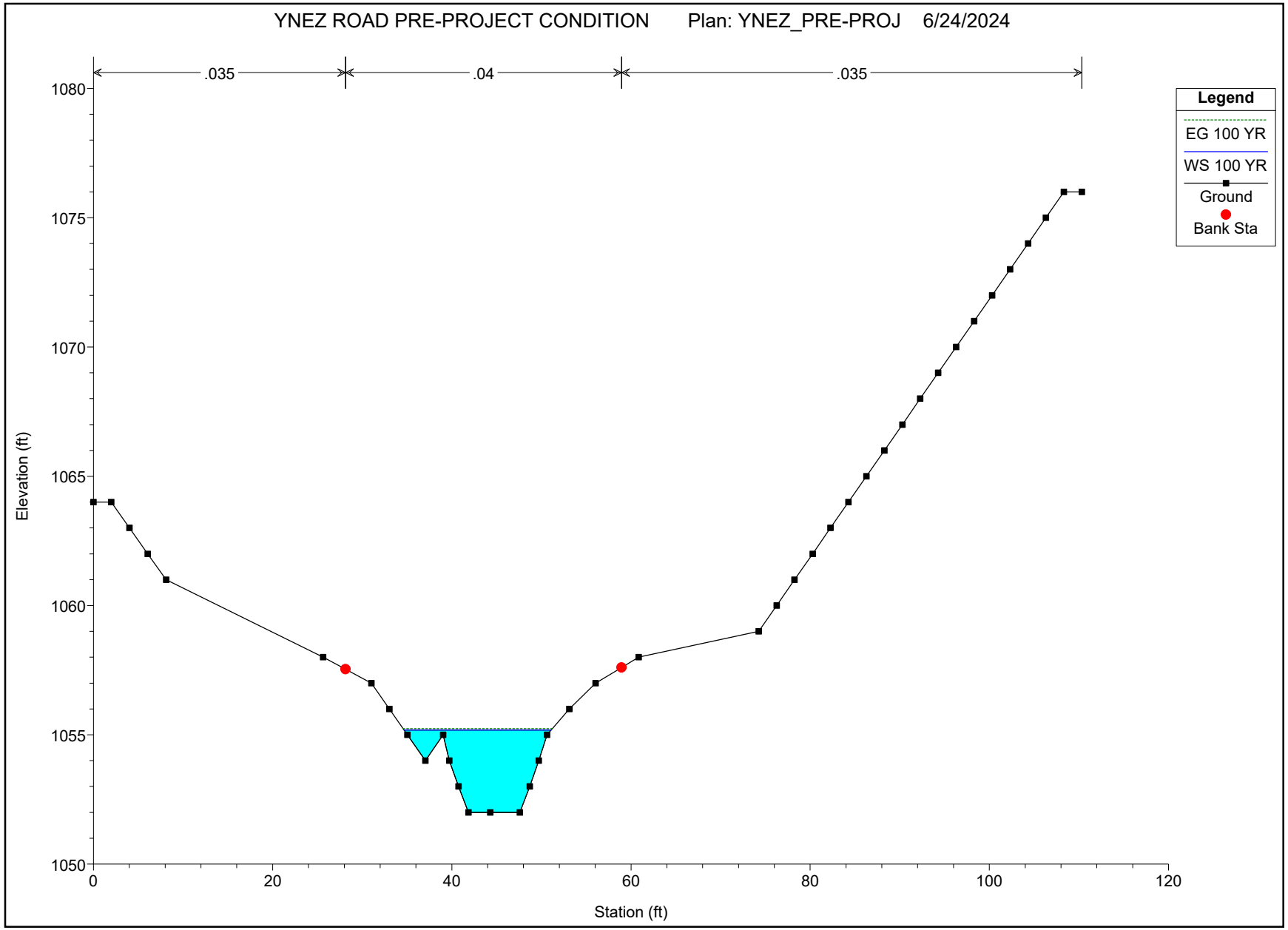
Station (ft)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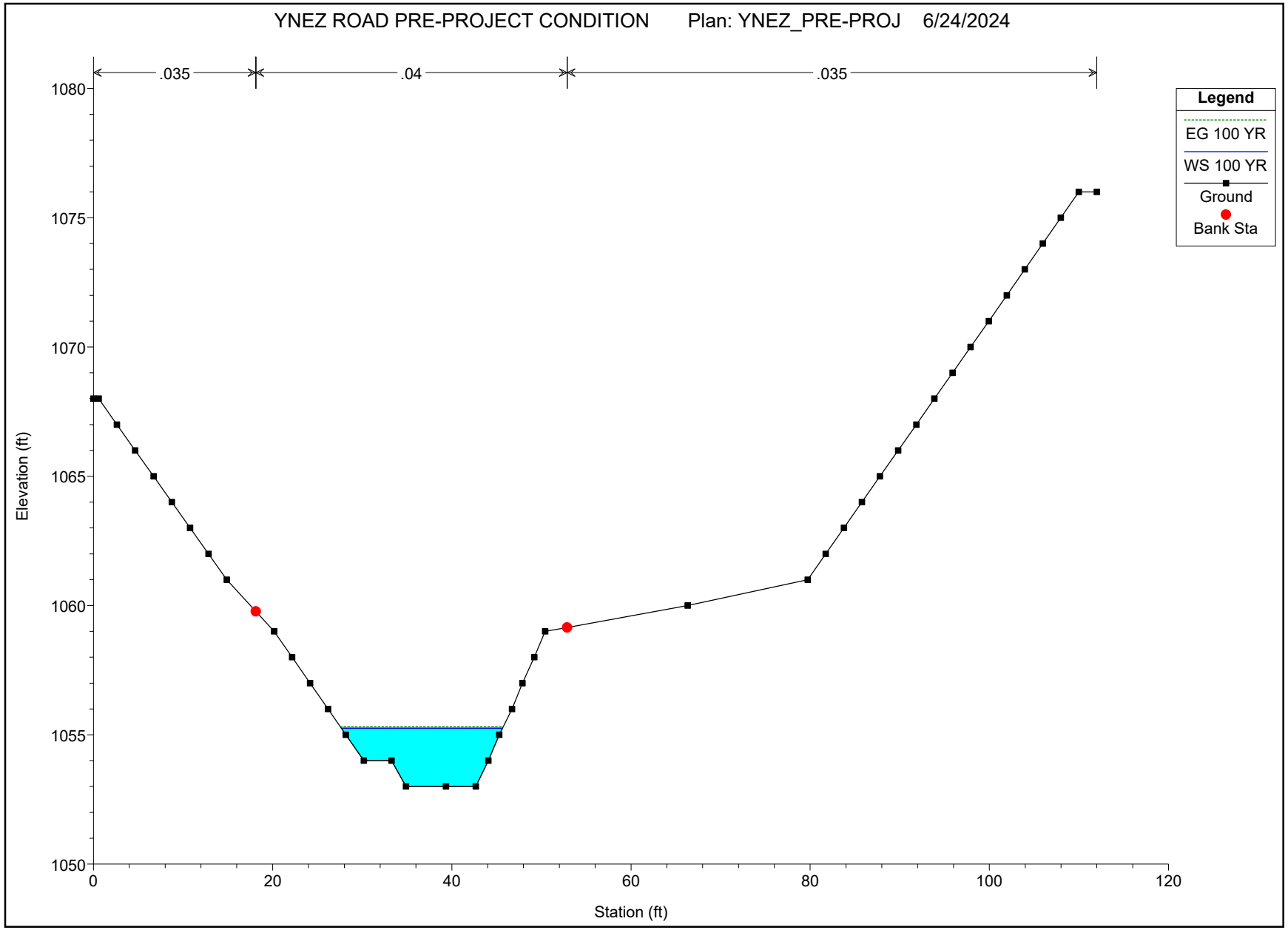
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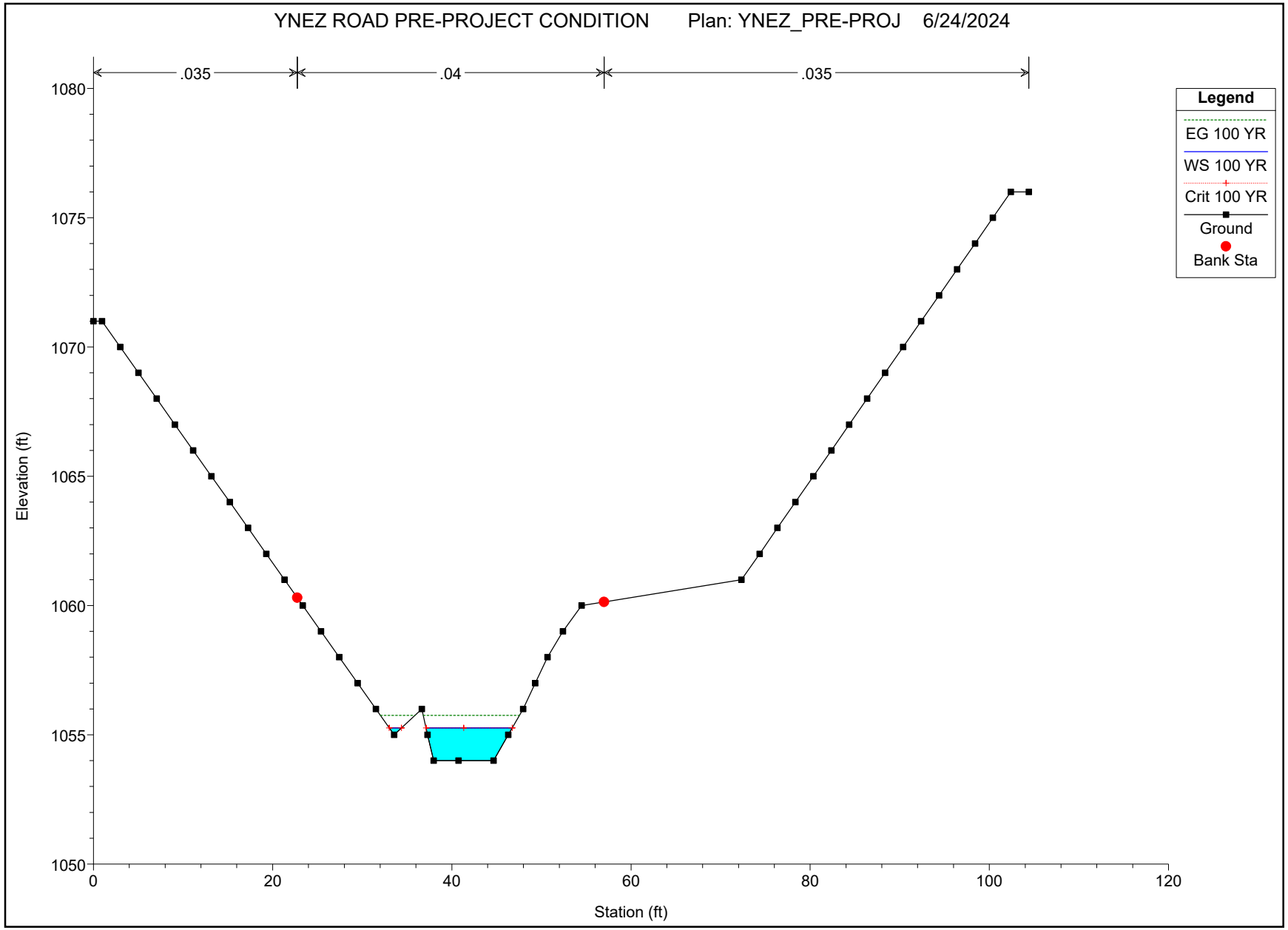
Station (ft)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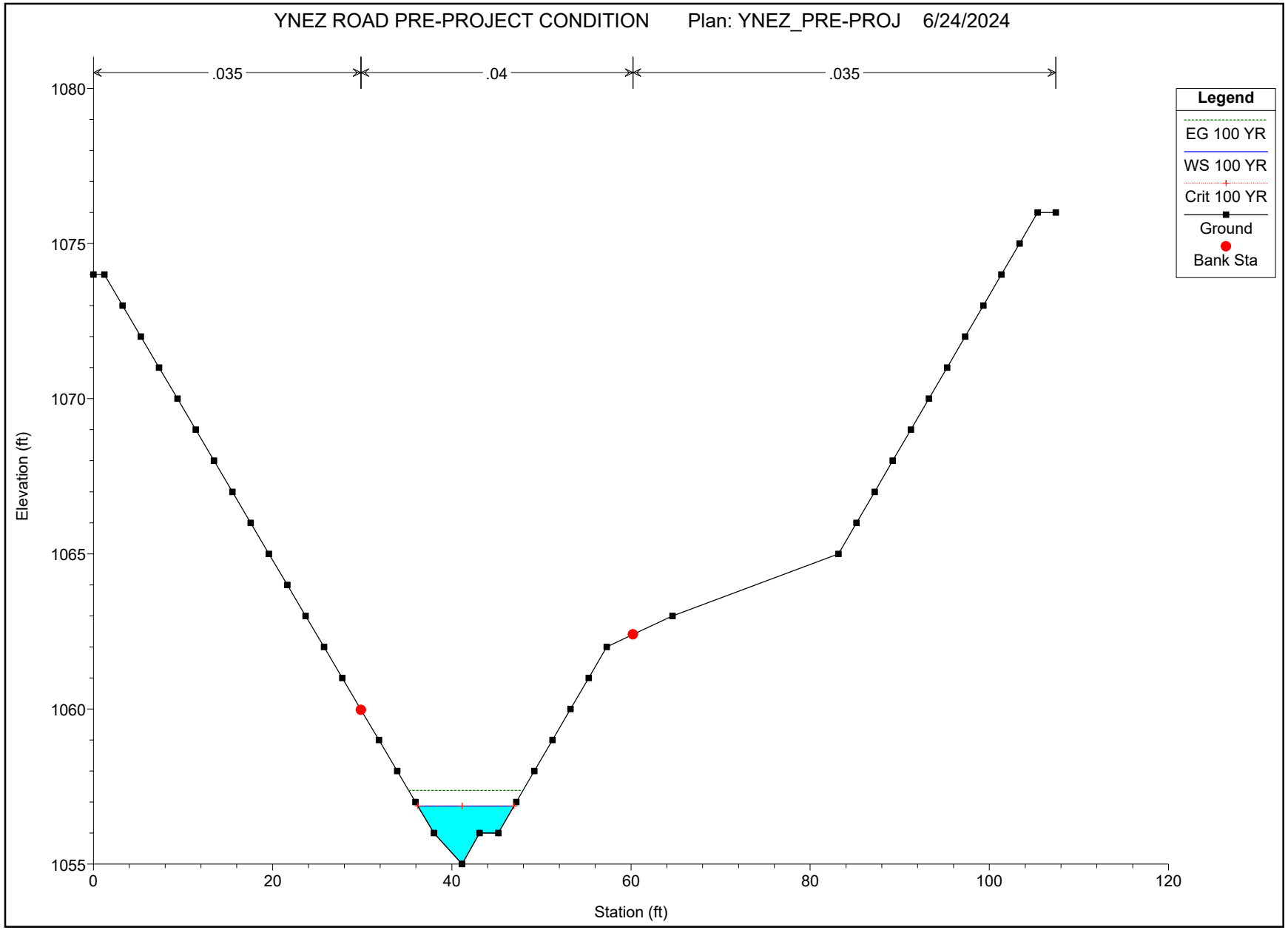
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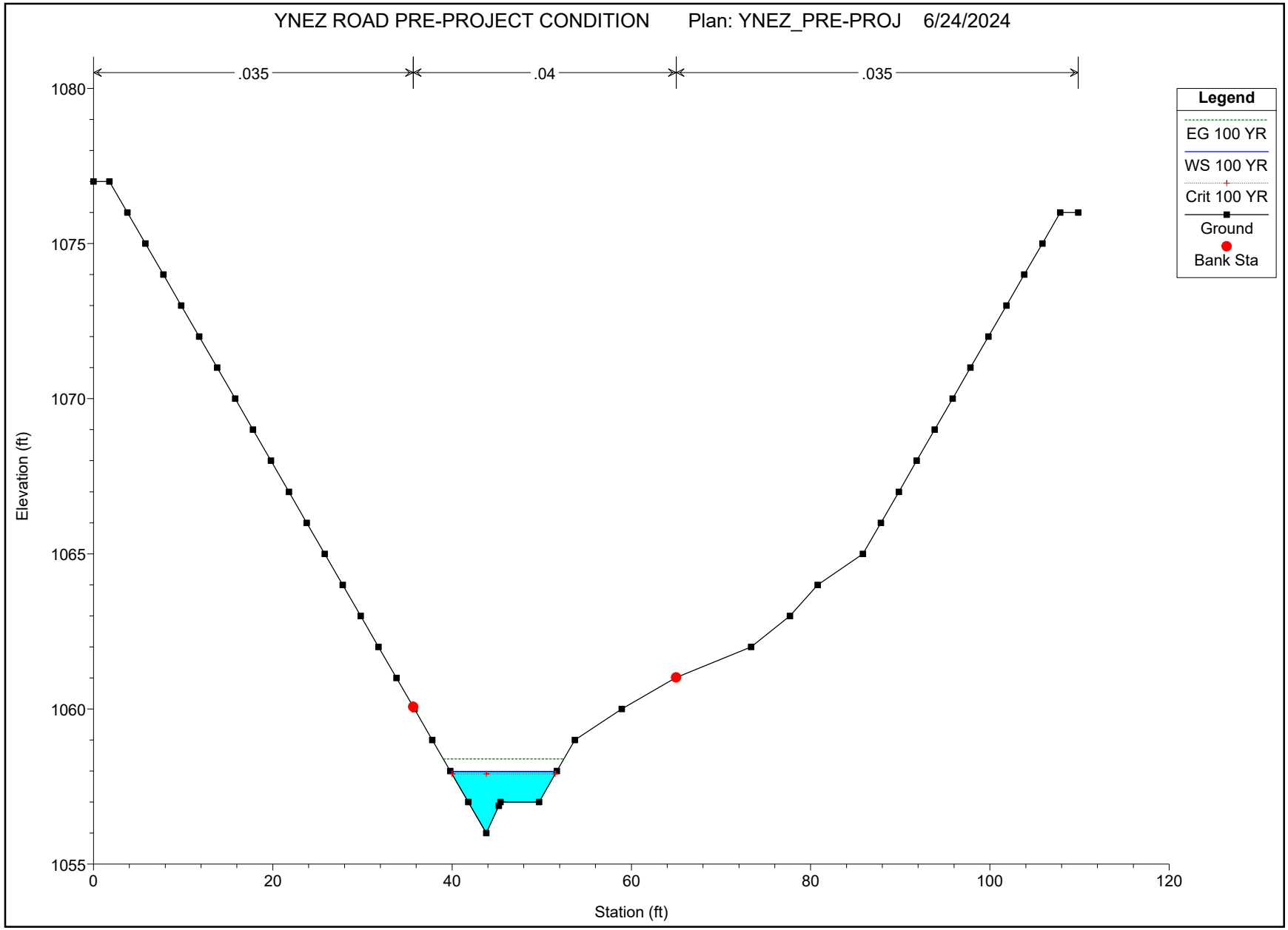
Station (ft)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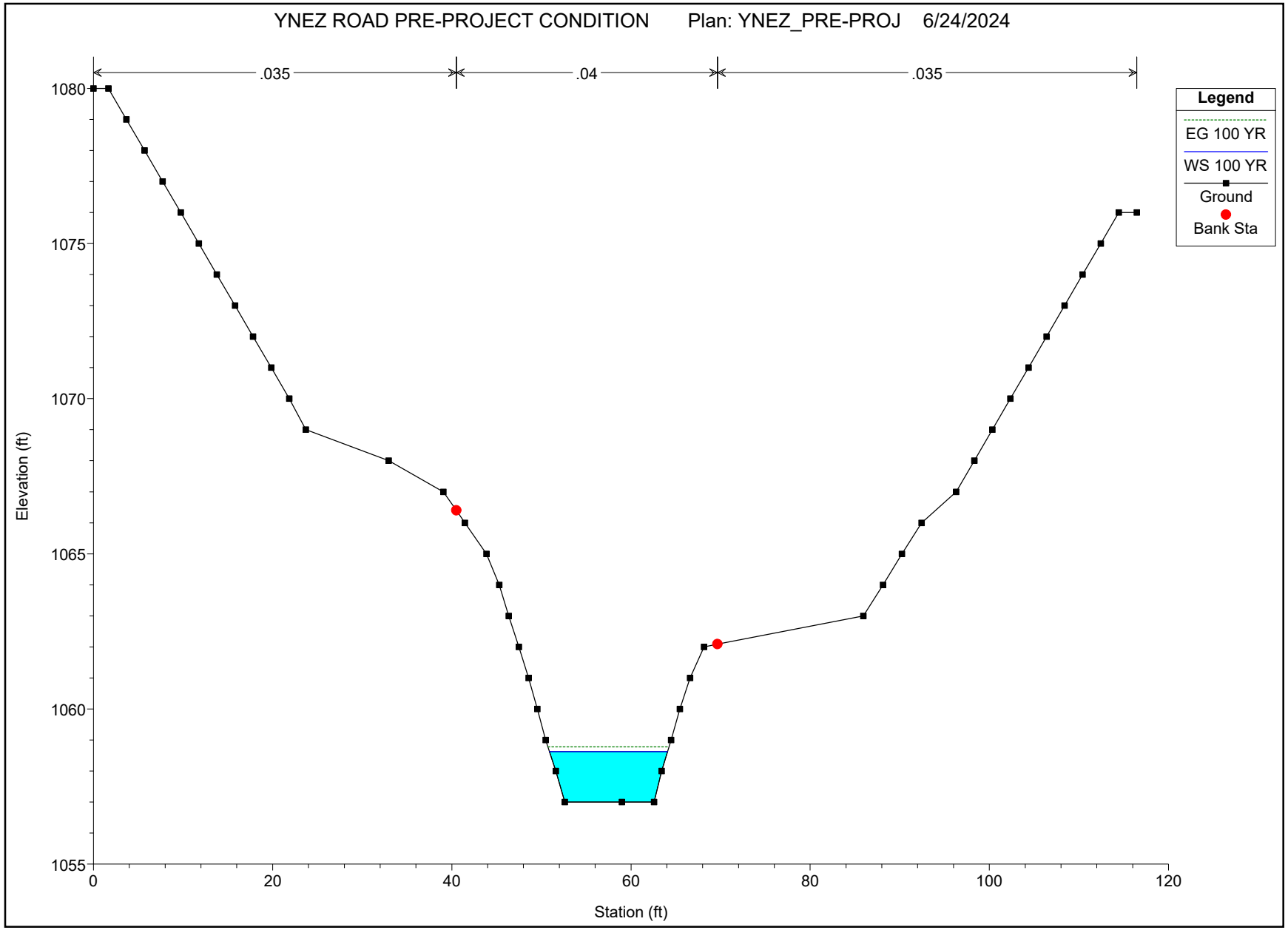
Station (ft)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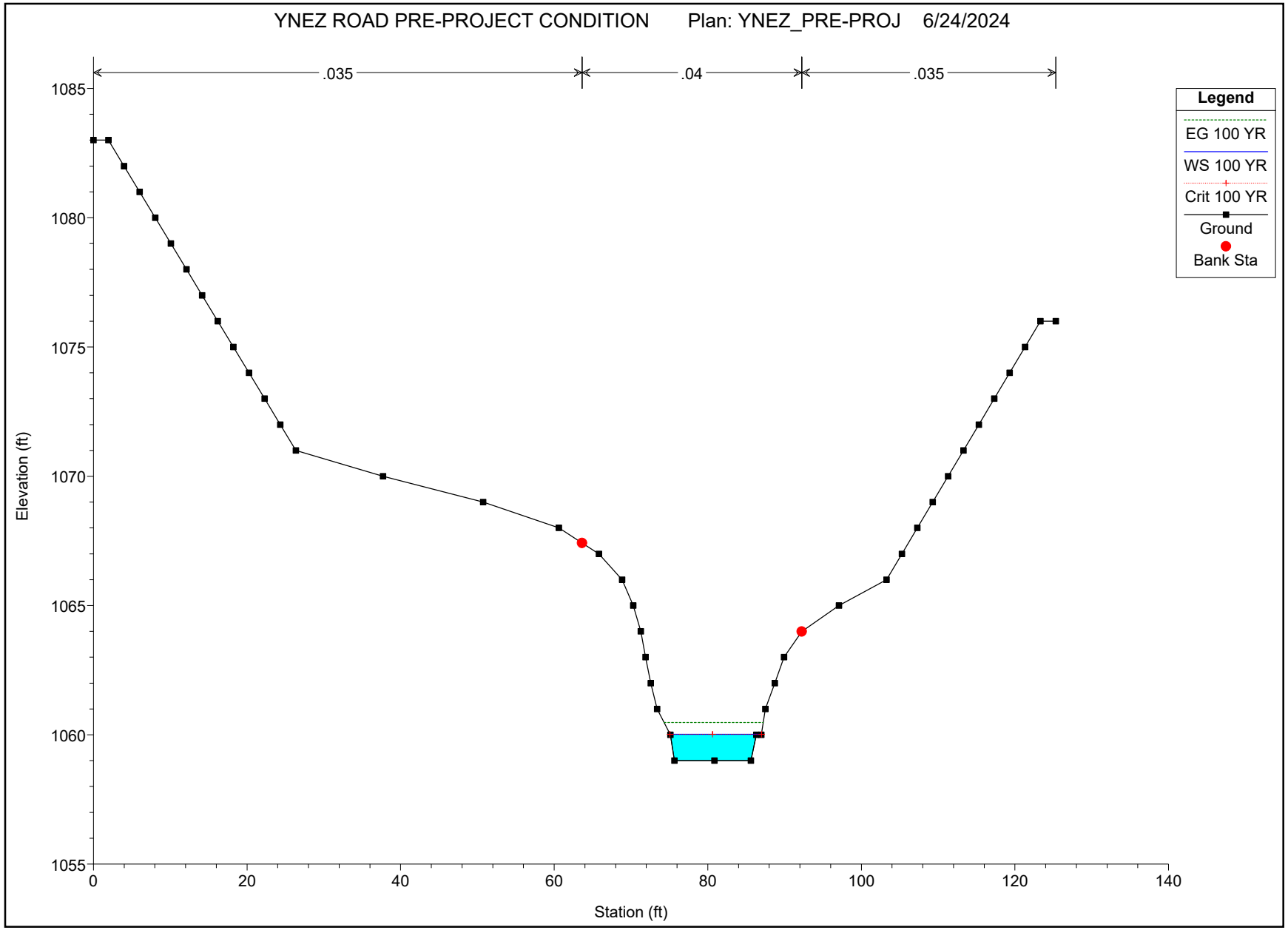
Station (ft)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Ground
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Elevation (ft)
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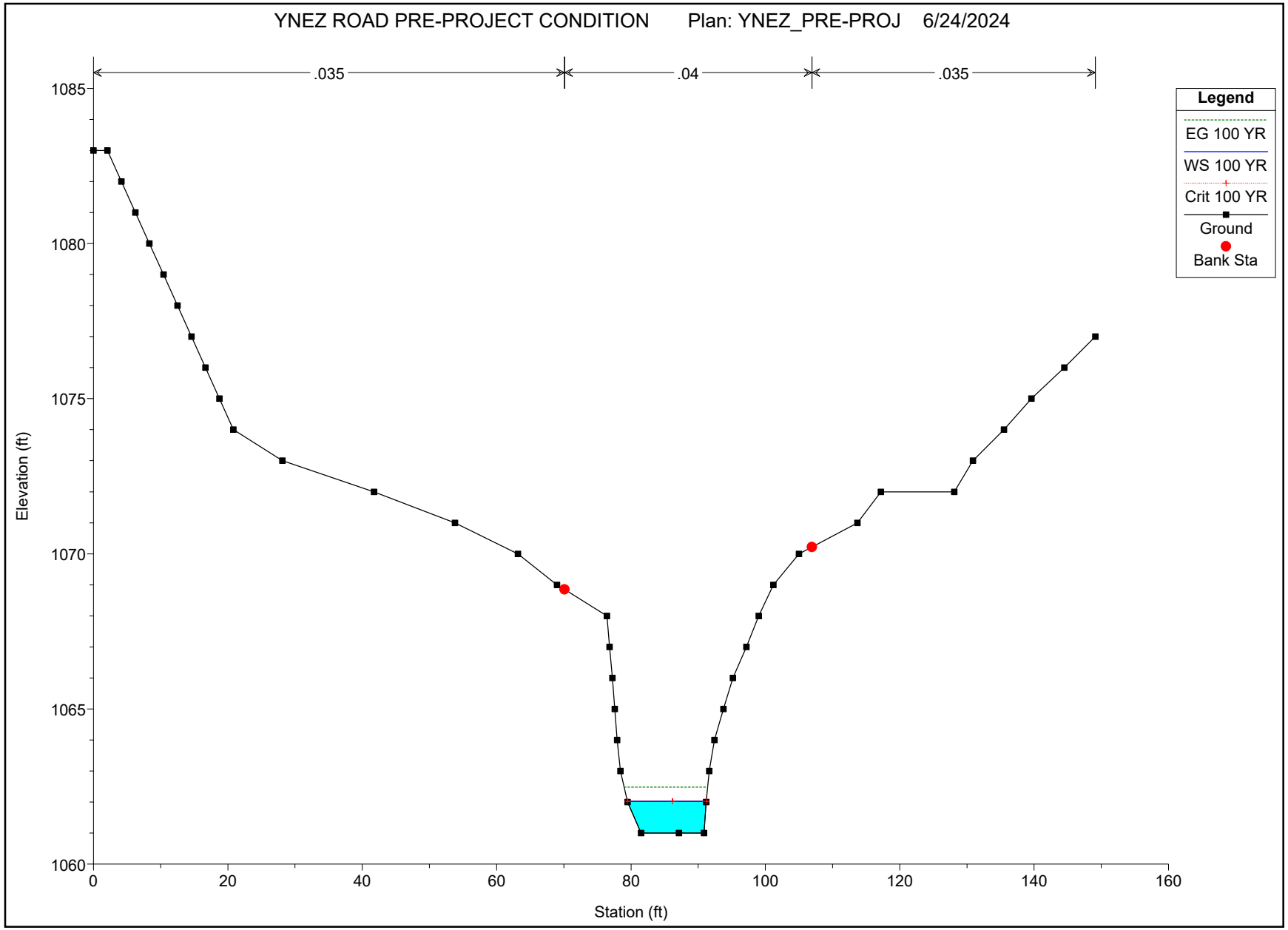
Station (ft)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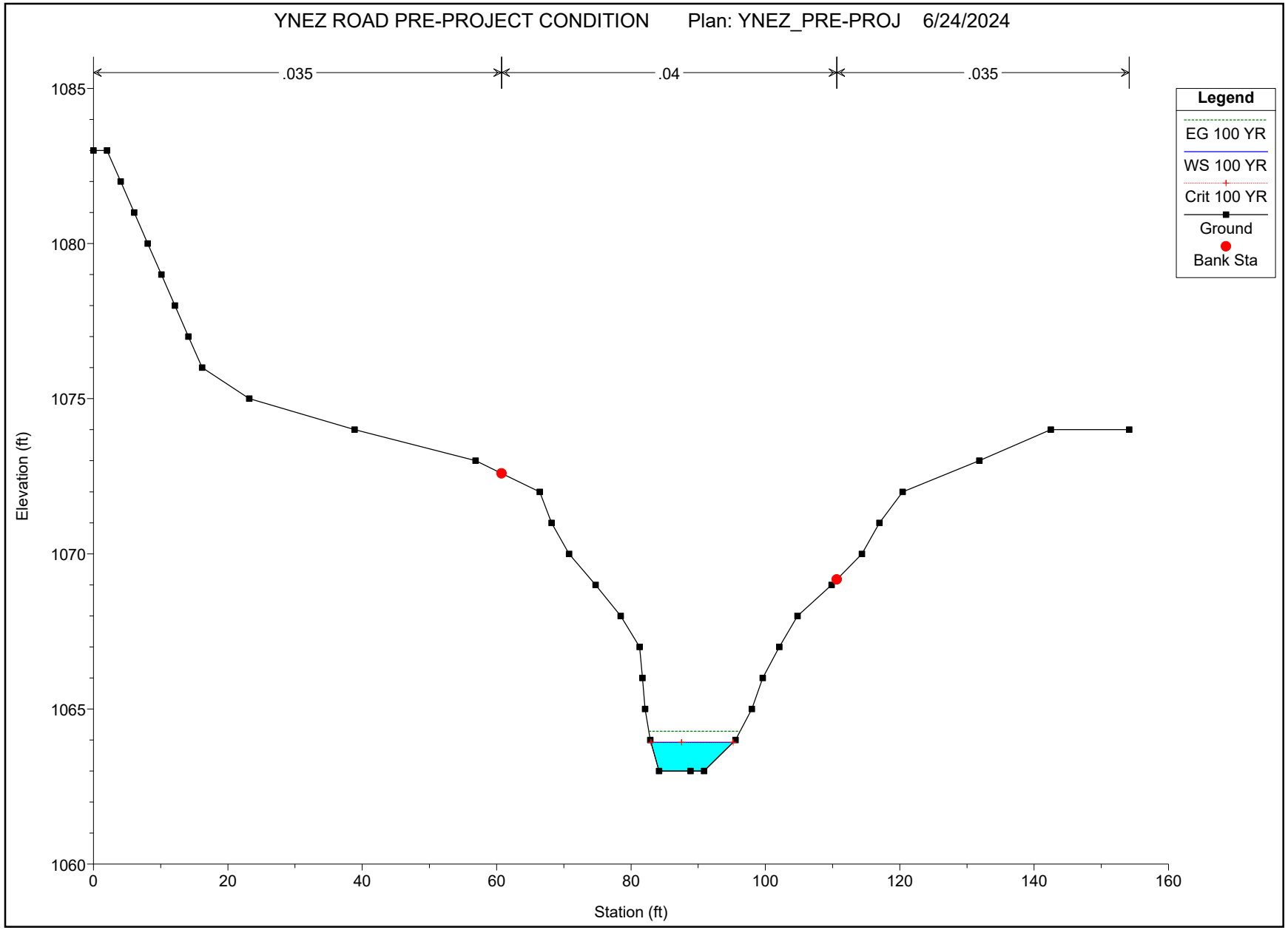
Station (ft)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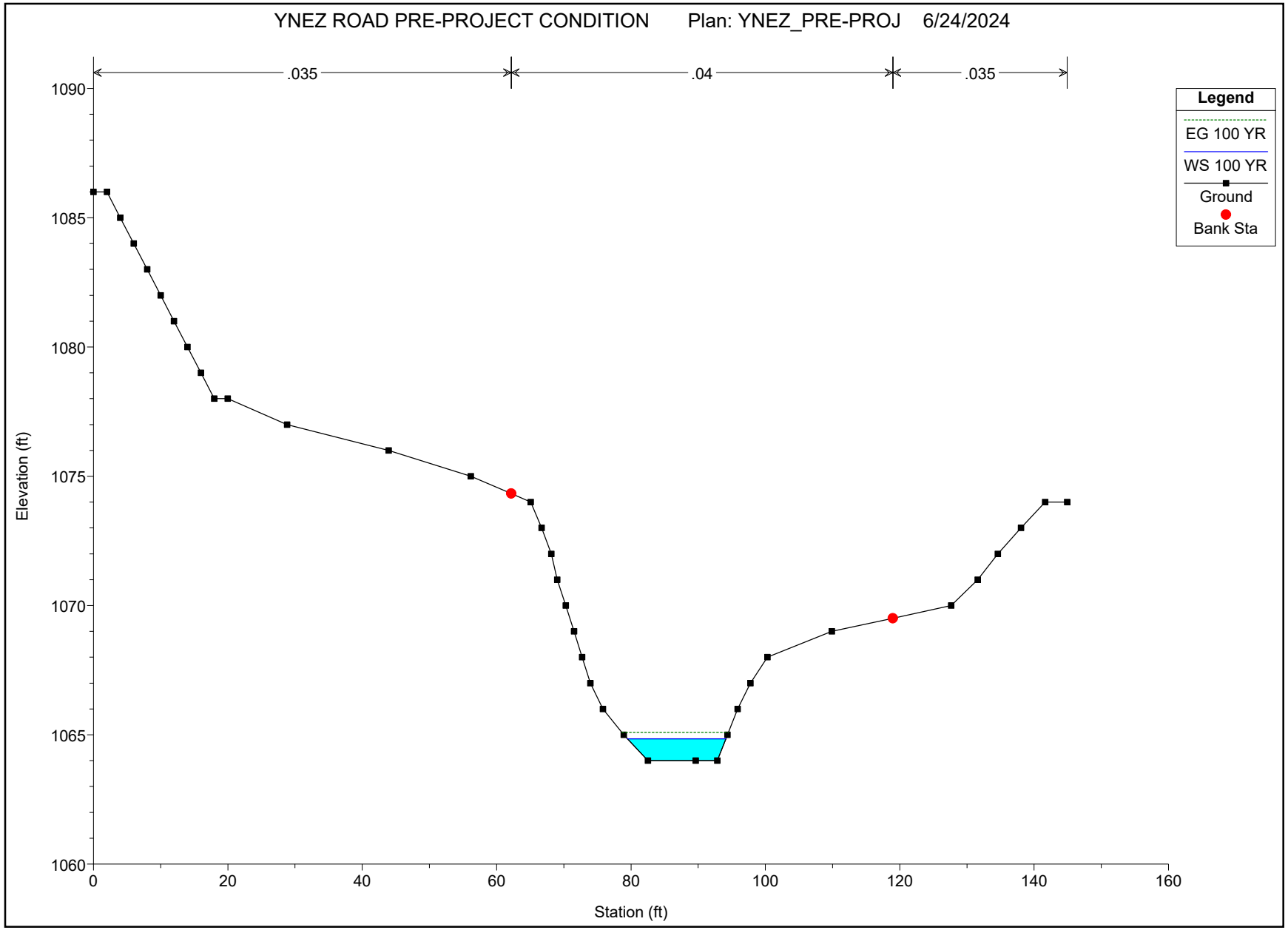
Station (ft)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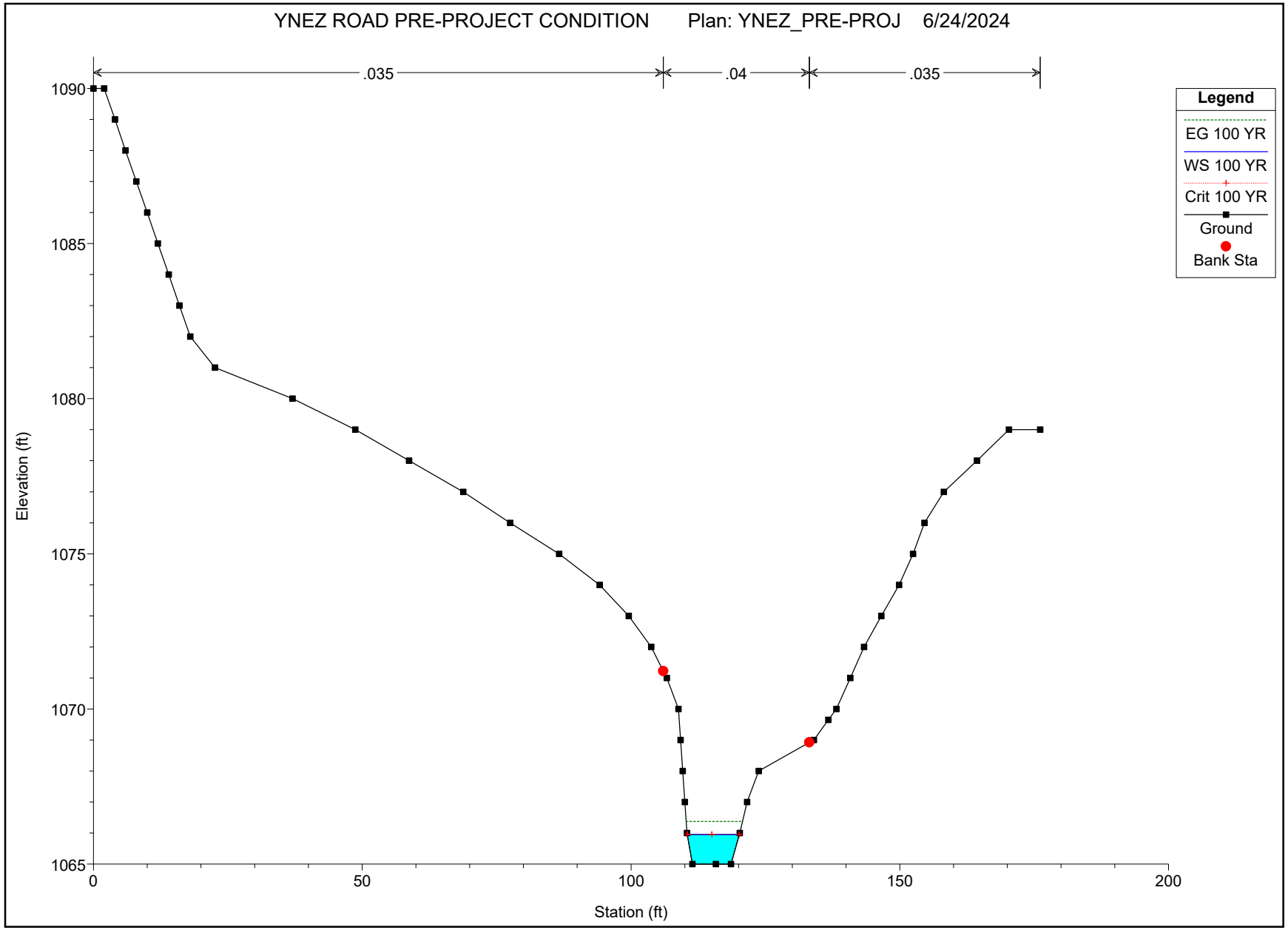
Station (ft)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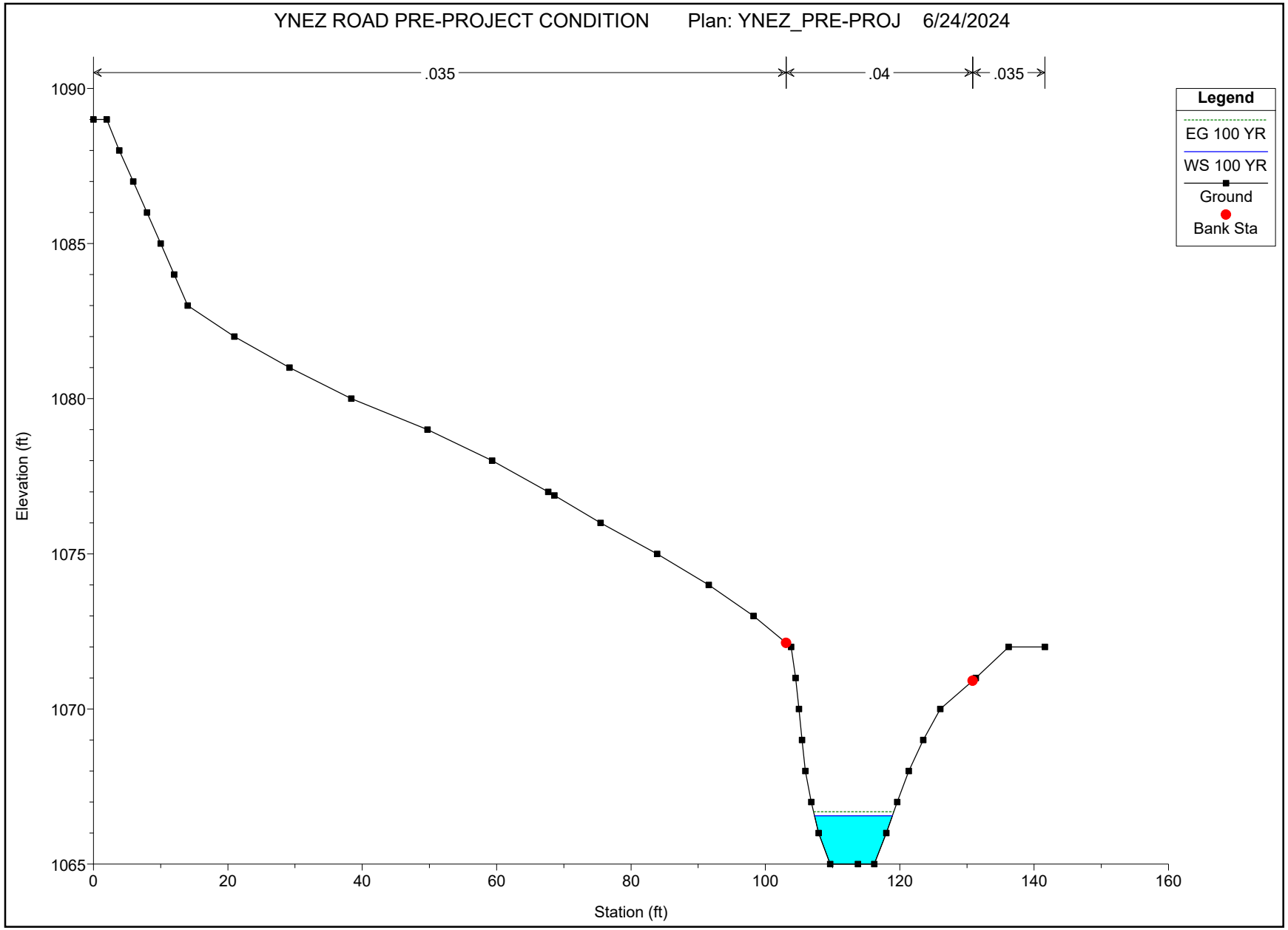
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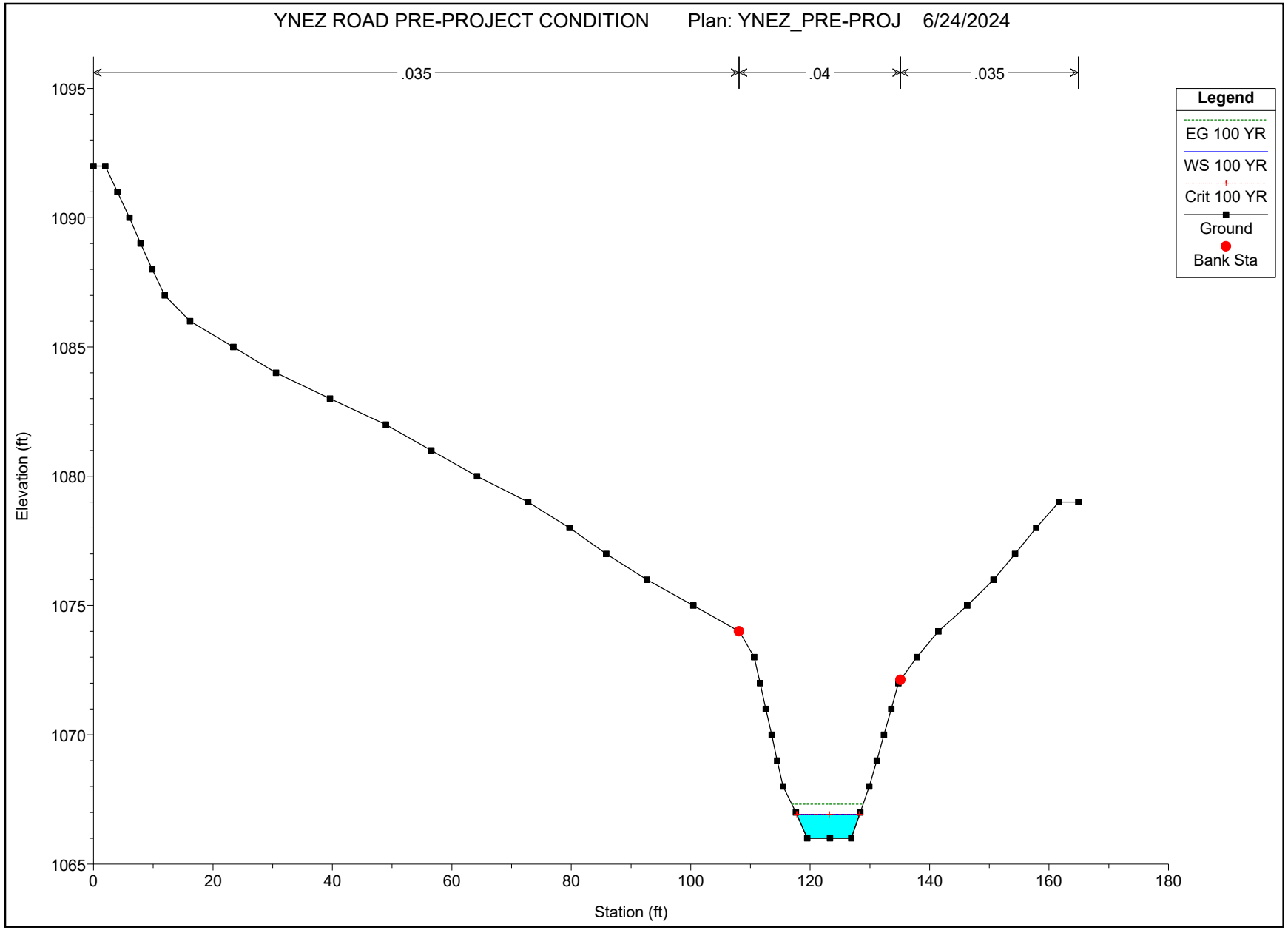
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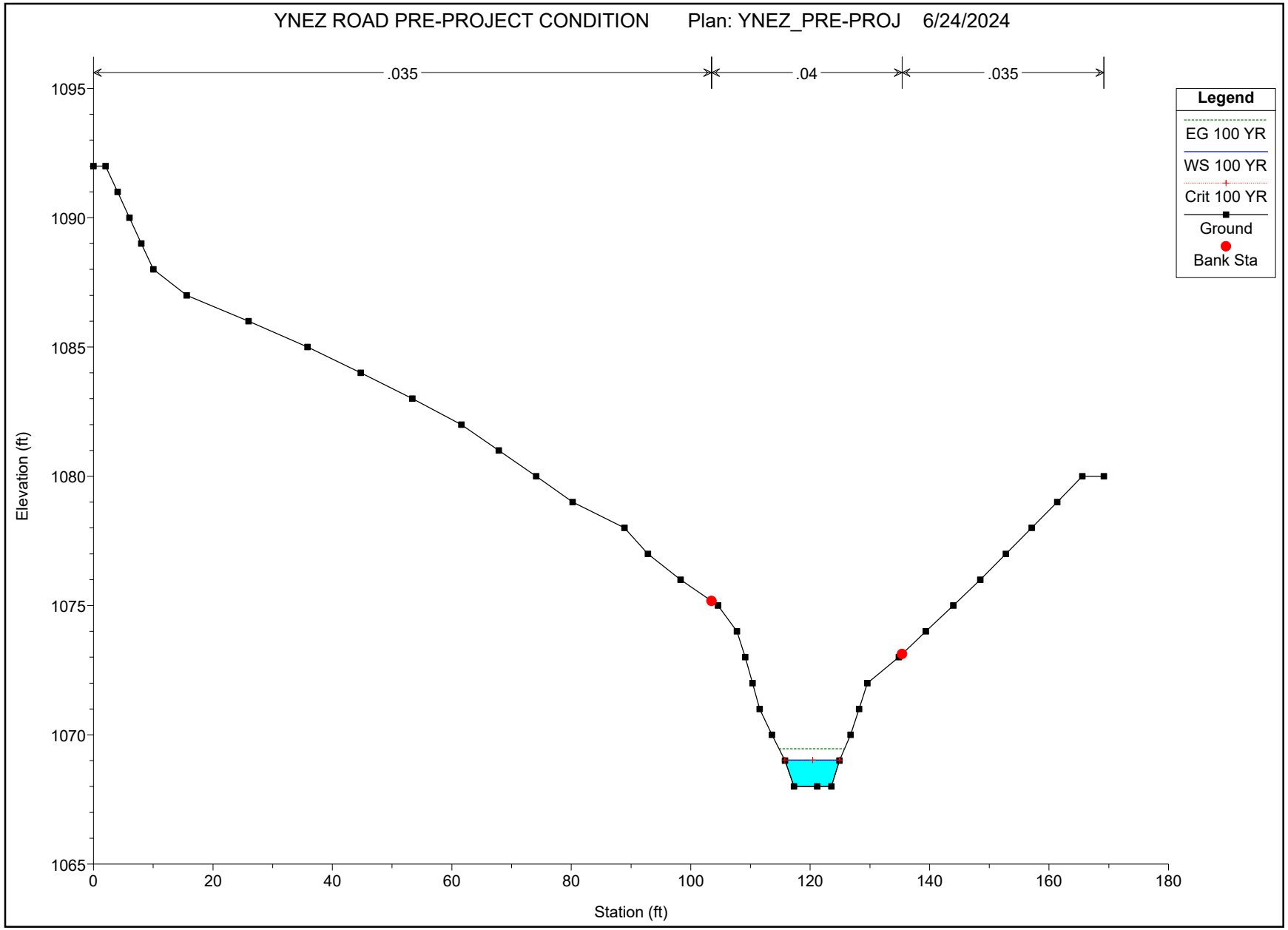
Station (ft)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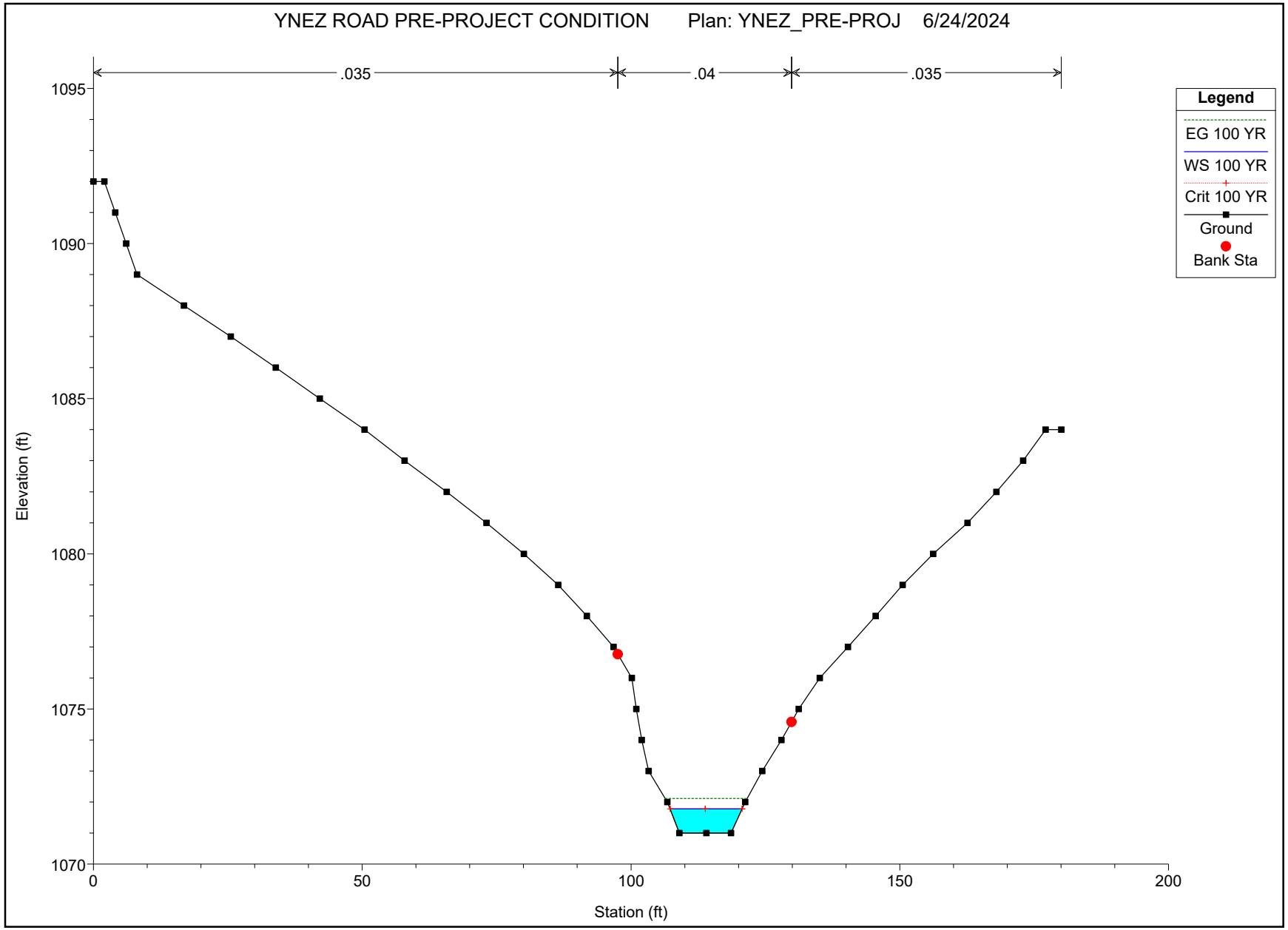
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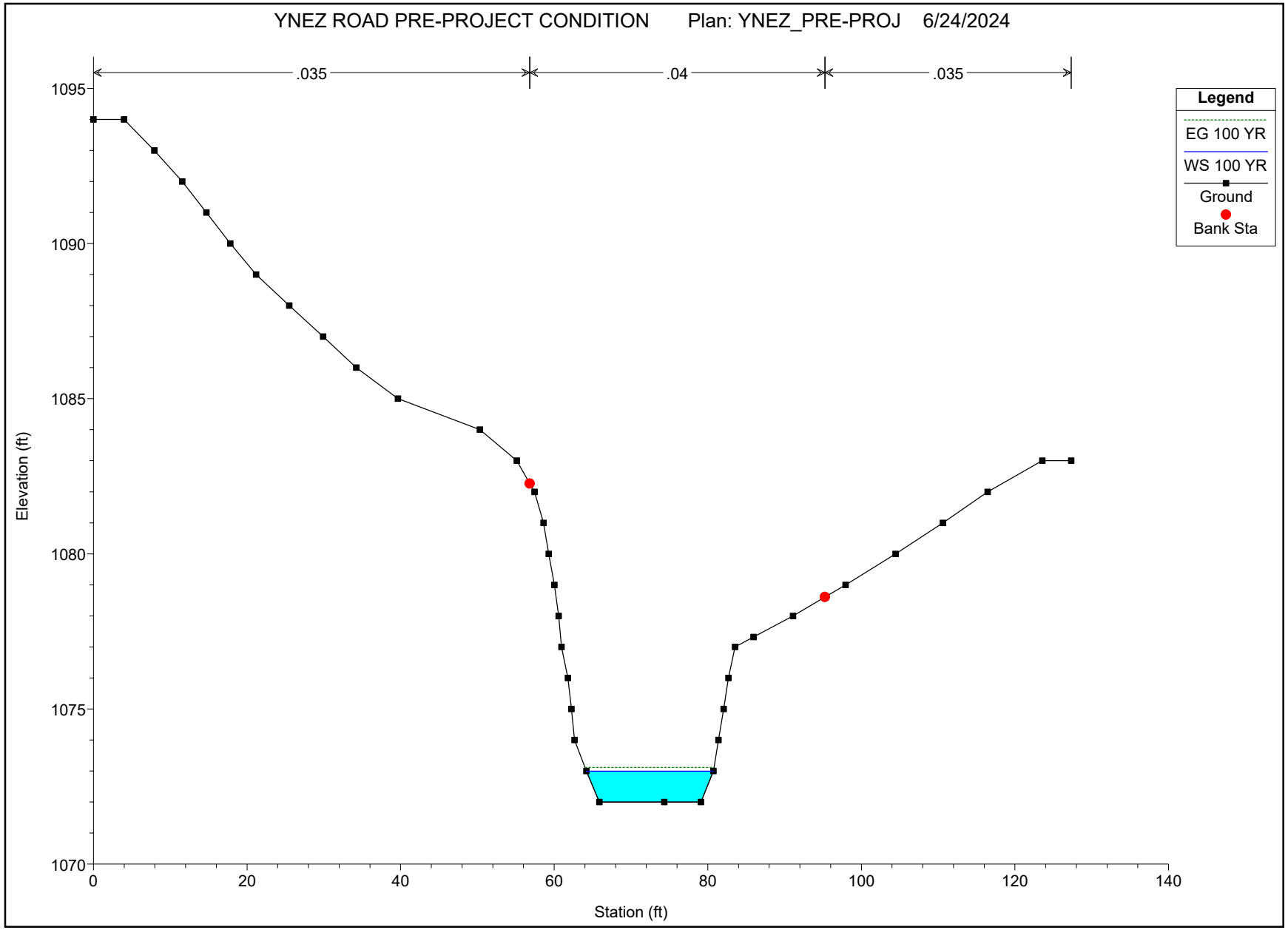
Station (ft)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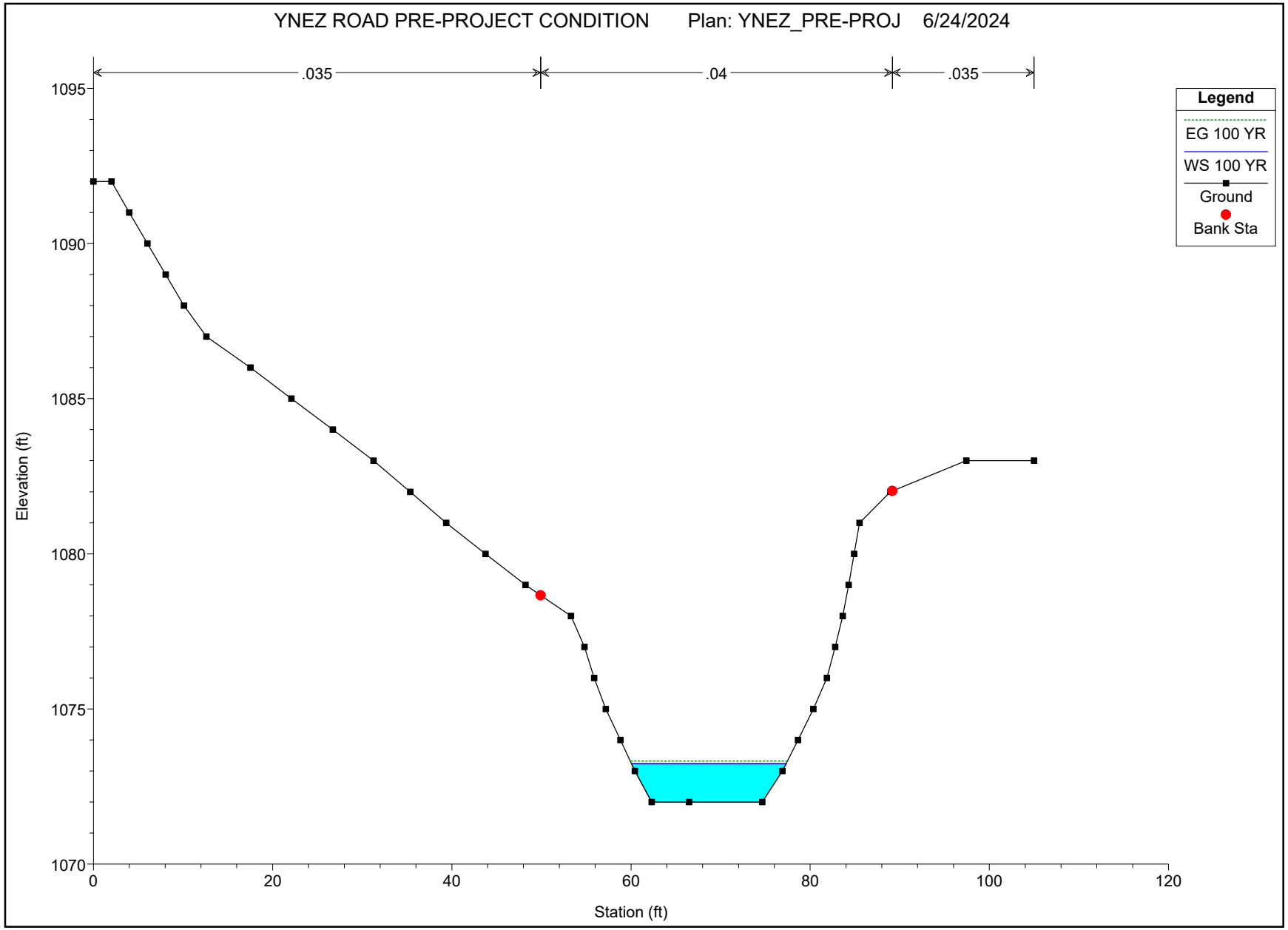
Station (ft)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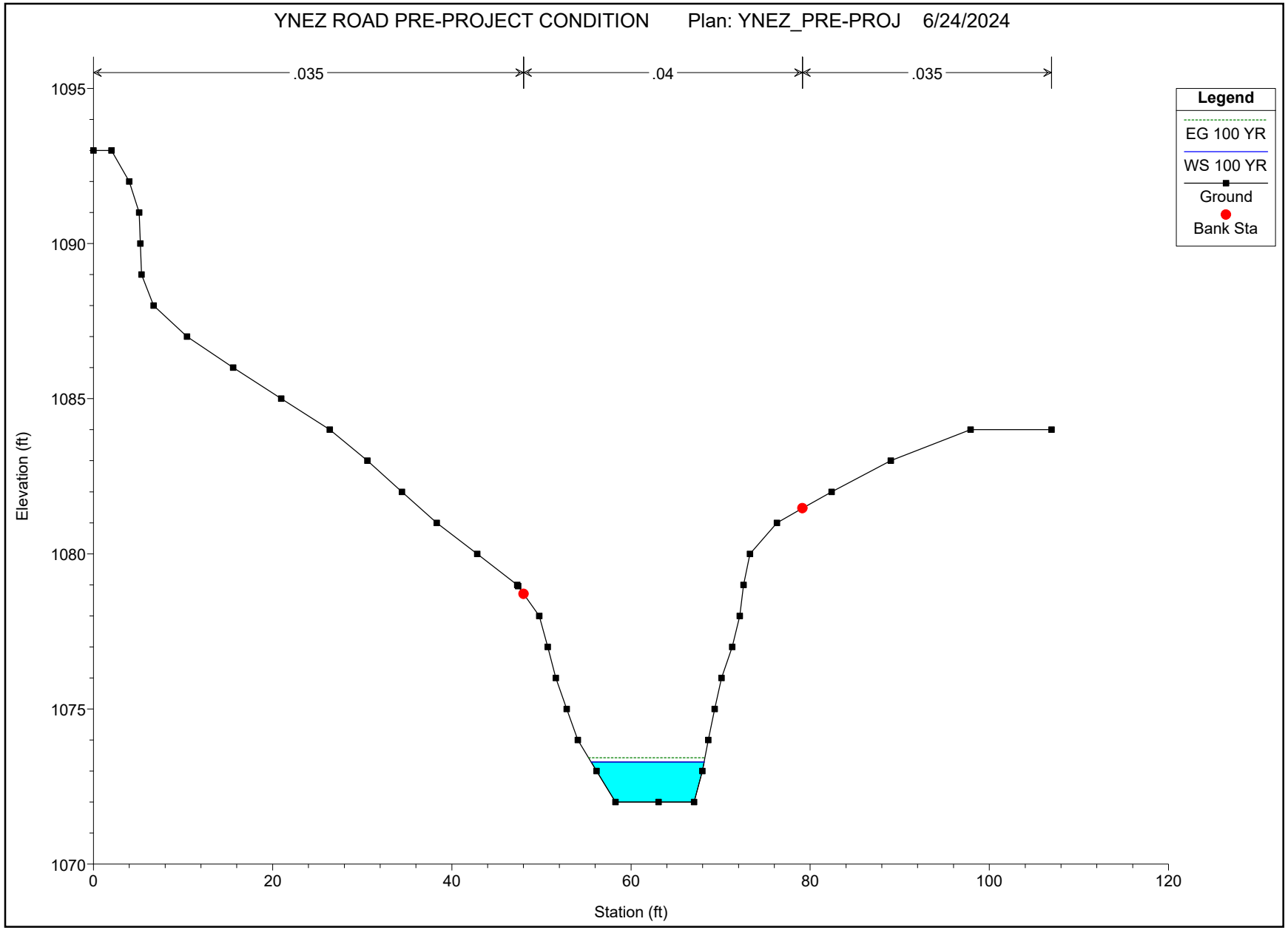
Station (ft)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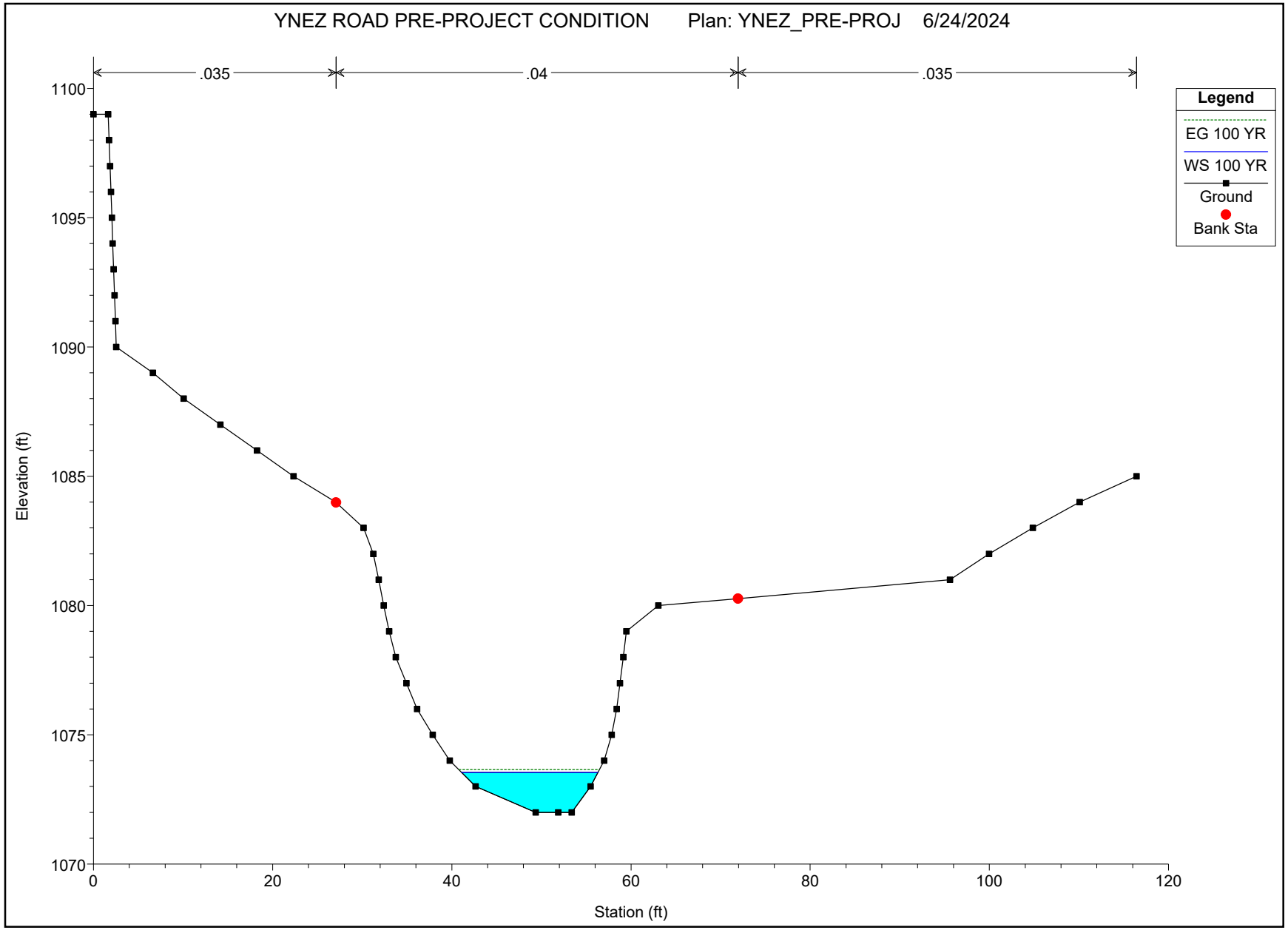
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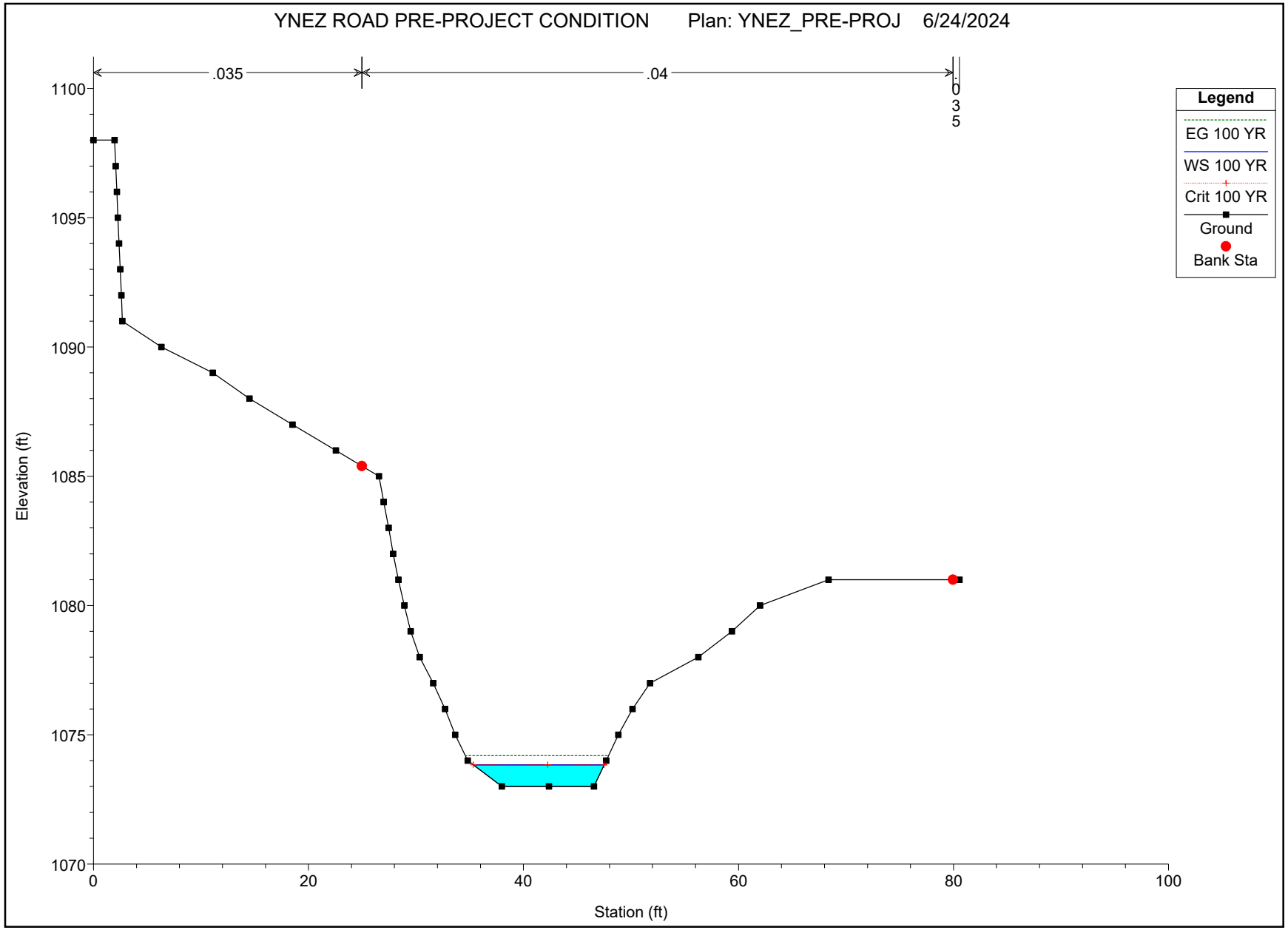
Station (ft)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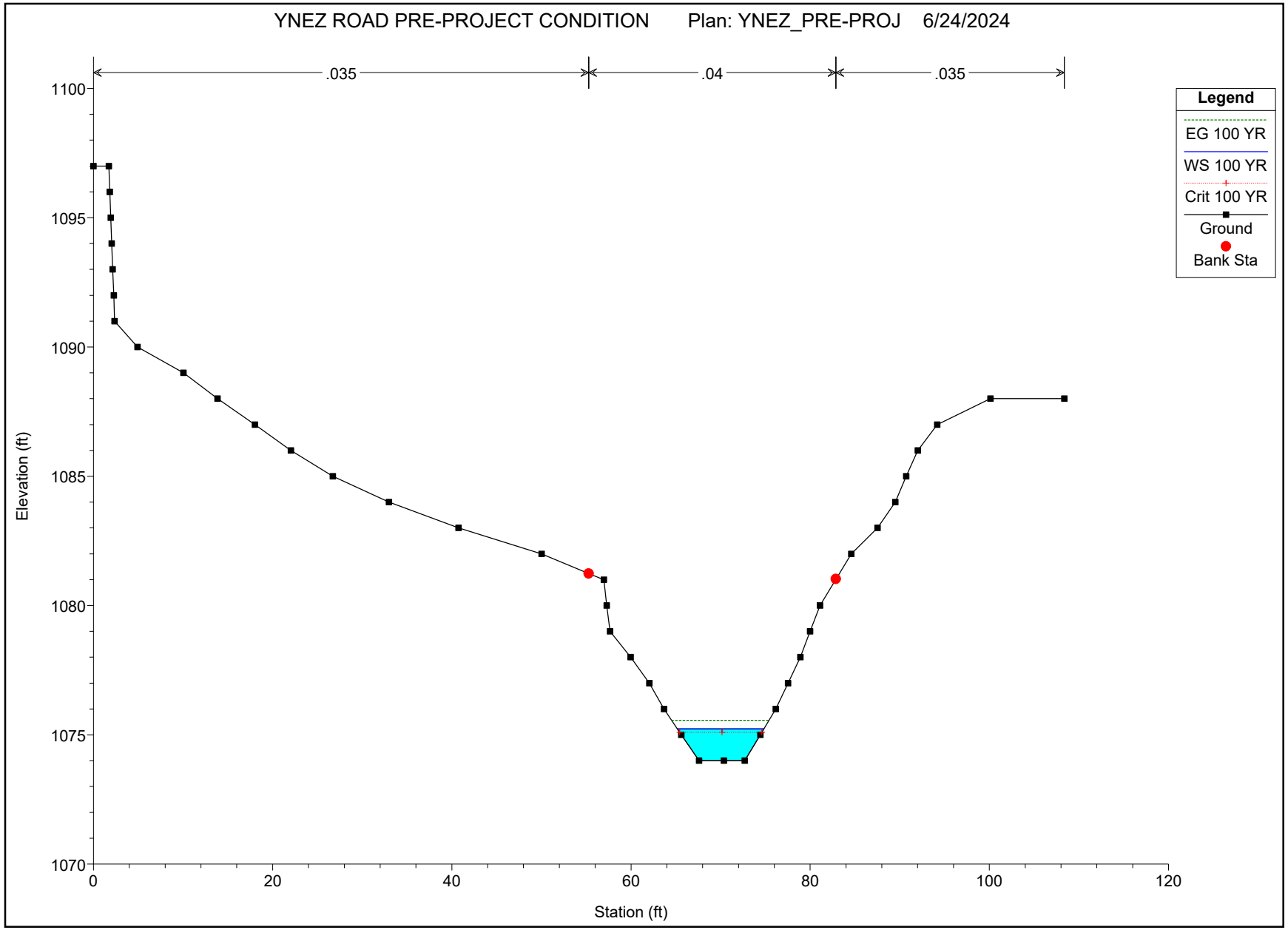
Station (ft)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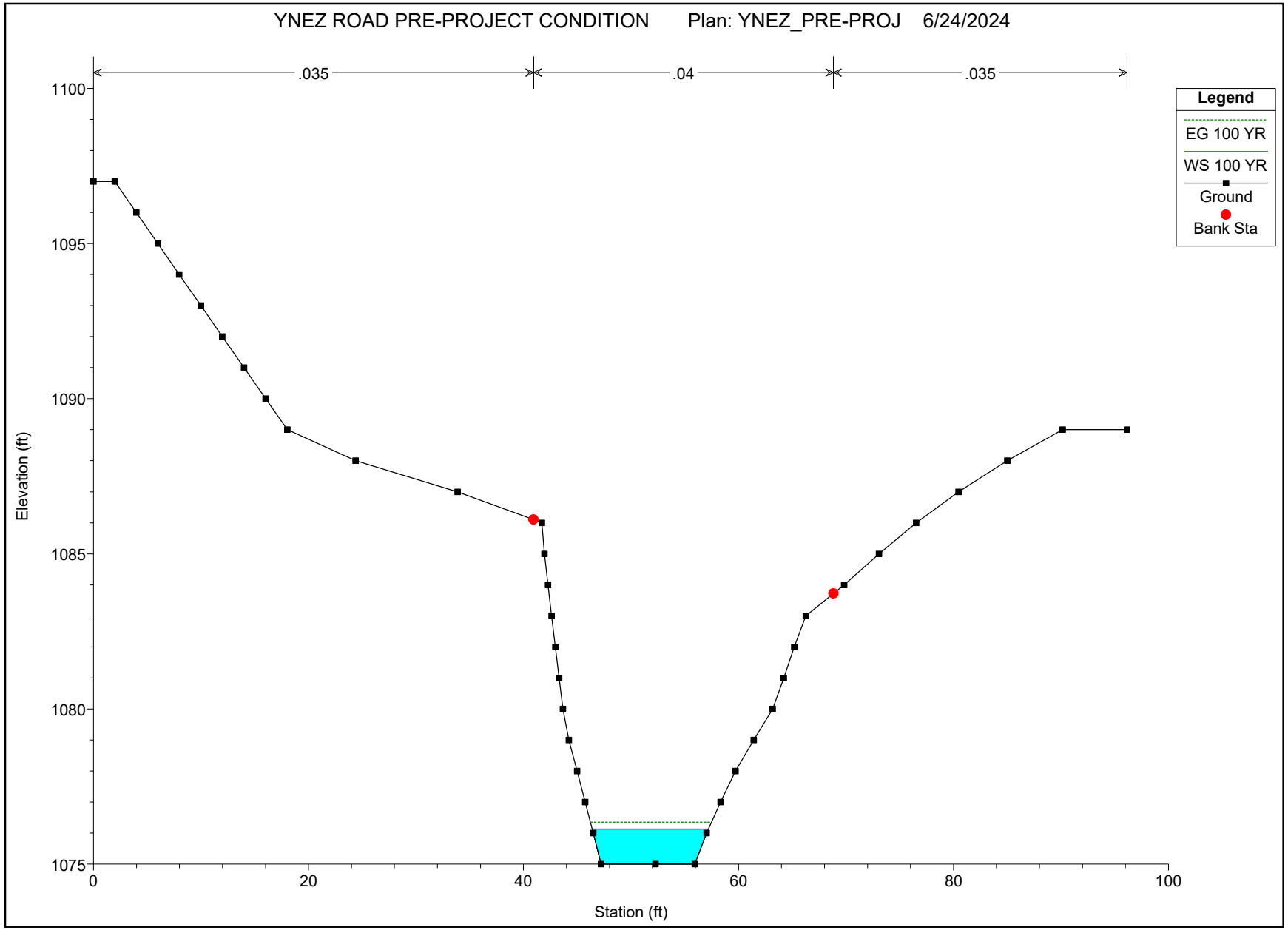
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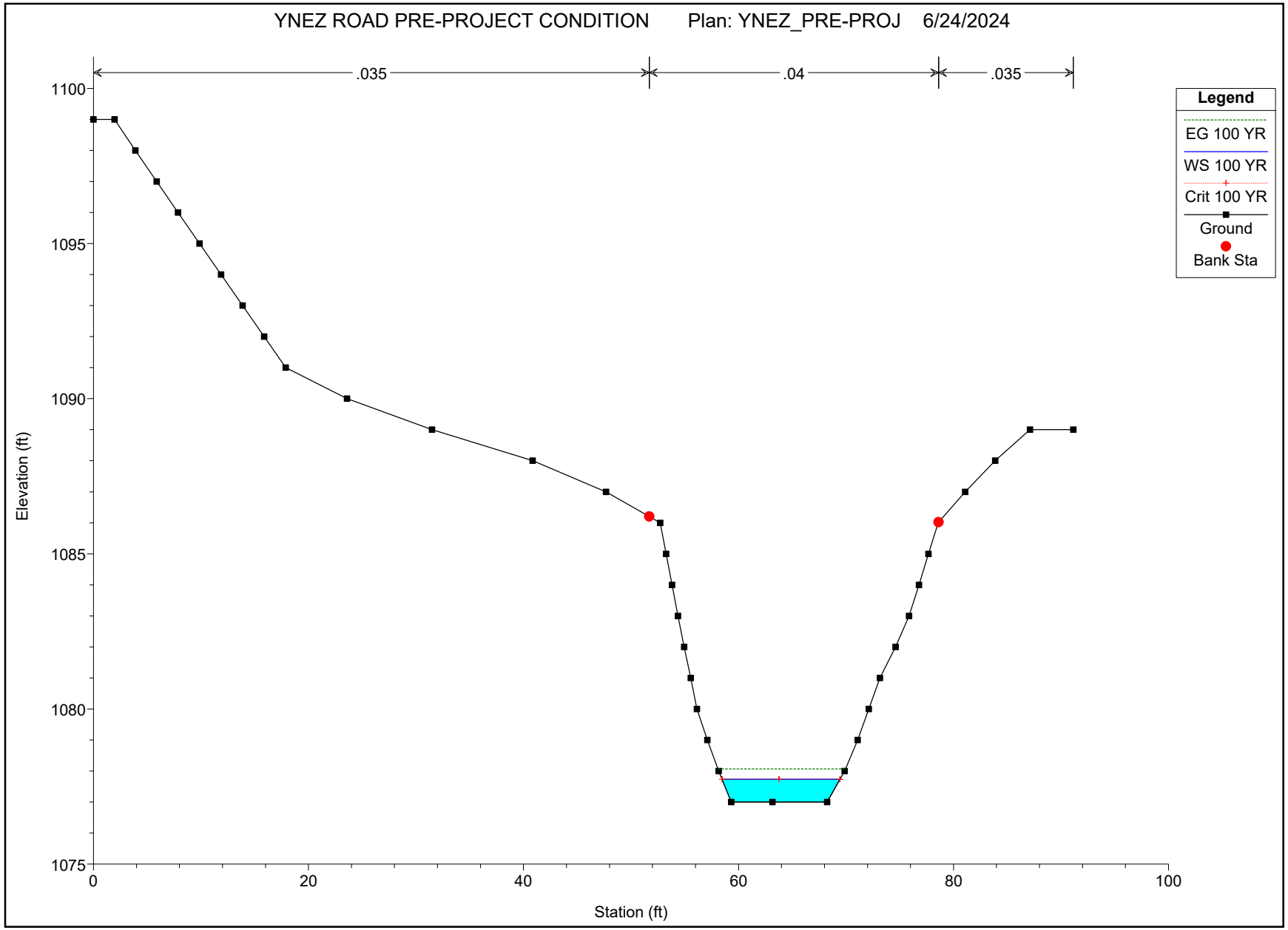
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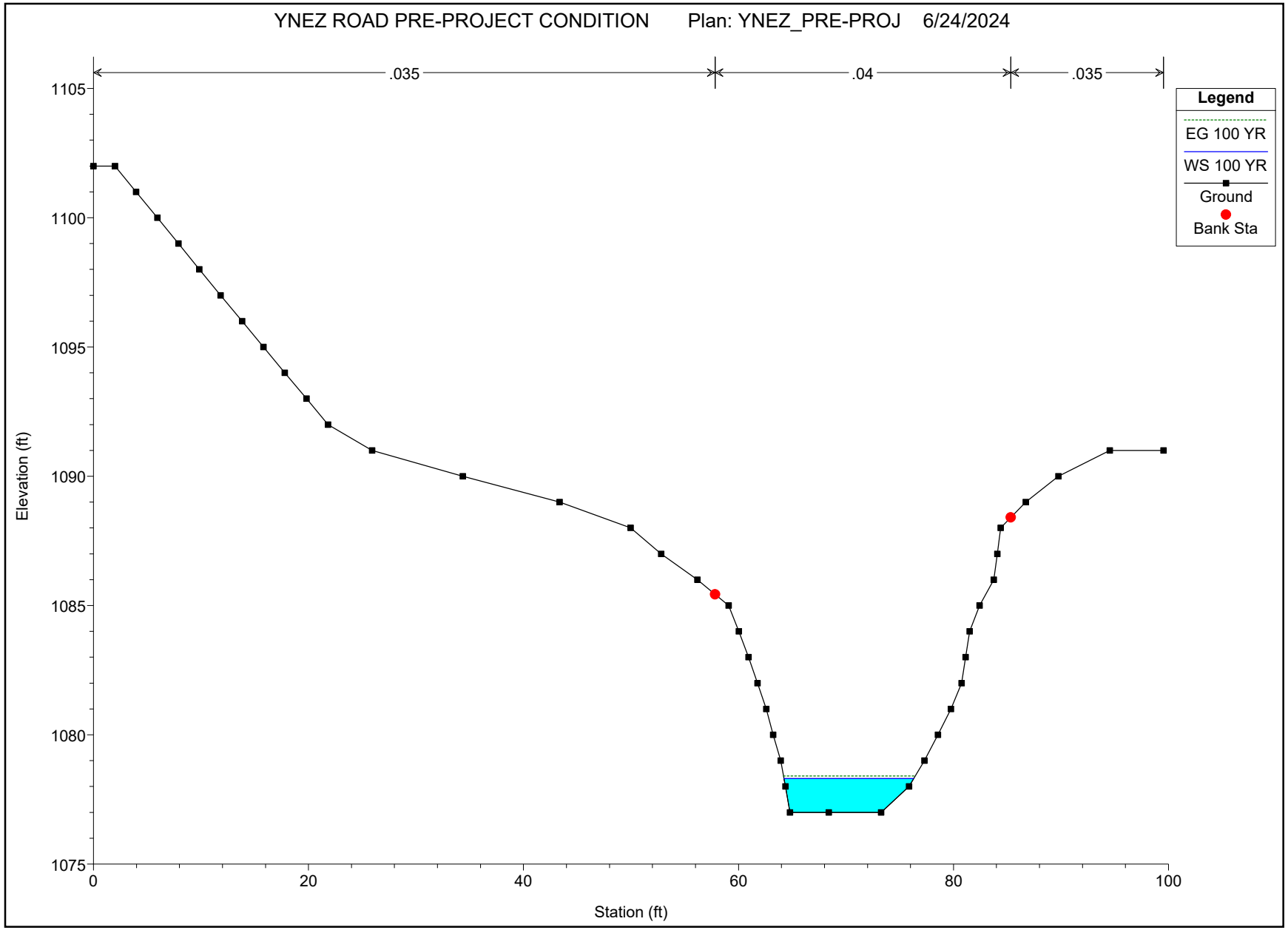
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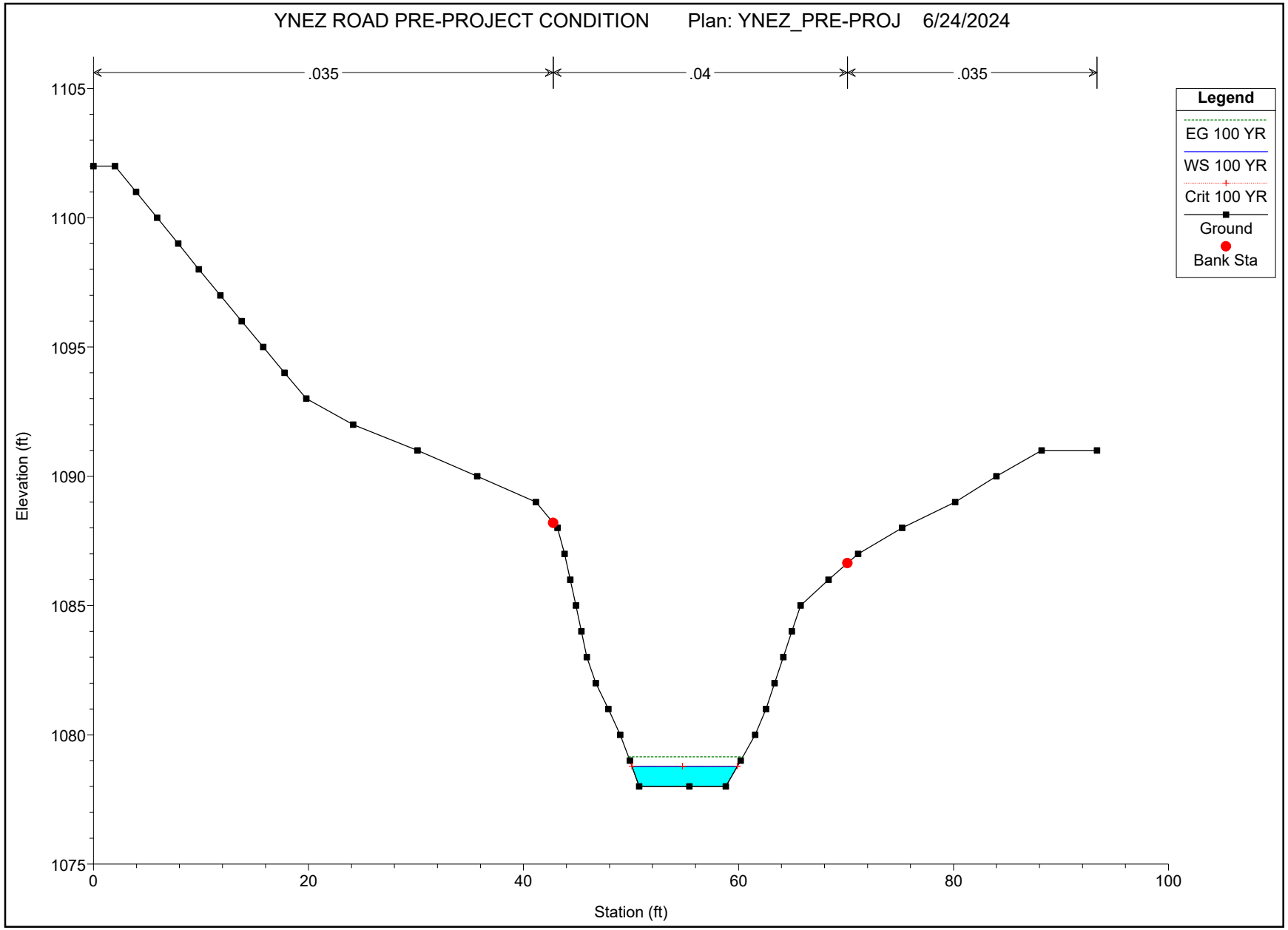
Station (ft)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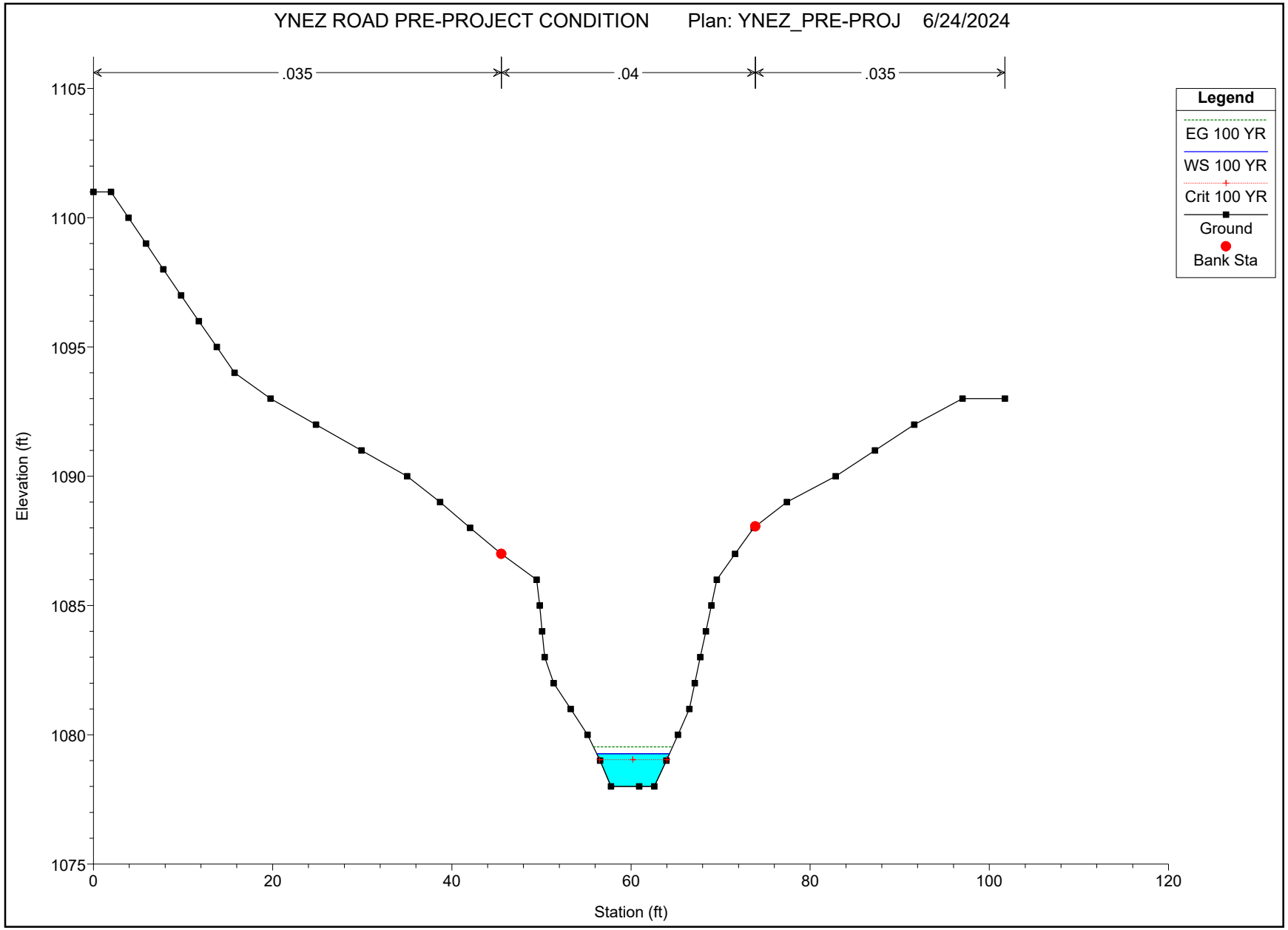
Station (ft)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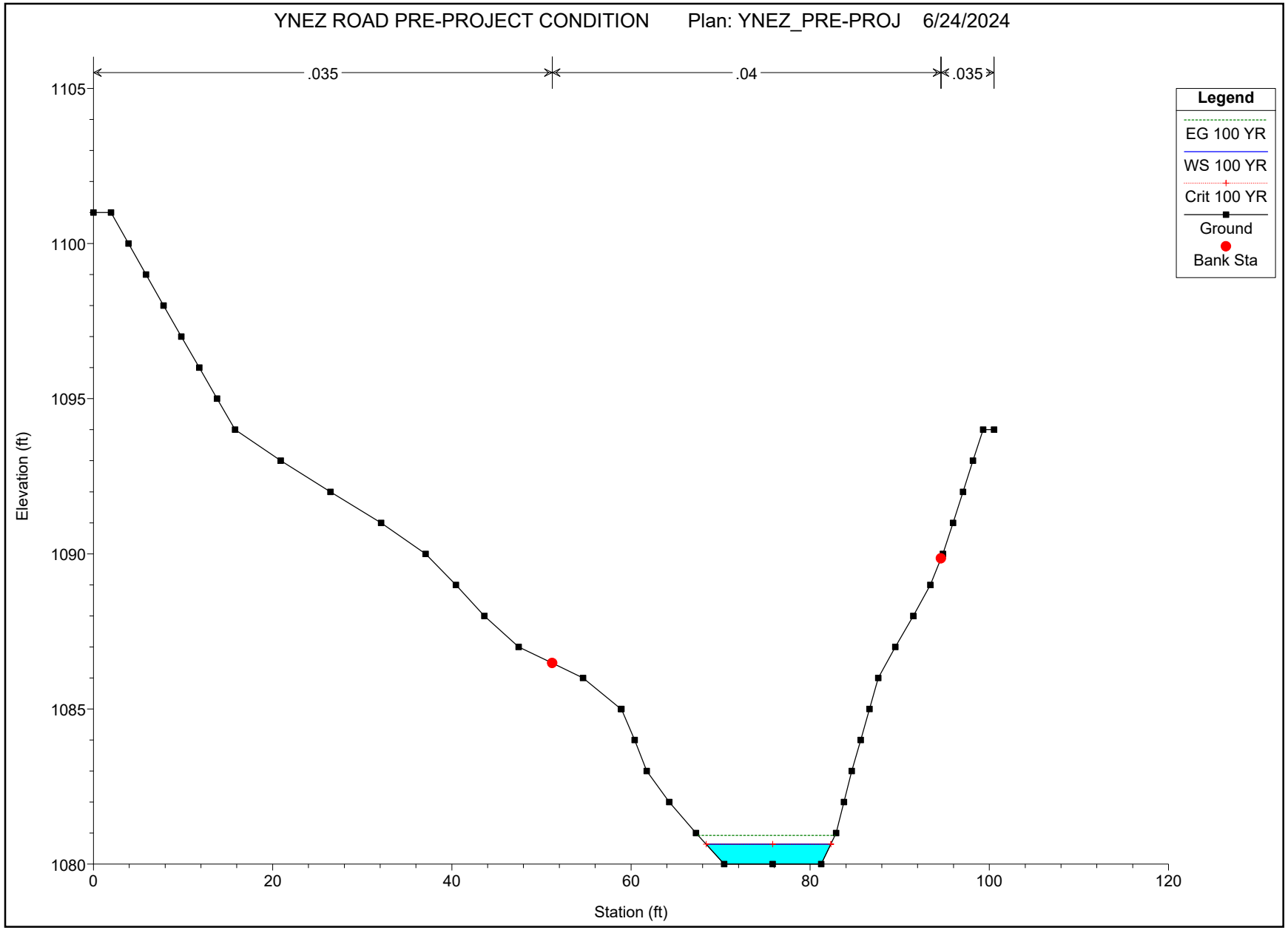
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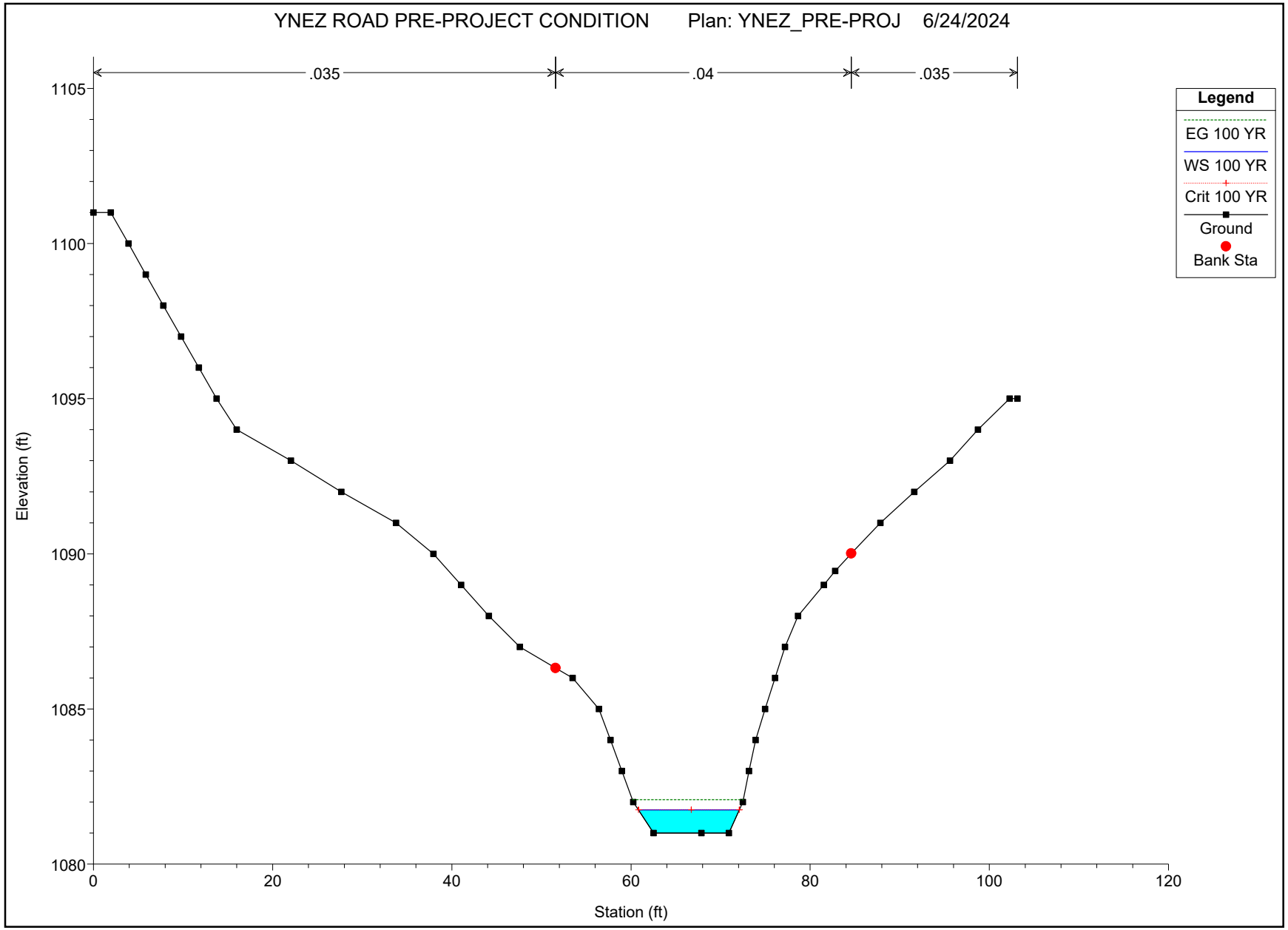
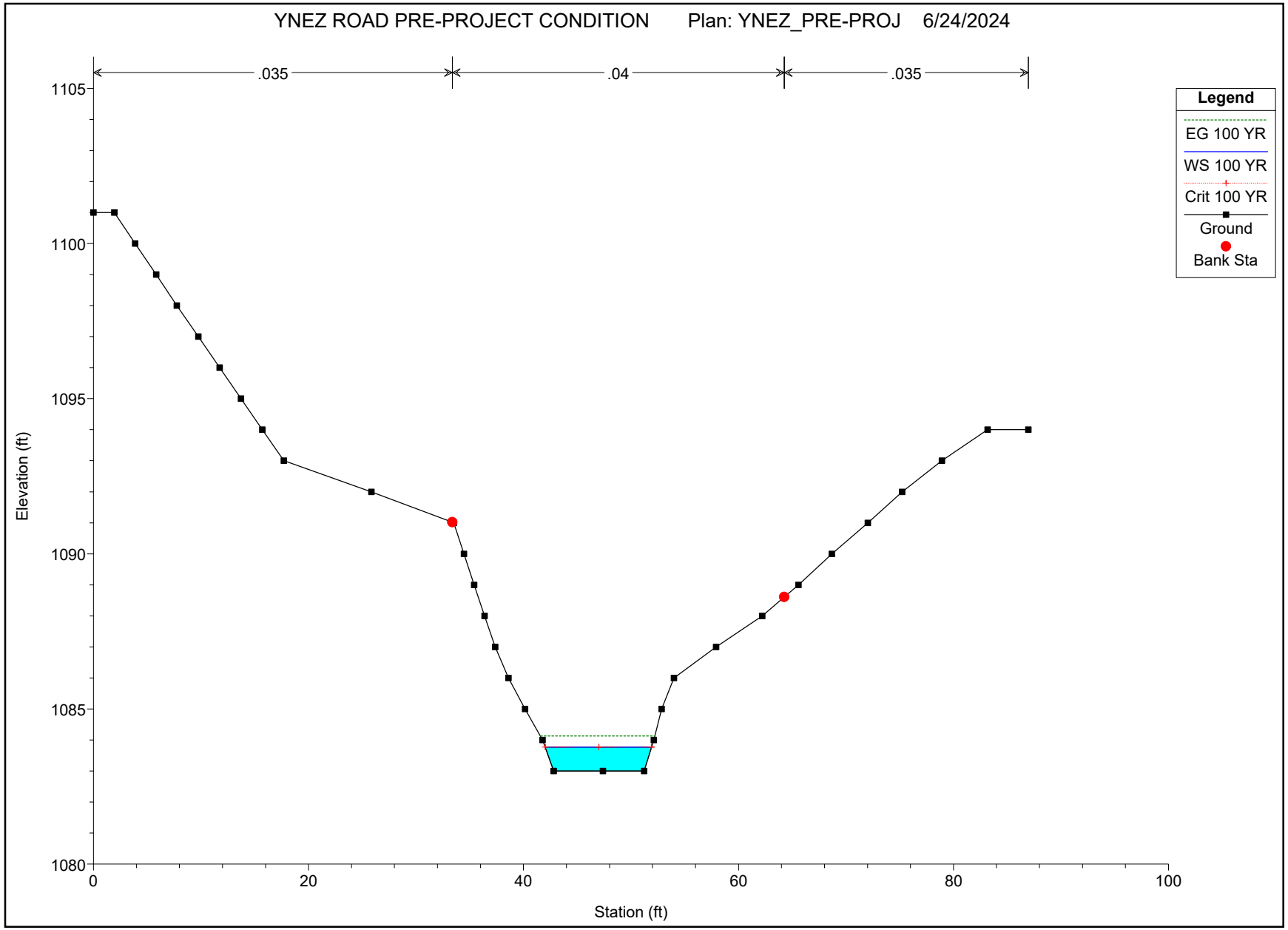
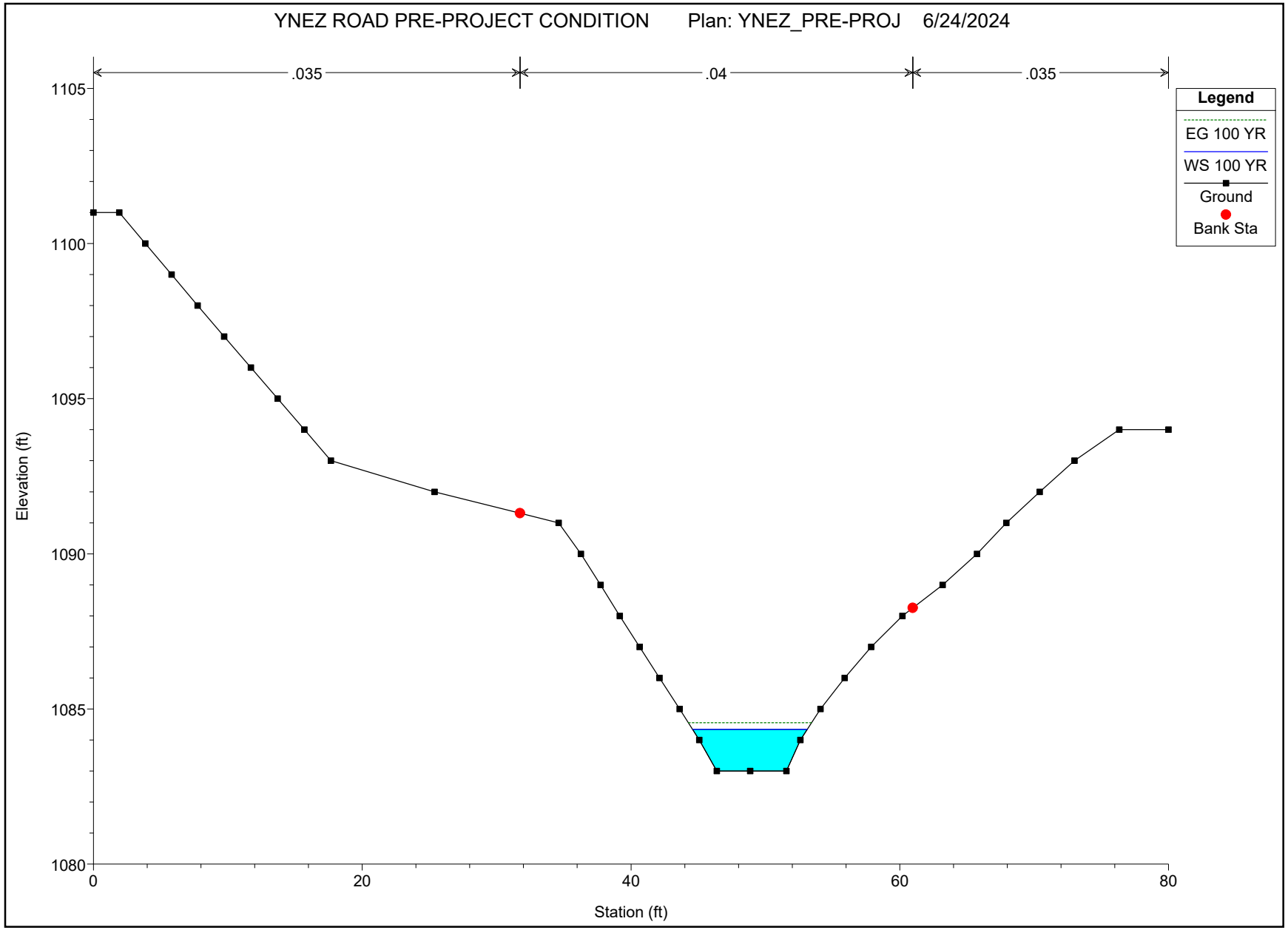
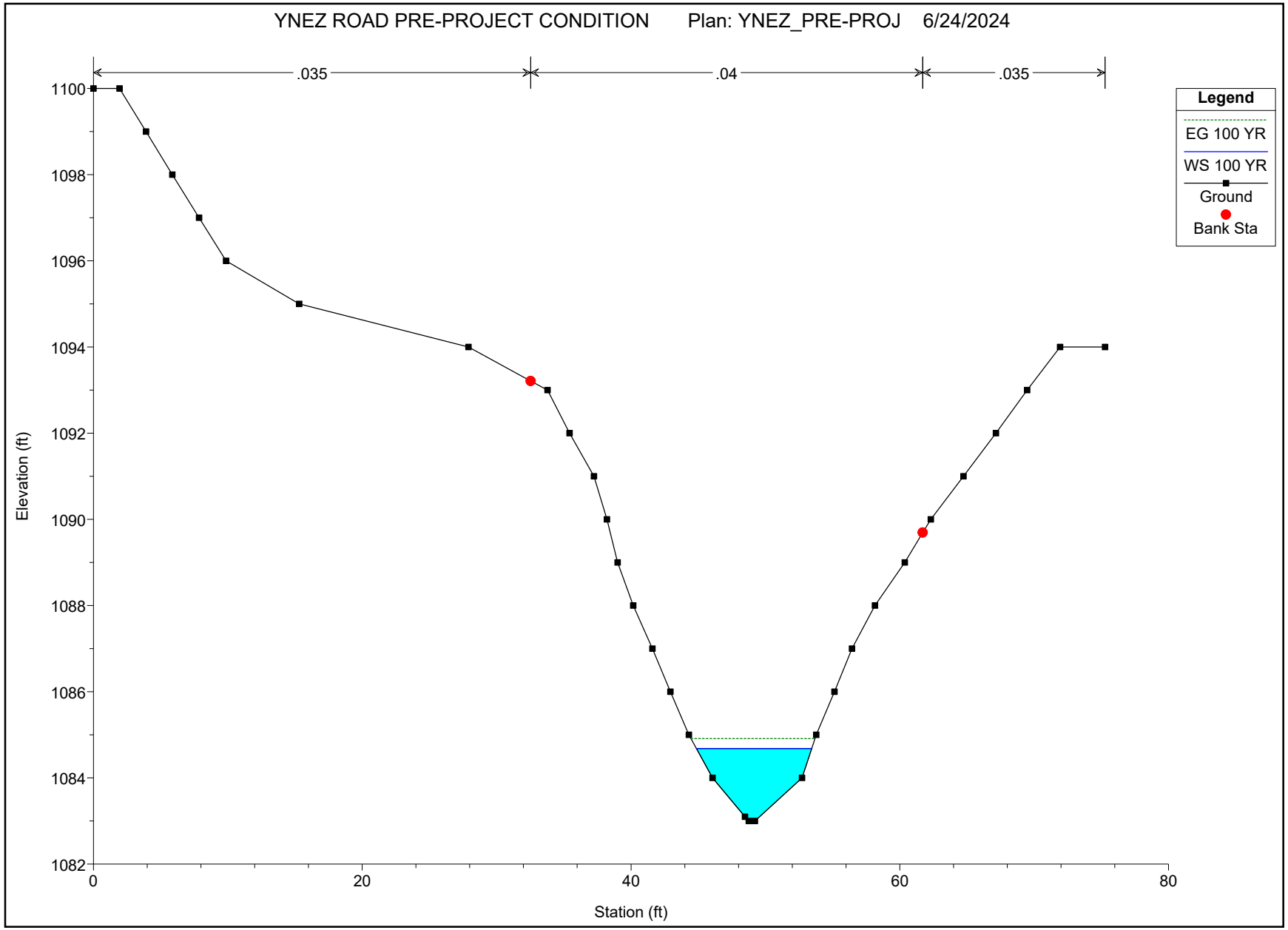
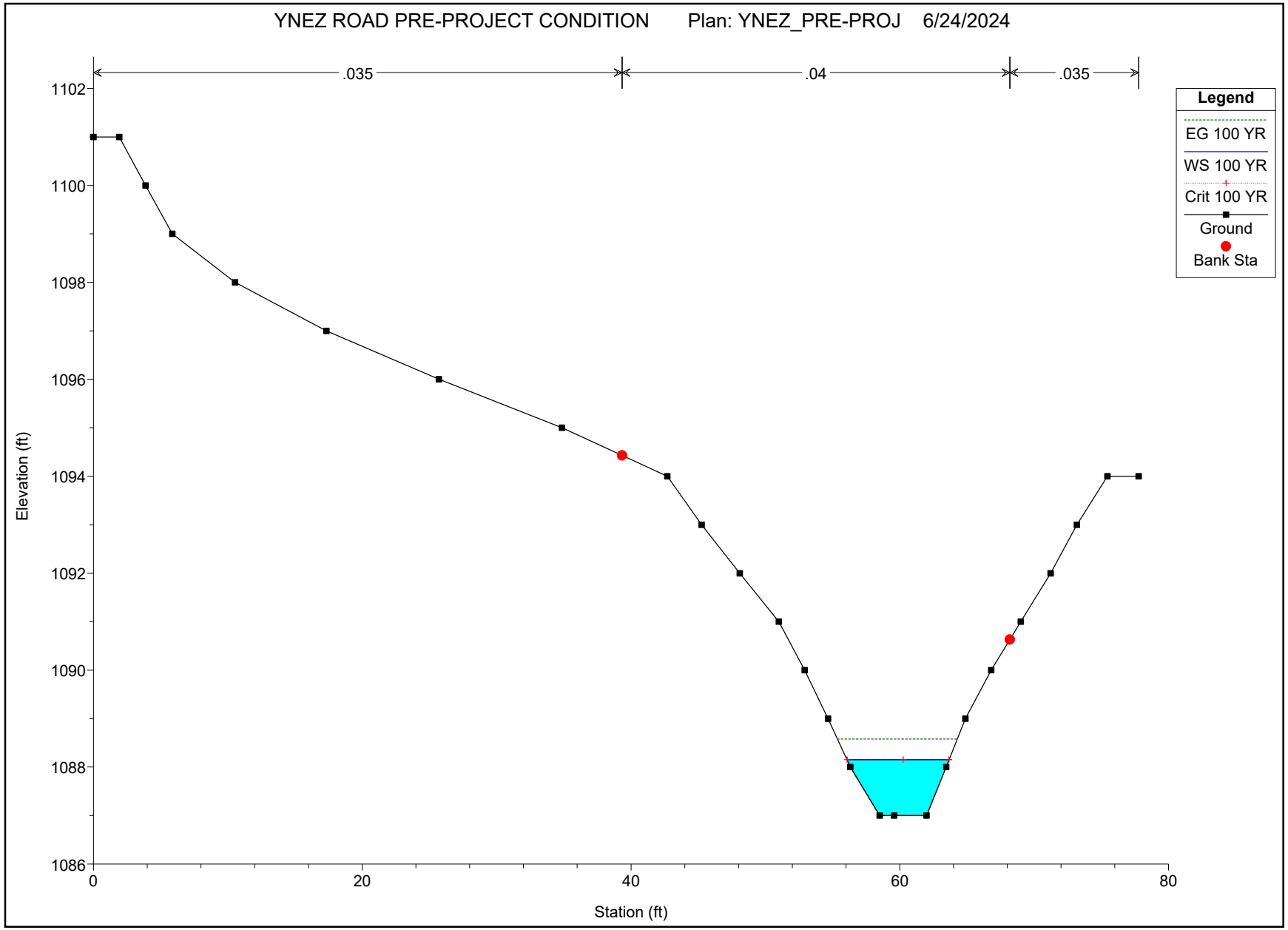
120
Station (ft)

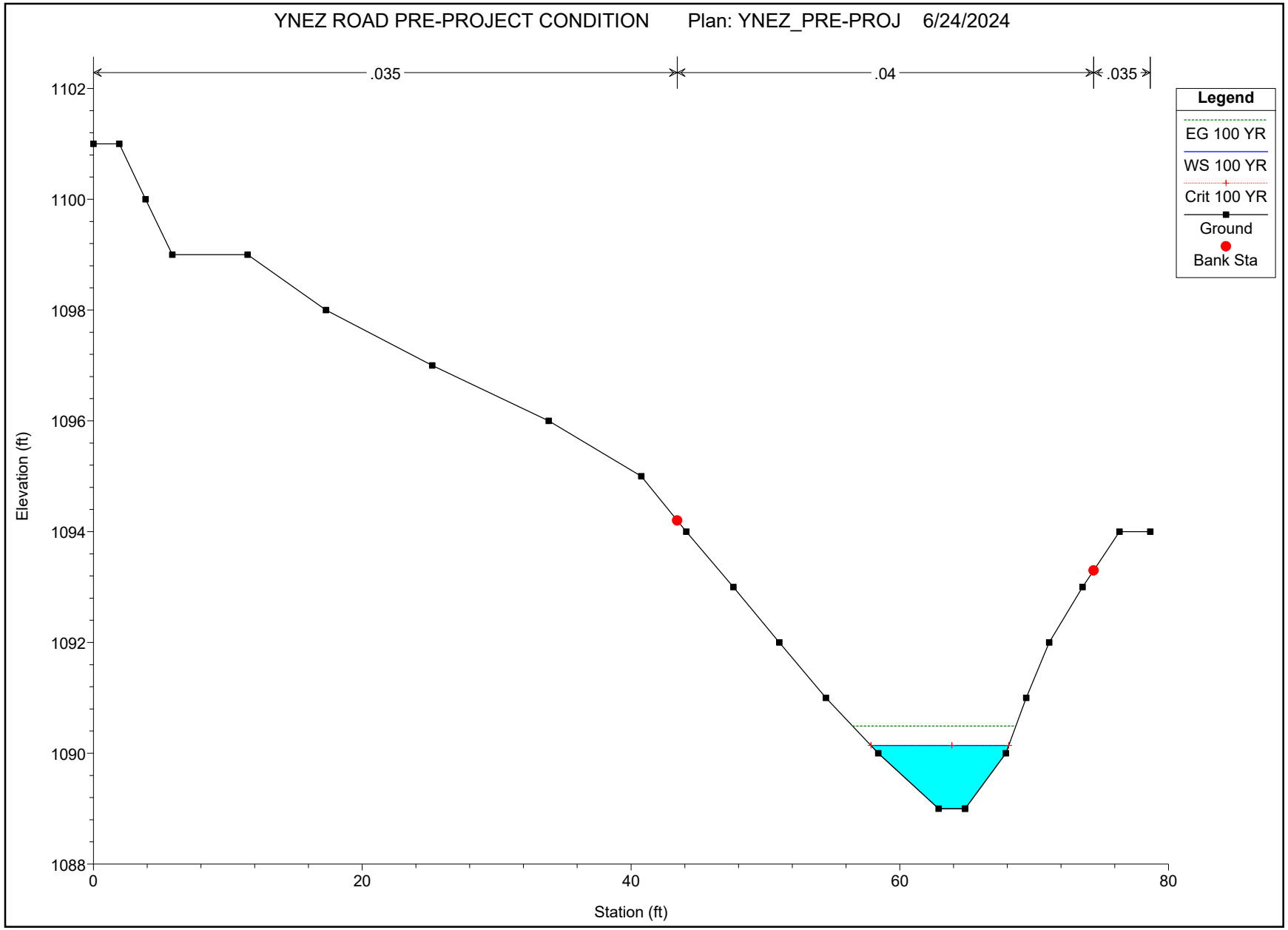

YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1105
1100
1095
1090
1085
1080
0
20
40
60
80
100
120
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1105
1100
1095
1090
1085
1080
0
20
40
60
80
100
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Ground
Bank Sta
Elevation (ft)
1105
1100
1095
1090
1085
1080
0
20
40
60
80
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Ground
Bank Sta
Elevation (ft)
1100
1098
1096
1094
1092
1090
1088
1086
1084
1082
0
20
40
60
80
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1102
1100
1098
1096
1094
1092
1090
1088
1086
0
20
40
60
80
Station (ft)


YNEZ ROAD PRE-PROJECT CONDITION Plan: YNEZ_PRE-PROJ 6/24/2024
.035
.04
.035
Legend
EG 100 YR
WS 100 YR
Crit 100 YR
Ground
Bank Sta
Elevation (ft)
1102
1100
1098
1096
1094
1092
1090
1088
0
20
40
60
80
Station (ft)

HEC-RAS HEC-RAS 6.4.1 June 2023
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: YNEZ ROAD PRE-PROJECT CONDITION
Project File : YNEZ RD_POST_PROJECT.prj
Run Date and Time: 6/24/2024 6:21:33 AM

Project in English units

Project Description:
MODEL OF YNEZ ROAD EXTENSION
CAPITAL IMPROVEMENT PROJECT
CRS
Info=<SpatialReference> <CoordinateSystem Code="2230" Unit="US_survey_Foot"
AcadCode="CA83-VIF" /></SpatialReference>

PLAN DATA

Plan Title: YNEZ_PRE-PROJ
Plan File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ
RD_POST_PROJECT.p01

Geometry Title: YNEZ_PRE-PROJECT
Geometry File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD
IMPROVEMENT\YNEZ RD_POST_PROJECT.g01

Flow Title   : YNEZ_PRE-PROJECT
Flow File   : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD
IMPROVEMENT\YNEZ RD_POST_PROJECT.f01

Plan Description:
YNEZ_PRE-PROJECT CONDITION

Plan Summary Information:
Number of: Cross Sections =   35   Multiple Openings =   0
            Culverts   =   0   Inline Structures =   0
            Bridges   =   0   Lateral Structures =   0

Computational Information
    Water surface calculation tolerance = 0.01
    Critical depth calculation tolerance = 0.01
    Maximum number of iterations   = 20
    Maximum difference tolerance   = 0.33
    Flow tolerance factor   = 0.001

Computation Options
    Critical depth computed only where necessary

Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Subcritical Flow

FLOW DATA

Flow Title: YNEZ_PRE-PROJECT
Flow File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ RD_POST_PROJECT.f01

Flow Data (cfs)

River	Reach	RS	100 YR
YNEZ_RD_STREAM	YNEZ RD	2275	33.8
YNEZ_RD_STREAM	YNEZ RD	1954	41.7
YNEZ_RD_STREAM	YNEZ RD	1382	58.7

Boundary Conditions

River	Reach	Profile	Upstream	Downstream
YNEZ_RD_STREAM	YNEZ RD	100 YR	Normal S = 0.055535	Known WS = 1055.2

GEOMETRY DATA

Geometry Title: YNEZ_PRE-PROJECT
Geometry File : O:\271.01.18\Engineering\HEC-RAS\HEC-RAS Models\GEO_HEC-RAS\YNEZ ROAD IMPROVEMENT\YNEZ RD_POST_PROJECT.g01

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2275

INPUT
Description:
Station Elevation Data num= 25

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1101	1.92	1101	3.87	1100	5.86	1099	11.47	1099
17.3	1098	25.21	1097	33.87	1096	40.76	1095	43.44	1094.2
44.11	1094	47.62	1093	51.04	1092	54.51	1091	58.4	1090
62.9	1089	64.85	1089	64.87	1089	67.9	1090	69.42	1091
71.12	1092	73.61	1093	74.44	1093.3	76.36	1094	78.65	1094

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	43.44	.04	74.44	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
43.44	74.44	24.84	24.84	24.84	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2250

INPUT
Description:
Station Elevation Data num= 28

```
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1101    1.92    1101    3.88    1100    5.87    1099   10.54    1098
   17.33    1097    25.7    1096   34.86    1095   39.34 1094.43    42.7    1094
   45.25    1093   48.09    1092   51.01    1091   52.93    1090   54.66    1089
   56.32    1088    58.5    1087   59.58    1087      62    1087   63.46    1088
   64.89    1089    66.8    1090   68.19 1090.63      69    1091   71.22    1092
   73.18    1093   75.46    1094   77.78    1094

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   39.34     .04   68.19    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         39.34   68.19             26.76   26.76   26.76             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2223

INPUT
Description:
Station Elevation Data    num=      35
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1100    1.94    1100    3.91    1099    5.86    1098    7.86    1097
    9.86    1096   15.31    1095    27.9    1094   32.54 1093.21   33.79    1093
   35.42    1092   37.25    1091   38.21    1090   39.01    1089   40.17    1088
   41.59    1087   42.93    1086   44.31    1085   46.07    1084   48.48  1083.1
   48.76    1083   49.22    1083   52.73    1084   53.78    1085   55.15    1086
   56.45    1087   58.15    1088   60.37    1089   61.71 1089.69   62.31    1090
   64.74    1091   67.15    1092   69.48    1093   71.93    1094   75.28    1094

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   32.54     .04   61.71    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         32.54   61.71             31.24   31.24   31.24             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2192

INPUT
Description:
Station Elevation Data    num=      36
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1101    1.92    1101    3.86    1100    5.81    1099    7.75    1098
    9.73    1097   11.72    1096    13.7    1095   15.69    1094   17.67    1093
   25.39    1092   31.74 1091.31   34.61    1091   36.27    1090   37.73    1089
   39.16    1088   40.64    1087   42.13    1086   43.62    1085   45.09    1084
   46.39    1083   48.87    1083   51.56    1083   52.61    1084    54.1    1085
    55.9    1086   57.88    1087    60.2    1088   60.98 1088.26   63.19    1089
   65.75    1090   67.94    1091   70.42    1092      73    1093   76.34    1094
      80    1094

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   31.74     .04   60.98    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         31.74   60.98              25.2    25.2    25.2             .1       .3

CROSS SECTION
```

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2167

INPUT
Description:
Station Elevation Data num= 36

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1101	1.93	1101	3.87	1100	5.83	1099	7.76	1098
9.75	1097	11.74	1096	13.72	1095	15.71	1094	17.71	1093
25.85	1092	33.39	1091.02	33.52	1091	34.47	1090	35.42	1089
36.39	1088	37.37	1087	38.6	1086	40.14	1085	41.78	1084
42.8	1083	47.39	1083	51.23	1083	52.12	1084	52.86	1085
54	1086	57.92	1087	62.21	1088	64.26	1088.61	65.59	1089
68.68	1090	72.04	1091	75.23	1092	78.92	1093	83.18	1094
86.96	1094								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	33.39	.04	64.26	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
33.39	64.26	30.34	30.34	30.34	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2136

INPUT
Description:
Station Elevation Data num= 42

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1101	1.94	1101	3.9	1100	5.85	1099	7.79	1098
9.77	1097	11.76	1096	13.75	1095	16	1094	22.03	1093
27.67	1092	33.78	1091	37.95	1090	41.04	1089	44.12	1088
47.6	1087	51.58	1086.32	53.48	1086	56.43	1085	57.71	1084
58.98	1083	60.26	1082	62.52	1081	67.86	1081	70.93	1081
72.48	1082	73.17	1083	73.91	1084	74.98	1085	76.08	1086
77.19	1087	78.65	1088	81.52	1089	82.8	1089.45	84.56	1090
84.58	1090.01	87.83	1091	91.63	1092	95.62	1093	98.72	1094
102.28	1095	103.13	1095						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	51.58	.04	84.58	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
51.58	84.58	10.63	10.63	10.63	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2126

INPUT
Description:
Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1101	1.95	1101	3.91	1100	5.87	1099	7.81	1098
9.8	1097	11.8	1096	13.79	1095	15.79	1094	20.9	1093
26.46	1092	32.11	1091	37.08	1090	40.45	1089	43.63	1088
47.45	1087	51.21	1086.48	54.64	1086	58.89	1085	58.92	1085
60.42	1084	61.75	1083	64.27	1082	67.26	1081	70.41	1080
75.82	1080	81.24	1080	82.91	1081	83.78	1082	84.65	1083
85.64	1084	86.62	1085	87.59	1086	89.51	1087	91.51	1088

```
   93.41    1089   94.61 1089.85   94.82    1090   95.95    1091   97.07    1092
   98.17    1093   99.31    1094  100.52    1094

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   51.21     .04   94.61    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         51.21   94.61             35.78   35.78   35.78             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2090

INPUT
Description:
Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1101    1.95    1101    3.91    1100    5.87    1099     7.8    1098
    9.78    1097   11.77    1096   13.76    1095   15.76    1094   19.76    1093
   24.85    1092   29.92    1091   35.02    1090   38.68    1089   42.04    1088
   45.52    1087   45.53    1087   49.47    1086    49.8    1085   50.09    1084
   50.38    1083   51.38    1082   53.27    1081   55.16    1080   56.55    1079
   57.77    1078    60.9    1078   62.61    1078   63.94    1079   65.25    1080
   66.52    1081   67.13    1082   67.74    1083   68.36    1084   68.98    1085
   69.58    1086   71.62    1087   73.69    1088    73.9 1088.06   77.41    1089
   82.85    1090   87.22    1091   91.62    1092   97.01    1093  101.75    1093

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   45.53     .04    73.9    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         45.53    73.9             19.35   19.35   19.35             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 2071

INPUT
Description:
Station Elevation Data    num=      44
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1102       2    1102    3.96    1101    5.92    1100    7.88    1099
    9.81    1098    11.8    1097   13.79    1096   15.78    1095   17.78    1094
    19.8    1093   24.16    1092   30.14    1091    35.7    1090   41.16    1089
   42.76  1088.2   43.16    1088   43.82    1087   44.36    1086   44.87    1085
   45.38    1084   45.89    1083   46.74    1082   47.89    1081   48.99    1080
   49.89    1079   50.75    1078   55.42    1078   58.82    1078   60.21    1079
   61.56    1080   62.56    1081   63.36    1082   64.16    1083   64.96    1084
   65.77    1085   68.37    1086   70.13 1086.64   71.14    1087   75.23    1088
   80.16    1089      84    1090   88.19    1091   93.34    1091

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   42.76     .04   70.13    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         42.76   70.13             28.31   28.31   28.31             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
```

REACH: YNEZ RD RS: 2042

INPUT
Description:
Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1102	2.01	1102	3.97	1101	5.95	1100	7.91	1099
9.84	1098	11.83	1097	13.82	1096	15.81	1095	17.8	1094
19.82	1093	21.83	1092	25.93	1091	34.36	1090	43.35	1089
49.96	1088	52.8	1087	56.17	1086	57.83	1085.43	59.09	1085
60.04	1084	60.93	1083	61.76	1082	62.59	1081	63.23	1080
63.92	1079	64.36	1078	64.79	1077	68.39	1077	73.27	1077
75.87	1078	77.29	1079	78.56	1080	79.77	1081	80.75	1082
81.13	1083	81.5	1084	82.42	1085	83.74	1086	84.07	1087
84.38	1088	85.33	1088.41	86.72	1089	89.77	1090	94.54	1091
99.54	1091								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	57.83	.04	85.33	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
57.83	85.33	35.18	35.18	35.18	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 2007

INPUT
Description:
Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1099	1.96	1099	3.89	1098	5.88	1097	7.87	1096
9.86	1095	11.86	1094	13.88	1093	15.88	1092	17.89	1091
23.58	1090	31.48	1089	40.85	1088	47.67	1087	51.7	1086.2
52.71	1086	53.26	1085	53.81	1084	54.38	1083	54.95	1082
55.55	1081	56.13	1080	57.11	1079	58.17	1078	59.32	1077
63.15	1077	68.25	1077	69.87	1078	71.09	1079	72.13	1080
73.15	1081	74.61	1082	75.87	1083	76.78	1084	77.67	1085
78.57	1086	78.61	1086.02	81.08	1087	83.88	1088	87.11	1089
91.14	1089								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	51.7	.04	78.61	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
51.7	78.61	53.26	53.26	53.26	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1954

INPUT
Description:
Station Elevation Data num= 43

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1097	1.99	1097	3.99	1096	5.98	1095	7.98	1094
9.99	1093	11.99	1092	14	1091	16.02	1090	18.03	1089
24.38	1088	33.86	1087	40.94	1086.1	41.7	1086	41.96	1085
42.29	1084	42.62	1083	42.96	1082	43.32	1081	43.66	1080
44.22	1079	44.98	1078	45.73	1077	46.49	1076	47.21	1075
52.28	1075	55.93	1075	57.03	1076	58.33	1077	59.72	1078
61.42	1079	63.18	1080	64.21	1081	65.19	1082	66.27	1083

```
   68.84 1083.72   69.84    1084   73.06    1085   76.52    1086   80.47    1087
   85.01    1088   90.16    1089   96.14    1089

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   40.94     .04   68.84    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         40.94   68.84            55.85   55.85   55.85             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1898

INPUT
Description:
Station Elevation Data    num=      45
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1097    1.72    1097    1.83    1096    1.94    1095    2.04    1094
    2.15    1093    2.26    1092    2.36    1091    4.92    1090   10.03    1089
   13.84    1088   18.02    1087   22.03    1086   26.72    1085   32.97    1084
   40.76    1083   50.03    1082   55.29 1081.24   56.97    1081   57.29    1080
   57.65    1079   59.97    1078   62.04    1077   63.68    1076   65.62    1075
   67.61    1074   70.37    1074   72.71    1074   74.43    1075   76.17    1076
   77.53    1077   78.91    1078      80    1079    81.1    1080   82.84    1081
   82.88 1081.03   82.89 1081.03   84.59    1082   87.53    1083   89.51    1084
   90.73    1085   92.01    1086   94.17    1087  100.13    1088  108.36    1088

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   55.29     .04   82.88    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         55.29   82.88            62.15   62.15   62.15             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1835

INPUT
Description:
Station Elevation Data    num=      41
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1098    1.96    1098    2.06    1097    2.17    1096    2.27    1095
    2.38    1094    2.48    1093    2.59    1092    2.69    1091    6.31    1090
   11.09    1089   14.51    1088   18.52    1087   22.54    1086   24.97 1085.39
   26.55    1085   26.99 1084.01   26.99    1084   27.45    1083   27.89    1082
   28.37    1081   28.91    1080   29.51    1079   30.34    1078    31.6    1077
    32.7    1076   33.64    1075   34.81    1074   37.98    1073   42.37    1073
   46.55    1073   47.69    1074   48.83    1075   50.14    1076   51.77    1077
   56.26    1078    59.4    1079   62.01    1080   68.37    1081   79.97    1081
   80.56    1081

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   24.97     .04   79.97    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         24.97   79.97            39.37   39.37   39.37             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
```

REACH: YNEZ RD RS: 1796

INPUT
Description:
Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1099	1.65	1099	1.75	1098	1.85	1097	1.95	1096
2.05	1095	2.15	1094	2.25	1093	2.35	1092	2.45	1091
2.55	1090	6.62	1089	10.08	1088	14.17	1087	18.25	1086
22.34	1085	27.03	1084	27.08	1083.98	30.14	1083	31.24	1082
31.83	1081	32.41	1080	33.01	1079	33.75	1078	34.93	1077
36.13	1076	37.86	1075	39.78	1074	42.66	1073	49.37	1072
51.88	1072	53.39	1072	55.5	1073	57	1074	57.85	1075
58.4	1076	58.77	1077	59.13	1078	59.49	1079	63.06	1080
71.97	1080.27	95.6	1081	99.97	1082	104.85	1083	110.08	1084
116.42	1085								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	27.08	.04	71.97	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
27.08	71.97	39.5	39.5	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1757

INPUT
Description:
Station Elevation Data num= 41

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1093	2	1093	4	1092	5.11	1091	5.24	1090
5.36	1089	6.7	1088	10.44	1087	15.59	1086	20.95	1085
26.36	1084	30.58	1083	34.44	1082	38.31	1081	42.83	1080
47.31	1079	47.41	1078.96	48.01	1078.71	49.76	1078	50.71	1077
51.61	1076	52.83	1075	54.07	1074	56.16	1073	58.28	1072
63.09	1072	67.03	1072	67.98	1073	68.64	1074	69.33	1075
70.11	1076	71.29	1077	72.14	1078	72.56	1079	73.27	1080
76.28	1081	79.14	1081.47	82.4	1082	88.99	1083	97.9	1084
106.95	1084								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	48.01	.04	79.14	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
48.01	79.14	19.55	19.55	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1737

INPUT
Description:
Station Elevation Data num= 38

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1092	2	1092	4	1091	6.02	1090	8.06	1089
10.1	1088	12.6	1087	17.52	1086	22.1	1085	26.72	1084
31.27	1083	35.36	1082	39.38	1081	43.76	1080	48.22	1079
49.92	1078.66	53.29	1078	54.81	1077	55.89	1076	57.19	1075
58.82	1074	60.44	1073	62.31	1072	66.5	1072	74.64	1072
76.91	1073	78.65	1074	80.37	1075	81.87	1076	82.8	1077
83.64	1078	84.3	1079	84.9	1080	85.52	1081	88.96	1082

```
    89.2 1082.03   97.43    1083     105    1083

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   49.92     .04    89.2    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         49.92    89.2            40.35   40.35   40.35             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1697

INPUT
Description:
Station Elevation Data    num=      41
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1094    3.97    1094    7.92    1093   11.57    1092    14.7    1091
   17.82    1090   21.18    1089    25.5    1088   29.91    1087   34.21    1086
   39.66    1085   50.32    1084   55.11    1083   56.83 1082.26   57.43    1082
   58.61    1081   59.28    1080   60.02    1079   60.58    1078   60.95    1077
   61.79    1076   62.24    1075   62.64    1074   64.18    1073   65.89    1072
   74.33    1072   79.11    1072   80.73    1073    81.4    1074   82.07    1075
   82.69    1076   83.56    1077   85.94 1077.32   91.09    1078   95.25 1078.61
   97.94    1079  104.46    1080  110.62    1081  116.44    1082  123.58    1083
  127.33    1083

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   56.83     .04   95.25    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         56.83   95.25            78.83   78.83   78.83             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1618

INPUT
Description:
Station Elevation Data    num=      41
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1092    2.03    1092    4.06    1091    6.08    1090    8.11    1089
   16.81    1088   25.54    1087   33.92    1086   42.11    1085   50.41    1084
   57.87    1083   65.73    1082   73.12    1081   80.08    1080   86.47    1079
   91.77    1078   96.76    1077   97.56 1076.76  100.14    1076  100.98    1075
     102    1074   103.3    1073  106.77    1072  109.02    1071  114.01    1071
  118.63    1071  121.26    1072  124.42    1073  128.01    1074  129.87 1074.58
  131.21    1075  135.12    1076  140.36    1077  145.53    1078  150.53    1079
  156.24    1080  162.61    1081  167.97    1082  172.94    1083  177.16    1084
  180.07    1084

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   97.56     .04  129.87    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         97.56  129.87            25.72   25.72   25.72             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1593
```

```
INPUT
Description:
Station Elevation Data    num=      43
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1092    2.01    1092    4.03    1091    6.04    1090    7.99    1089
   10.03    1088   15.63    1087   25.98    1086   35.85    1085   44.75    1084
    53.4    1083   61.61    1082   67.86    1081   74.13    1080   80.24    1079
    88.9    1078   92.85    1077   98.32    1076   103.5 1075.17  104.58    1075
  107.74    1074  109.13    1073  110.36    1072  111.53    1071   113.6    1070
  115.78    1069   117.3    1068  121.18    1068  123.54    1068  124.92    1069
  126.75    1070  128.21    1071  129.56    1072  134.86    1073  135.41 1073.12
  139.37    1074  143.98    1075  148.47    1076  152.77    1077  157.07    1078
  161.38    1079  165.58    1080  169.19    1080

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   103.5     .04  135.41    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         103.5  135.41             25.22   25.22   25.22             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1567

INPUT
Description:
Station Elevation Data    num=      46
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1092       2    1092    4.01    1091    6.01    1090    7.88    1089
    9.83    1088   11.95    1087   16.19    1086   23.41    1085   30.58    1084
   39.61    1083   48.95    1082   56.56    1081    64.2    1080   72.77    1079
   79.72    1078   85.85    1077   92.66    1076  100.44    1075   108.1    1074
  108.12    1074  110.62    1073  111.61    1072  112.59    1071  113.57    1070
  114.48    1069  115.46    1068  117.61    1067  119.53    1066   123.3    1066
  126.88    1066   128.4    1067   129.9    1068  131.16    1069  132.37    1070
  133.57    1071  134.76    1072  135.13 1072.12  137.85    1073  141.47    1074
  146.29    1075  150.71    1076  154.33    1077  157.85    1078  161.63    1079
  164.91    1079

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   108.1     .04  135.13    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         108.1  135.13             26.49   26.49   26.49             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1541

INPUT
Description:
Station Elevation Data    num=      39
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1089    1.98    1089    3.85    1088    5.92    1087    7.98    1086
   10.01    1085   12.02    1084   14.03    1083   20.96    1082   29.16    1081
   38.38    1080   49.73    1079   59.35    1078   67.67    1077   68.61 1076.88
   75.48    1076   83.91    1075   91.58    1074   98.24    1073  103.11 1072.13
  103.85    1072  104.52    1071  104.99    1070  105.47    1069  105.96    1068
  106.82    1067  107.94    1066  109.64    1065  113.76    1065  116.19    1065
  118.01    1066  119.61    1067  121.34    1068  123.49    1069  126.02    1070
  130.85 1070.91  131.33    1071   136.2    1072  141.61    1072
```

```
Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035  103.11     .04  130.85    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        103.11  130.85            29.02   29.02   29.02             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1512

INPUT
Description:
Station Elevation Data    num=      47
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1090       2    1090    4.01    1089    5.96    1088    7.98    1087
    9.99    1086   11.99    1085   13.99    1084   15.99    1083      18    1082
    22.6    1081   37.05    1080    48.7    1079   58.71    1078   68.78    1077
   77.53    1076   86.63    1075   94.15    1074   99.59    1073  103.78    1072
  106.03 1071.22  106.67    1071  108.82    1070  109.22    1069  109.61    1068
  110.01    1067  110.41    1066  111.44    1065   115.8    1065  118.61    1065
  120.24    1066  121.59    1067  123.78    1068   133.2 1068.92  134.03    1069
  136.69 1069.65   138.2    1070   140.8    1071  143.35    1072  146.58    1073
  149.86    1074  152.46    1075  154.58    1076   158.2    1077  164.39    1078
  170.32    1079  176.14    1079

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035  106.03     .04   133.2    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        106.03   133.2            52.35   52.35   52.35             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1459

INPUT
Description:
Station Elevation Data    num=      40
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1086       2    1086    3.99    1085    5.99    1084    7.99    1083
    9.99    1082   11.98    1081   13.98    1080   15.98    1079   17.97    1078
   19.98    1078   28.81    1077   43.93    1076   56.18    1075   62.19 1074.33
   65.09    1074   66.69    1073   68.13    1072   69.01    1071    70.3    1070
   71.54    1069   72.72    1068   73.96    1067   75.83    1066   78.91    1065
   82.51    1064   89.64    1064   92.85    1064   94.36    1065   95.89    1066
   97.79    1067  100.31    1068  109.89    1069     119 1069.51  127.67    1070
   131.6    1071   134.6    1072  138.06    1073  141.66    1074  144.92    1074

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   62.19     .04     119    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         62.19     119            36.56   36.56   36.56             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1423
```

INPUT
Description:
Station Elevation Data num= 38

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1083	2.02	1083	4.04	1082	6.06	1081	8.08	1080
10.1	1079	12.12	1078	14.14	1077	16.16	1076	23.18	1075
38.88	1074	56.87	1073	60.76	1072.59	66.42	1072	68.18	1071
70.79	1070	74.75	1069	78.47	1068	81.27	1067	81.7	1066
82.1	1065	82.86	1064	84.19	1063	88.85	1063	90.86	1063
95.57	1064	97.98	1065	99.6	1066	102.06	1067	104.77	1068
109.86	1069	110.62	1069.17	114.38	1070	116.99	1071	120.43	1072
131.86	1073	142.48	1074	154.16	1074				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	60.76	.04	110.62	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
60.76	110.62	41.28	41.28	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1382

INPUT
Description:
Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1083	2.08	1083	4.17	1082	6.25	1081	8.33	1080
10.42	1079	12.5	1078	14.58	1077	16.67	1076	18.75	1075
20.83	1074	28.12	1073	41.76	1072	53.81	1071	63.18	1070
68.98	1069	70.1	1068.85	76.41	1068	76.82	1067	77.22	1066
77.6	1065	77.94	1064	78.43	1063	79.48	1062	81.49	1061
87.15	1061	90.86	1061	91.18	1062	91.66	1063	92.42	1064
93.76	1065	95.16	1066	97.16	1067	99.01	1068	101.19	1069
104.99	1070	106.94	1070.22	113.69	1071	117.2	1072	128.1	1072
130.88	1073	135.5	1074	139.61	1075	144.48	1076	149.13	1077

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	70.1	.04	106.94	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
70.1	106.94	46.77	46.77	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1335

INPUT
Description:
Station Elevation Data num= 49

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1083	1.95	1083	3.98	1082	6.02	1081	8.05	1080
10.08	1079	12.12	1078	14.15	1077	16.19	1076	18.22	1075
20.25	1074	22.29	1073	24.32	1072	26.36	1071	37.69	1070
50.76	1069	60.61	1068	63.62	1067.42	65.83	1067	68.83	1066
70.29	1065	71.27	1064	71.9	1063	72.58	1062	73.4	1061
75.12	1060	75.66	1059	80.87	1059	85.61	1059	86.32	1060
86.98	1060	87.5	1061	88.74	1062	89.92	1063	92.24	1063.99
92.26	1064	97.08	1065	103.29	1066	105.29	1067	107.3	1068
109.3	1069	111.3	1070	113.31	1071	115.31	1072	117.32	1073
119.32	1074	121.33	1075	123.33	1076	125.34	1076		

```
Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   63.62     .04   92.24    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         63.62   92.24             45.57   45.57   45.57             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1289

INPUT
Description:
Station Elevation Data    num=      49
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1080    1.67    1080    3.68    1079     5.7    1078    7.72    1077
    9.74    1076   11.76    1075   13.78    1074    15.8    1073   17.82    1072
   19.84    1071   21.86    1070   23.71    1069   32.96    1068   39.05    1067
    40.5  1066.4   41.46    1066   43.87    1065   45.29    1064   46.34    1063
   47.48    1062   48.58    1061   49.56    1060   50.48    1059    51.6    1058
   52.61    1057   58.98    1057   62.57    1057   63.43    1058   64.49    1059
   65.47    1060    66.6    1061   68.14    1062   69.67 1062.09   85.94    1063
   88.14    1064   90.25    1065   92.45    1066    96.3    1067   98.32    1068
  100.33    1069  102.35    1070  104.37    1071  106.38    1072   108.4    1073
  110.42    1074  112.43    1075  114.45    1076  116.47    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035    40.5     .04   69.67    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          40.5   69.67             39.03   39.03   39.03             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1250

INPUT
Description:
Station Elevation Data    num=      48
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1077    1.78    1077    3.78    1076    5.78    1075    7.79    1074
    9.79    1073   11.79    1072   13.79    1071   15.79    1070   17.79    1069
   19.79    1068   21.79    1067   23.79    1066    25.8    1065    27.8    1064
    29.8    1063    31.8    1062    33.8    1061   35.67 1060.07    35.8    1060
    37.8    1059    39.8    1058   41.81    1057   43.81    1056   45.21 1056.88
    45.4    1057    49.7    1057    51.7    1058    53.7    1059   58.93    1060
    64.9    1061   65.02 1061.01   73.36    1062   77.69    1063   80.79    1064
   85.84    1065   87.84    1066   89.84    1067   91.84    1068   93.84    1069
   95.84    1070   97.84    1071   99.84    1072  101.84    1073  103.84    1074
  105.85    1075  107.85    1076  109.85    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   35.67     .04   65.02    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         35.67   65.02             41.84   41.84   41.84             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1208
```

INPUT
Description:
Station Elevation Data num= 46

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1074	1.22	1074	3.25	1073	5.29	1072	7.33	1071
9.37	1070	11.42	1069	13.46	1068	15.5	1067	17.55	1066
19.59	1065	21.64	1064	23.68	1063	25.73	1062	27.77	1061
29.81	1060	29.87	1059.97	31.86	1059	33.9	1058	35.95	1057
37.99	1056	41.11	1055.01	41.14	1055	43.09	1056	45.18	1056
47.19	1057	49.21	1058	51.23	1059	53.25	1060	55.27	1061
57.28	1062	60.22	1062.4	64.64	1063	83.16	1065	85.18	1066
87.2	1067	89.22	1068	91.24	1069	93.26	1070	95.28	1071
97.31	1072	99.33	1073	101.35	1074	103.37	1075	105.39	1076
107.41	1076								

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	29.87	.04	60.22	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
29.87	60.22	50.63	50.63	50.63	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1158

INPUT
Description:
Station Elevation Data num= 48

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1071	.94	1071	2.98	1070	5.01	1069	7.05	1068
9.09	1067	11.13	1066	13.17	1065	15.21	1064	17.25	1063
19.29	1062	21.32	1061	22.75	1060.3	23.36	1060	25.4	1059
27.44	1058	29.48	1057	31.52	1056	33.56	1055	36.66	1056
37.3	1055	37.98	1054	40.74	1054	44.67	1054	46.29	1055
47.96	1056	49.31	1057	50.69	1058	52.4	1059	54.48	1060
56.99	1060.14	72.34	1061	74.35	1062	76.35	1063	78.35	1064
80.36	1065	82.36	1066	84.36	1067	86.37	1068	88.38	1069
90.38	1070	92.39	1071	94.39	1072	96.4	1073	98.4	1074
100.4	1075	102.41	1076	104.41	1076				

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	22.75	.04	56.99	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
22.75	56.99	51.78	51.78	51.78	.1	.3

CROSS SECTION

RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD RS: 1106

INPUT
Description:
Station Elevation Data num= 45

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1068	.58	1068	2.62	1067	4.66	1066	6.71	1065
8.75	1064	10.79	1063	12.83	1062	14.87	1061	18.13	1059.77
20.16	1059	22.17	1058	24.17	1057	26.18	1056	28.18	1055
30.19	1054	33.26	1054	34.87	1053	39.36	1053	42.69	1053
44.09	1054	45.3	1055	46.71	1056	47.89	1057	49.2	1058
50.43	1059	52.88	1059.15	66.32	1060	79.72	1061	81.74	1062
83.76	1063	85.78	1064	87.8	1065	89.83	1066	91.85	1067

```
   93.87    1068   95.89    1069   97.91    1070   99.93    1071  101.94    1072
  103.96    1073  105.97    1074  107.98    1075  109.99    1076  111.99    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   18.13     .04   52.88    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         18.13   52.88             50.27   50.27   50.27             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1056

INPUT
Description:
Station Elevation Data    num=      43
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1064    1.98    1064    4.02    1063    6.06    1062     8.1    1061
   25.64    1058   28.14 1057.54   31.02    1057   33.03    1056   35.03    1055
   37.04    1054   39.02    1055   39.71    1054   40.76    1053   41.87    1052
   44.28    1052   47.58    1052   48.71    1053    49.7    1054   50.62    1055
   53.11    1056   56.04    1057   58.95  1057.6   60.85    1058   74.25    1059
   76.26    1060   78.26    1061   80.27    1062   82.27    1063   84.28    1064
   86.28    1065   88.28    1066   90.29    1067   92.29    1068    94.3    1069
    96.3    1070   98.31    1071  100.31    1072  102.31    1073  104.32    1074
  106.32    1075  108.33    1076  110.33    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   28.14     .04   58.95    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         28.14   58.95             26.32   26.32   26.32             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
REACH: YNEZ RD            RS: 1029

INPUT
Description:
Station Elevation Data    num=      42
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0    1063     .65    1063     2.7    1062    4.74    1061    6.79    1060
   15.97    1058   24.23    1057   32.77    1056   35.99 1055.42    38.3    1055
   40.31    1054   43.55    1055   45.85    1054    48.3    1053    53.8    1052
   56.04    1052   60.72    1052   61.81    1053   62.73    1054   63.99    1055
   65.99 1055.71   66.82 1056.01   72.41    1058   74.41    1059   76.42    1060
   78.42    1061   80.43    1062   82.43    1063   84.44    1064   86.44    1065
   88.45    1066   90.45    1067   92.46    1068   94.46    1069   96.47    1070
   98.47    1071  100.48    1072  102.48    1073  104.49    1074  106.49    1075
   108.5    1076   110.5    1076

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0    .035   35.99     .04   66.82    .035

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         35.99   66.82             29.38   29.38   29.38             .1       .3

CROSS SECTION


RIVER: YNEZ_RD_STREAM
```

REACH: YNEZ RD RS: 1000

INPUT
Description:
Station Elevation Data num= 37

Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev	Sta	Elev
0	1061	1.02	1061	3.06	1060	5.1	1059	7.13	1058
9.17	1057	11.2	1056	25.6	1054.1	26.36	1054	28.74	1053
31.34	1052	33.76	1052	39.93	1051	53.02	1051	56.58	1051
58.63	1052	60.63	1053	62.64	1054	64.64	1055	65.95	1055.37
66.64	1055.56	71.82	1057	73.83	1058	75.83	1059	77.83	1060
79.84	1061	81.84	1062	83.84	1063	85.85	1064	87.85	1065
89.86	1066	91.86	1067	93.86	1068	95.87	1069	97.87	1070
99.87	1071	100.9	1071						

Manning's n Values num= 3

Sta	n Val	Sta	n Val	Sta	n Val
0	.035	25.6	.04	65.95	.035

Bank Sta: Left	Right	Lengths: Left Channel	Right	Coeff Contr.	Expan.
25.6	65.95	0	0	.1	.3

SUMMARY OF MANNING'S N VALUES

River:YNEZ_RD_STREAM

Reach	River Sta.	n1	n2	n3
YNEZ RD	2275	.035	.04	.035
YNEZ RD	2250	.035	.04	.035
YNEZ RD	2223	.035	.04	.035
YNEZ RD	2192	.035	.04	.035
YNEZ RD	2167	.035	.04	.035
YNEZ RD	2136	.035	.04	.035
YNEZ RD	2126	.035	.04	.035
YNEZ RD	2090	.035	.04	.035
YNEZ RD	2071	.035	.04	.035
YNEZ RD	2042	.035	.04	.035
YNEZ RD	2007	.035	.04	.035
YNEZ RD	1954	.035	.04	.035
YNEZ RD	1898	.035	.04	.035
YNEZ RD	1835	.035	.04	.035
YNEZ RD	1796	.035	.04	.035
YNEZ RD	1757	.035	.04	.035
YNEZ RD	1737	.035	.04	.035
YNEZ RD	1697	.035	.04	.035
YNEZ RD	1618	.035	.04	.035
YNEZ RD	1593	.035	.04	.035
YNEZ RD	1567	.035	.04	.035
YNEZ RD	1541	.035	.04	.035
YNEZ RD	1512	.035	.04	.035
YNEZ RD	1459	.035	.04	.035
YNEZ RD	1423	.035	.04	.035
YNEZ RD	1382	.035	.04	.035
YNEZ RD	1335	.035	.04	.035
YNEZ RD	1289	.035	.04	.035
YNEZ RD	1250	.035	.04	.035
YNEZ RD	1208	.035	.04	.035
YNEZ RD	1158	.035	.04	.035
YNEZ RD	1106	.035	.04	.035
YNEZ RD	1056	.035	.04	.035
YNEZ RD	1029	.035	.04	.035
YNEZ RD	1000	.035	.04	.035

SUMMARY OF REACH LENGTHS

River: YNEZ_RD_STREAM

Reach	River Sta.	Left	Channel	Right
YNEZ RD	2275	24.84	24.84	24.84
YNEZ RD	2250	26.76	26.76	26.76
YNEZ RD	2223	31.24	31.24	31.24
YNEZ RD	2192	25.2	25.2	25.2
YNEZ RD	2167	30.34	30.34	30.34
YNEZ RD	2136	10.63	10.63	10.63
YNEZ RD	2126	35.78	35.78	35.78
YNEZ RD	2090	19.35	19.35	19.35
YNEZ RD	2071	28.31	28.31	28.31
YNEZ RD	2042	35.18	35.18	35.18
YNEZ RD	2007	53.26	53.26	53.26
YNEZ RD	1954	55.85	55.85	55.85
YNEZ RD	1898	62.15	62.15	62.15
YNEZ RD	1835	39.37	39.37	39.37
YNEZ RD	1796	39.5	39.5	39.5
YNEZ RD	1757	19.55	19.55	19.55
YNEZ RD	1737	40.35	40.35	40.35
YNEZ RD	1697	78.83	78.83	78.83
YNEZ RD	1618	25.72	25.72	25.72
YNEZ RD	1593	25.22	25.22	25.22
YNEZ RD	1567	26.49	26.49	26.49
YNEZ RD	1541	29.02	29.02	29.02
YNEZ RD	1512	52.35	52.35	52.35
YNEZ RD	1459	36.56	36.56	36.56
YNEZ RD	1423	41.28	41.28	41.28
YNEZ RD	1382	46.77	46.77	46.77
YNEZ RD	1335	45.57	45.57	45.57
YNEZ RD	1289	39.03	39.03	39.03
YNEZ RD	1250	41.84	41.84	41.84
YNEZ RD	1208	50.63	50.63	50.63
YNEZ RD	1158	51.78	51.78	51.78
YNEZ RD	1106	50.27	50.27	50.27
YNEZ RD	1056	26.32	26.32	26.32
YNEZ RD	1029	29.38	29.38	29.38
YNEZ RD	1000	0	0	0

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: YNEZ_RD_STREAM

Reach	River Sta.	Contr.	Expan.
YNEZ RD	2275	.1	.3
YNEZ RD	2250	.1	.3
YNEZ RD	2223	.1	.3
YNEZ RD	2192	.1	.3
YNEZ RD	2167	.1	.3
YNEZ RD	2136	.1	.3
YNEZ RD	2126	.1	.3
YNEZ RD	2090	.1	.3
YNEZ RD	2071	.1	.3
YNEZ RD	2042	.1	.3
YNEZ RD	2007	.1	.3
YNEZ RD	1954	.1	.3
YNEZ RD	1898	.1	.3
YNEZ RD	1835	.1	.3
YNEZ RD	1796	.1	.3
YNEZ RD	1757	.1	.3

YNEZ RD	1737	.1	.3
YNEZ RD	1697	.1	.3
YNEZ RD	1618	.1	.3
YNEZ RD	1593	.1	.3
YNEZ RD	1567	.1	.3
YNEZ RD	1541	.1	.3
YNEZ RD	1512	.1	.3
YNEZ RD	1459	.1	.3
YNEZ RD	1423	.1	.3
YNEZ RD	1382	.1	.3
YNEZ RD	1335	.1	.3
YNEZ RD	1289	.1	.3
YNEZ RD	1250	.1	.3
YNEZ RD	1208	.1	.3
YNEZ RD	1158	.1	.3
YNEZ RD	1106	.1	.3
YNEZ RD	1056	.1	.3
YNEZ RD	1029	.1	.3
YNEZ RD	1000	.1	.3

Profile Output Table - Standard Table 1

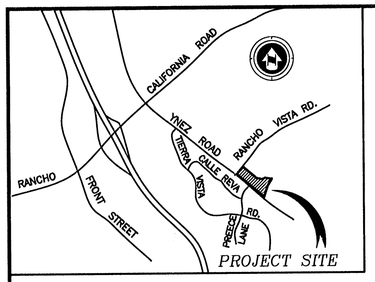
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
YNEZ RD	1000	100 YR	58.70	1051.00	1055.20	1051.68	1055.20	0.000031	0.44	134.90	48.08	0.04
YNEZ RD	1029	100 YR	58.70	1052.00	1055.19		1055.21	0.000439	1.13	51.74	27.27	0.15
YNEZ RD	1056	100 YR	58.70	1052.00	1055.19		1055.24	0.001321	1.86	31.56	16.42	0.24
YNEZ RD	1106	100 YR	58.70	1053.00	1055.25		1055.32	0.001671	2.00	29.29	17.99	0.28
YNEZ RD	1158	100 YR	58.70	1054.00	1055.27	1055.27	1055.75	0.027295	5.58	10.52	10.99	1.01
YNEZ RD	1208	100 YR	58.70	1055.00	1056.87	1056.87	1057.37	0.026861	5.67	10.35	10.72	1.02
YNEZ RD	1250	100 YR	58.70	1056.00	1057.99	1057.91	1058.39	0.021617	5.09	11.54	11.85	0.91
YNEZ RD	1289	100 YR	58.70	1057.00	1058.62		1058.78	0.005111	3.14	18.70	13.19	0.46
YNEZ RD	1335	100 YR	58.70	1059.00	1060.02	1060.02	1060.48	0.027390	5.43	10.81	11.91	1.00
YNEZ RD	1382	100 YR	58.70	1061.00	1062.02	1062.02	1062.48	0.027000	5.46	10.75	11.73	1.01
YNEZ RD	1423	100 YR	41.70	1063.00	1063.92	1063.92	1064.28	0.027428	4.80	8.69	12.23	1.00
YNEZ RD	1459	100 YR	41.70	1064.00	1064.85		1065.09	0.017899	3.94	10.60	14.67	0.82
YNEZ RD	1512	100 YR	41.70	1065.00	1065.95	1065.95	1066.37	0.027337	5.19	8.04	9.70	1.00
YNEZ RD	1541	100 YR	41.70	1065.00	1066.56		1066.69	0.005108	2.91	14.33	11.58	0.46
YNEZ RD	1567	100 YR	41.70	1066.00	1066.92	1066.92	1067.32	0.027207	5.05	8.26	10.53	1.01
YNEZ RD	1593	100 YR	41.70	1068.00	1069.02	1069.02	1069.46	0.027234	5.28	7.89	9.23	1.01
YNEZ RD	1618	100 YR	41.70	1071.00	1071.78	1071.78	1072.12	0.027822	4.66	8.95	13.40	1.01
YNEZ RD	1697	100 YR	41.70	1072.00	1072.99		1073.12	0.007019	2.82	14.76	16.53	0.53
YNEZ RD	1737	100 YR	41.70	1072.00	1073.24		1073.32	0.003566	2.26	18.42	17.27	0.39

YNEZ RD	1757	100 YR	41.70	1072.00	1073.29		1073.43	0.006446	
3.03	13.78	12.61	0.51						
YNEZ RD	1796	100 YR	41.70	1072.00	1073.55		1073.65	0.004755	
2.59	16.08	15.23	0.44						
YNEZ RD	1835	100 YR	41.70	1073.00	1073.84	1073.84	1074.20	0.027630	
4.81	8.67	12.17	1.00						
YNEZ RD	1898	100 YR	41.70	1074.00	1075.23	1075.10	1075.56	0.017960	
4.59	9.09	9.66	0.83						
YNEZ RD	1954	100 YR	41.70	1075.00	1076.13		1076.35	0.011325	
3.78	11.04	10.81	0.66						
YNEZ RD	2007	100 YR	33.80	1077.00	1077.73	1077.73	1078.07	0.028526	
4.64	7.28	10.96	1.00						
YNEZ RD	2042	100 YR	33.80	1077.00	1078.31		1078.41	0.004259	
2.48	13.65	12.09	0.41						
YNEZ RD	2071	100 YR	33.80	1078.00	1078.78	1078.78	1079.14	0.028751	
4.83	7.00	9.83	1.01						
YNEZ RD	2090	100 YR	33.80	1078.00	1079.27	1079.04	1079.53	0.014072	
4.14	8.17	8.10	0.73						
YNEZ RD	2126	100 YR	33.80	1080.00	1080.64	1080.64	1080.92	0.028949	
4.28	7.90	13.91	1.00						
YNEZ RD	2136	100 YR	33.80	1081.00	1081.75	1081.75	1082.08	0.028545	
4.61	7.33	11.25	1.01						
YNEZ RD	2167	100 YR	33.80	1083.00	1083.77	1083.77	1084.13	0.028811	
4.81	7.03	9.90	1.01						
YNEZ RD	2192	100 YR	33.80	1083.00	1084.34		1084.56	0.010643	
3.72	9.08	8.53	0.64						
YNEZ RD	2223	100 YR	33.80	1083.00	1084.68		1084.91	0.011833	
3.87	8.74	8.57	0.67						
YNEZ RD	2250	100 YR	33.80	1087.00	1088.15	1088.15	1088.58	0.027695	
5.25	6.44	7.61	1.01						
YNEZ RD	2275	100 YR	33.80	1089.00	1090.14	1090.14	1090.49	0.027687	
4.75	7.12	10.26	1.00						

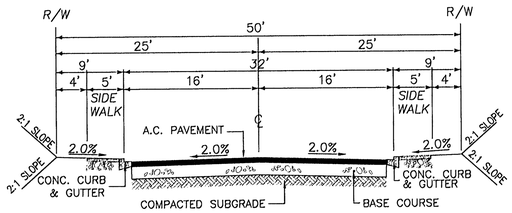
EXCERPTS

EXCERPT A: TRACT 31344 IMPROVEMENT PLANS

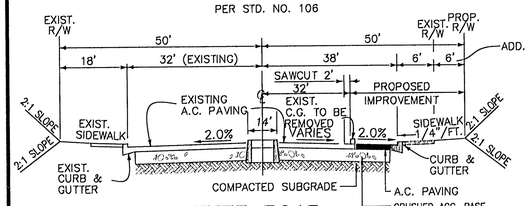
CITY OF TEMECULA
TRACT NO. 31344
STREET AND STORM DRAIN IMPROVEMENT PLANS



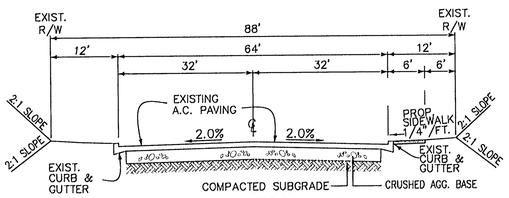
VICINITY MAP
N.T.S.



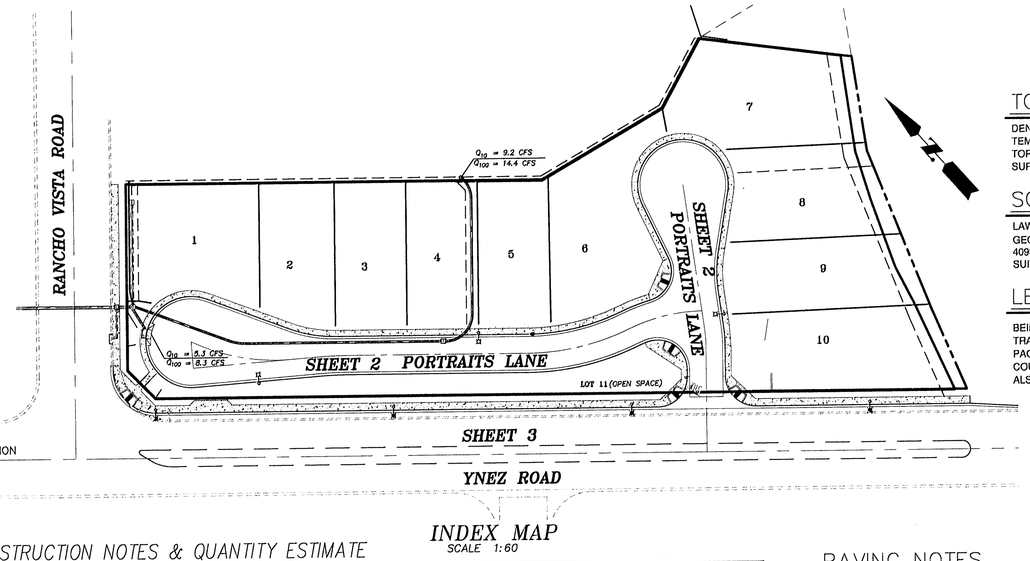
PORTRAITS LANE
NOT TO SCALE
PER STD. NO. 106



YNEZ ROAD
NOT TO SCALE



RANCHO VISTA ROAD
NOT TO SCALE
EXISTING IMPROVEMENTS



INDEX MAP
SCALE 1:60

SHEET INDEX

SHEET 1: TITLE SHEET
SHEET 2: PORTRAITS LANE: STA. 10+00.00 TO STA. 14+36.66
PORTRAITS LANE: STA. 10+00.00 TO STA. 11+94.42
SHEET 3: YNEZ ROAD: STA. 10+00.00 TO STA. 18+51.10
SHEET 4: STORM DRAIN PLAN & PROFILE
SHEET 5: STORM DRAIN DETAILS

CONSTRUCTION NOTES & QUANTITY ESTIMATE

NO.	ITEMS	QUANTITY	UNIT
1	CONST. 0.25' A.C. PAVEMENT 31,094 S.F.	576	TONS
2	CONST. 0.54' CRUSHED AGGREGATE BASE 31,094 S.F.	622	C.Y.
3	CONST. TYPE "A-6" CURB & GUTTER PER CITY STD. NO. 200	2,128	L.F.
4	CONST. CROSS-GUTTER PER CITY STD. NO. 210 & 211	756	S.F.
5	CONST. SIDEWALK PER CITY STD. NO. 400 & 401	10,902	S.F.
6	CONST. ACCESS RAMP PER CITY STD. 402	5	EA.
7	INSTALL STREET NAME SIGN PER CITY STD. NO. 403 -405	1	EA.
8	INSTALL RESIDENTIAL STREET LIGHTS PER CITY OF TEMECULA STD. NO. 801 LOW PRESSURE SODIUM-8000 LUMIN.	3	EA.
9	INSTALL ARTERIAL STREET LIGHT PER CITY OF TEMECULA STD. NO. 800 LOW PRESSURE SODUIM-(22,500 LUMIN) (X3)	2	EA.
10	SAWCUT LINE	852	L.F.
11	FEATHER TO MATCH A.C.	1,760	S.F.
12	RELOCATE TRAFFIC BOX	4	EA.
13	RELOCATE GTE MANHOLE/RISER	2	EA.
14	RELOCATE WATER METER	1	EA.
15	RELOCATE SIGN	2	EA.
16	REMOVE EXISTING TREE	1	EA.
17	REMOVE EXISTING CURB & GUTTER	846	L.F.
18	ADJUST TO FINISH GRADE	4	E.A.
19	NOT USED		
~~20~~	~~CONSTRUCT 24" RCP (CLASS-IV)~~	~~93~~	~~L.F.~~
21	CONSTRUCT 18" RCP (CLASS- IV)	431	L.F.
22	CONSTRUCT MANHOLE NO.1 PER R.C.F.C & W.C.D. STD. DWG. NO. MH 251	X 1	EA.
23	CONSTRUCT CATCH BASIN NO.1 PER R.C.F.C. & W.C.D. STD. DWG. NO. CB 100	1	EA.
24	CONSTRUCT LOCAL DEPRESSION NO.2 CASE "C" PER R.C.F.C. & W.C.D. STD. DWG. NO. LD 201	1	EA.
25	CONSTRUCT TYPE X INLET PER R.C.F.C. & W.C.D. STD. DWG. NO. CB 108	1	EA.
26	REMOVE EXISTING 24" CMP	176	L.F.
~~27~~	~~CONSTRUCT COLLAR FOR PIPE 12" THROUGH 66" PER RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STD. NO.M803~~	~~1~~	~~EA.~~
28	CONSTRUCT 8" PVC	102	L.F.
29	PREBUILT DRAIN BASIN ADS #2824 OR EQUIVALENT. 24" SQ GRATE.	1	EA.
~~30~~	~~JUNCTION STRUCTURE NO. 2 PER R.C.F.C. STD 227~~	~~1~~	~~EA.~~
31	CONSTRUCT MANHOLE NO. 1 PER R.C.F.C. & W.C.D. STD. DWG. NO MH 251 MODIFIED PER DETAIL SHEET 4	1	EA.

TOPOGRAPHIC SOURCE

DENNIS JANDA, INC.
TEMECULA, CALIFORNIA
TOPOGRAPHY FROM FIELD
SURVEY DATED: NOV. 2002

SOILS ENGINEER

LAWSON AND ASSOCIATES
GEOTECHNICAL CONSULTING, INC.
40935 COUNTY CENTER DR.
SUITE A TEMECULA, C.A. 92591

LEGAL DESCRIPTION

BEING A SUBDIVISION OF A PORTION OF LOT 252, TRACT MAP 3833, PER MAP RECORDED IN MAP BOOK 61, PAGES 42-52, OF TRACT MAPS, IN THE OFFICE OF THE COUNTY RECORDER, RIVERSIDE COUNTY, CALIFORNIA. ALSO BEING A PORTION OF THE RANCHO TEMECULA

PAVING NOTES

1. Minimum Parking Lot grade shall be one (1.0) percent.
2. Minimum grade for ribbon drains shall be 0.50 percent.
3. An approved soil sterilizer shall be used on all subgrade surfaces prior to placement of paving.
4. Asphaltic emulsion (fog seal) shall be applied not less than fourteen (14) days following placement of the asphalt surfacing and shall be applied at a rate of 0.05 gallons per square yard, asphalt emulsion shall conform to Sections 37, 39 and 94 of the State Standard Specifications.
5. The subdivider or contractor shall apply to the City of Temecula Department of Public Works for an encroachment permit for all work within city Right-of-Way.
6. Three inspections are required by the Department of Public Works, one inspection at subgrade completion, at base grade completion and during placement of asphalt.
7. The contractor shall be responsible for the clearing of the proposed work area, and relocation and cost of all existing utilities. The City shall be informed 48 hours prior to beginning of construction at (951) 694-6411.
8. A compaction report by a Soils Engineer shall certify 95 percent compaction of base prior to call for second inspection and a placement of asphalt paving.
9. Compaction test observation of subgrade or base rock grade shall be coordinated by the contractor with the Soils Engineer and the Project Inspector, all grade inspections will be in conjunction with or preceded by compaction testing.
10. Final pavement structural section design shall be submitted to the Director of Public Works for approval a minimum of ten days prior to placement of base material. The design shall adhere to the methodology set forth in Chapter 600 of the Caltrans Highway Design Manual and utilize the "R" value method. The "R" value tests shall be conducted in accordance with California Test no. 301 and shall be performed by a Registered Civil Engineer. The number and locations of these tests shall be subject to approval by the Director of Public Works.
11. Asphalt concrete shall conform to all provisions of section 203-6 of the current standard specifications of public works construction. Asphalt surface course shall be C2-AR-4000. Minimum thickness is 2 inches, maximum thickness is 3 inches. Asphalt concrete sections greater than 3 inches shall contain a base course of B-AR-4000, a minimum thickness of 2 inches.
12. Two special inspections are required from Department of Building and Safety prior to any paving in disabled parking areas or paths of travel and one inspection after all paving has been placed in disabled parking areas or paths of travel.

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CLEARING OF THE PROPOSED WORK AREA. AND RELOCATION COSTS OF ALL EXISTING UTILITIES. PERMITTEE MUST INFORM THE CITY OF CONSTRUCTION SCHEDULE AT LEAST 48 HOURS PRIOR TO BEGINNING OF CONSTRUCTION: PHONE (951) 694-6411.
2. THE DEVELOPER WILL INSTALL STREET NAME SIGNS CONFORMING TO CITY OF TEMECULA'S STANDARD NO. 403-405.
3. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CITY OF TEMECULA PUBLIC WORKS DEPARTMENT IMPROVEMENT STANDARDS AND THE LATEST EDITION OF STANDARD SPECIFICATION FOR PUBLIC WORKS CONSTRUCTION (GREEN BOOK).
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER. TO INSTALL STREET CENTERLINE MONUMENTS AS REQUIRED BY THE CITY OF TEMECULA STANDARDS.
5. IT SHALL BE THE RESPONSIBILITY OF THE DEVELOPER OR CONTRACTOR TO APPLY TO THE CITY OF TEMECULA ENGINEERING DEPARTMENT FOR AN ENCROACHMENT PERMIT FOR ALL WORK ON EXISTING CITY MAINTAINED ROADS AND FOR UTILITY WORK WITHIN OFFERS OF DEDICATION FOR PUBLIC USE.
6. ALL UNDERGROUND FACILITIES WITH LATERALS SHALL BE IN PLACE PRIOR TO PAVING THE STREET SECTION INCLUDING, BUT NOT LIMITED TO THE FOLLOWING: SEWER, WATER, ELECTRIC, GAS, DRAINAGE.
7. CURB DEPRESSIONS AND DRIVEWAY APPROACHES WILL BE INSTALLED AND CONSTRUCTED ACCORDING TO CITY STANDARD NO. 207 AS DIRECTED IN THE FIELD.
8. AN APPROVED SOILS STERILIZE SHALL BE USED ON ALL SUBGRADE SURFACES PRIOR TO PLACEMENT OF A.C. PAVING.
9. ALL STREET SECTIONS ARE TENTATIVE. ADDITIONAL SOIL TESTS SHALL BE TAKEN AFTER ROUGH GRADING TO DETERMINE THE EXACT STREET SECTION REQUIREMENTS. USE STANDARD NO. 401 IF EXPANSIVE SOILS ARE ENCOUNTERED.
10. ASPHALTIC EMULSION (FOG SEAL) SHALL BE APPLIED NOT LESS THAN FOURTEEN (14) DAYS FOLLOWING PLACEMENT OF THE ASPHALT SURFACING AND SHALL BE APPLIED AT A RATE OF 0.05 GALLONS PER SQ. YARD. ASPHALTIC EMULSION SHALL CONFORM TO SECTIONS 37, 39, AND 94 OF THE STATE STANDARD SPECIFICATION.
11. INSTALL STREET TREES IN ACCORDANCE WITH ORDINANCE NO. 460.53.
12. STREET LIGHTS SHALL BE INSTALLED IN ACCORDANCE WITH THE APPROVED STREET LIGHTING PLAN.
13. AS DETERMINED BY THE CITY ENGINEER, THE DEVELOPER IS RESPONSIBLE AS A MINIMUM FOR ROAD IMPROVEMENT TO CENTERLINE AND MAY BE REQUIRED TO RECONSTRUCT EXISTING PAVEMENT. INCLUDING BASE, AND MATCHING OVERLAY TO MEET THE STRUCTURAL STANDARDS FOR THE CURRENT ASSIGNED TRAFFIC INDEX.
14. ONLY LANDSCAPING CONSISTING OF GRASS AND PARKWAY TREES MAY BE INSTALLED WITHIN PARKWAYS ON LOCAL RESIDENTIAL STREETS WITHOUT SEPARATE LANDSCAPE PLANS. ALL OTHER TYPES OF LANDSCAPING IN THESE AREA'S, AND ALL LANDSCAPING ON ALL OTHER STREETS SHALL REQUIRE SEPARATE LANDSCAPE PLANS. ALL LANDSCAPING ENCROACHMENTS SHALL CONFORM TO RIVERSIDE COUNTY "STANDARDS RELATING TO THE ADMINISTRATION OF LANDSCAPE ENCROACHMENTS" DATED JANUARY 1989.
15. PURSUANT TO THE CITY OF TEMECULA ORDINANCE NO. 90-12, THE DEVELOPER SHALL INSTALL ALL REQUIRED CABLE TV FACILITIES.
16. APPROVAL OF THIS PLANS BY THE CITY OR ITS AGENTS DOES NOT RELIEVE THE APPLICANT AND HIS ENGINEER FROM THE RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION. UPON REQUEST, THE APPROPRIATE PLAN REVISIONS SHALL BE PROMPTLY SUBMITTED TO THE CITY ENGINEER FOR REVIEW AND APPROVAL.

ENGINEERING NOTES

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER. THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A DILIGENT SEARCH OF ALL AVAILABLE RECORDS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN AND ANY OTHER LINES OR STRUCTURES SHOWN OR NOT SHOWN ON THESE PLANS. AND IS RESPONSIBLE FOR THE PROTECTION OF, AND ANY DAMAGE TO THESE LINES OR STRUCTURES.

STREET TREE NOTES

1. EACH LOT SHALL HAVE A MINIMUM OF ONE STREET TREE PLANTED ALONG ITS FRONTAGE.
2. ALL STREET TREES SHALL BE LOCATED WITHIN THE STREET RIGHT OF WAY, A MINIMUM OF 1' FROM THE PROPERTY LINE AND THE MINIMUM OF 4' FROM THE BACK OF SIDEWALK.
3. NO TREE SHALL BE PLANTED WITHIN 10' OF ANY DRIVEWAY APPROACH OR CORNER CUTBACK.
4. ALL TREES SHALL BE MINIMUM DOUBLE STAKED. WEAKER AND/OR SLOW GROWING TREES SHALL BE STEEL STAKE.
5. TYPE OF TREE SPECIMEN PER APPROVED LANDSCAPE / IRRIGATION PLAN.

LEGEND

- STREET TREES
- STREET LIGHTS (RESIDENTIAL)
- STREET LIGHTS (ARTERIAL)

TC TOP OF CURB
FL FLOWLINE
R/W RIGHT OF WAY
GB GRADE BREAK

OWNER/DEVELOPER

GALLERY PORTRAITS PARTNERS, INC.
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CANYON LAKE 92587
PH 951-244-7713

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FAX - 951.784.0287

REGISTERED PROFESSIONAL ENGINEER DAVID GLENN CURRINGTON No. C58883 Exp. 8/30/07 CIVIL STATE OF CALIFORNIA

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	ACC'D
Contractor			⚠1 ARTERIAL STREET LIGHT CHANGED FROM 8000 LUMEN TO 22,500 LUMEN	8/16/06	SLa
Inspector	6/12/06	DC PR	⚠2 REVISE STORM DRAIN @ RANCHO VISTA ROAD TO MATCH FIELD CONDITIONS - RAISED 18" RCP 1.5' @ 12+62.08 TO AVOID CONFLICT WITH SEWER CHIMNEYS	8/16/06	SLa
Date completed			⚠3 RELOCATE EXIST. STREET LIGHT	11/13/06	AM
			⚠4 REMOVE EXIST. STREET LIGHT	12/1/06	SLa
			⚠5 REVISED QUANTITY FOR ARTERIAL STREET LIGHT	2/28/07	SLa

BENCH MARK: ELEV.: 1131.02 FROM THE INT. OF FRONT STREET AND RANCHO CALIF. ROAD, 0.6 MILES W. ON RANCHO CALIF. RD.; 44' S. OF THE C/L OF RANCHO CALIF. RD., SW. OF 1" I.P., FLUSH W/ R.C.E. 21914 TAG (PM 6835 NE. COR. OF PARCEL 150). SET FIBERGLASS POST 1' S. OF MONUMENT

SCALE: Horizontal AS SHOWN Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER DAVID G. CURRINGTON RCE No. 58883 Exp. 08-30-07 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
IBS	OS	D.G.C.

Plans Prepared Under Supervision Of
DAVID G. CURRINGTON Date: 11/10/05
R.C.E. No. C58883 Expires 06/30/07

RECOMMENDED BY: S.R. Alleyne DATE: 11/17/05
ACCEPTED BY: Ronald J. Parks DATE: 11/17/05
RONALD J. PARKS
DEPUTY DIRECTOR OF PUBLIC WORKS
R.C.E. No. 19744 Expires 09-30-07

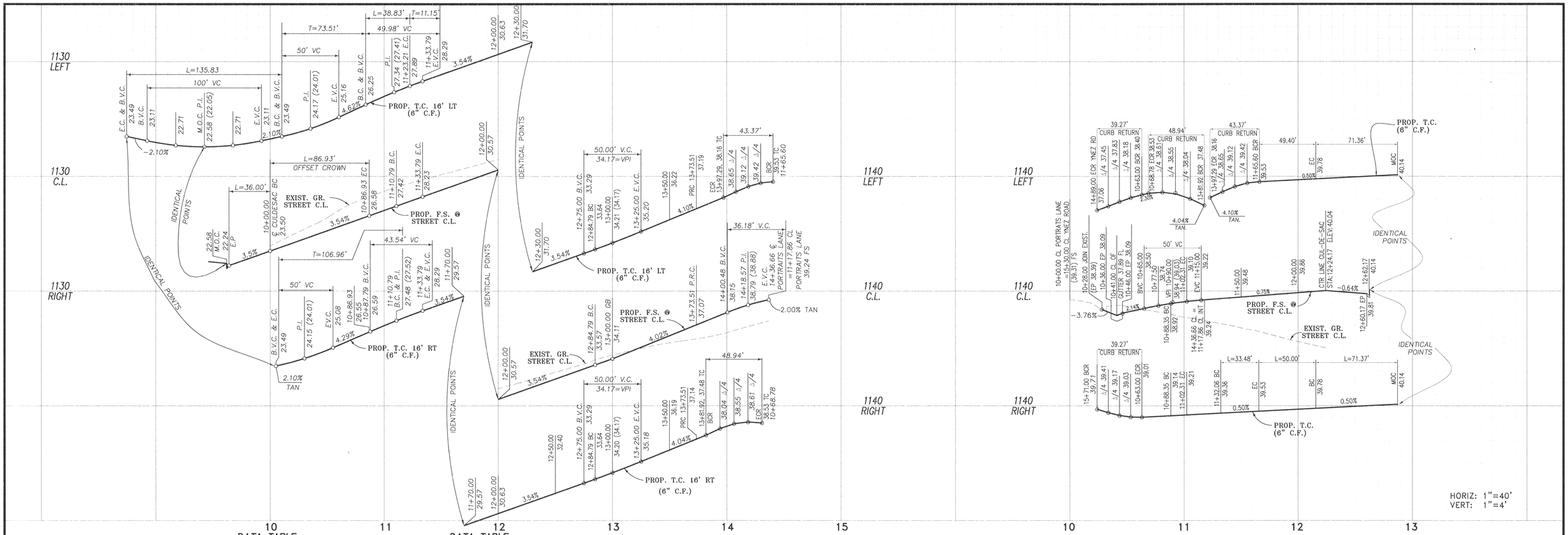
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

TRACT NO. 31344
STREET AND STORM DRAIN IMPROVEMENT PLANS

Drawing No.

Sheet 1 of 5

⚠2 LD06-122CO
LD04-197CO



DATA TABLE

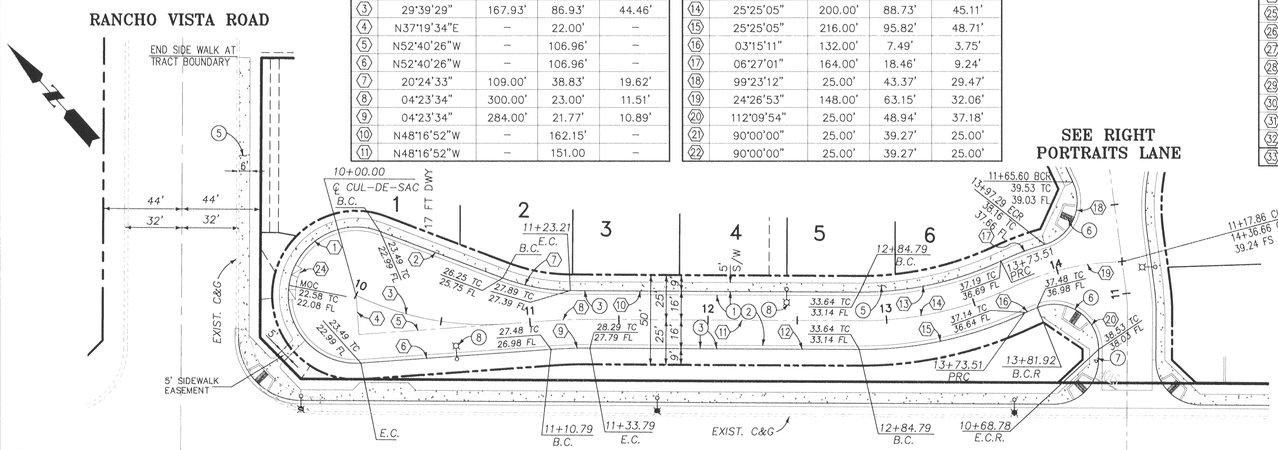
NO	DELTA/BRG	RADIUS	LENGTH	TANGENT
①	204°48'07"	38.00'	135.83'	172.82'
②	N27°52'19"W	–	73.51'	–
③	29°39'29"	167.93'	86.93'	44.46'
④	N37°19'34"E	–	22.00'	–
⑤	N52°40'26"W	–	106.96'	–
⑥	N52°40'26"W	–	106.96'	–
⑦	20°24'33"	109.00'	38.83'	19.62'
⑧	04°23'34"	300.00'	23.00'	11.51'
⑨	04°23'34"	284.00'	21.77'	10.89'
⑩	N48°16'52"W	–	162.15'	–
⑪	N48°16'52"W	–	151.00	–

DATA TABLE

NO	DELTA/BRG	RADIUS	LENGTH	TANGENT
⑫	N48°16'52"W	–	151.00'	–
⑬	25°25'05"	184.00'	81.63'	41.50'
⑭	25°25'05"	200.00'	88.73'	45.11'
⑮	25°25'05"	216.00'	95.82'	48.71'
⑯	03°15'11"	132.00'	7.49'	3.75'
⑰	06°27'01"	164.00'	18.46'	9.24'
⑱	99°23'12"	25.00'	43.37'	29.47'
⑲	24°26'53"	148.00'	63.15'	32.06'
⑳	112°09'54"	25.00'	48.94'	37.18'
㉑	90°00'00"	25.00'	39.27'	25.00'
㉒	90°00'00"	25.00'	39.27'	25.00'

DATA TABLE

NO	DELTA/BRG	RADIUS	LENGTH	TANGENT
㉓	N41°43'08"E	–	5.78'	–
㉔	N41°43.08E	–	88.35'	–
㉕	N41°43'08"E	–	25.35'	–
㉖	08°00'00"	100.00'	13.96'	6.99'
㉗	8°00'00"	116.00'	16.20'	8.11'
㉘	N33°43'08"E	–	121.86'	–
㉙	17°36'02"	109.00'	33.48'	16.87'
㉚	N51°19'09"E	–	50.00'	–
㉛	N16°07'07"E	–	49.40'	–
㉜	215°12'02"	38.00'	142.73'	119.79'
㉝	N33°43'08"E	–	29.75'	–



PORTRAITS LANE

CONSTRUCTION NOTES:

1. CONST. 0.25' A.C. PAVEMENT
2. CONST. 0.54' CRUSHED AGGREGATE BASE
3. CONST. TYPE "A-6" CURB & GUTTER PER CITY STD. NO. 200
4. CONST. CROSS-GUTTER PER CITY STD. NO. 210 & 211
5. CONST. SIDEWALK PER CITY STD. NO. 400 & 401
6. CONST. ACCESS RAMP PER CITY STD. 402
7. INSTALL STREET NAME SIGN WITH STOP SIGN PER CITY OF TEMECULA STD. NOS. 403, 404 & 405
8. INSTALL RESIDENTIAL STREET LIGHTS PER CITY OF TEMECULA STD. NO. 801 LOW PRESSURE SODIUM-8000 LUMIN.
24. CONSTRUCT LOCAL DEPRESSION NO.2 CASE "C" PER R.C.F.C. & W.C.D. STD. DWG. NO. LD 201

NOTE: (XX.XX) IN PROFILE EQUALS PVI ELEVATION

GRAPHIC SCALE
40 0 20 40 80 120
(IN FEET)
1 inch = 40 ft.

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FAX – 951.784.0287

REGISTERED PROFESSIONAL ENGINEER DAVID GLENN CURRINGTON No. C58883 Exp. 6/30/07 CIVIL STATE OF CALIFORNIA

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	ACC'D	BENCH MARK	SCALE	SEAL
Contractor						SEE SHEET 1	Horizontal AS SHOWN Vertical	REGISTERED PROFESSIONAL ENGINEER DAVID G. CURRINGTON RCE No. 58883 Exp. 06-30-07 CIVIL STATE OF CALIFORNIA
Inspector								
Date completed								

Designed By	Drawn By	Checked By
IBS	OS	D.G.C.

Plans Prepared Under Supervision Of
DAVID G. CURRINGTON Date: 11/10/05
R.C.E. No. C58883 Expires 06/30/07

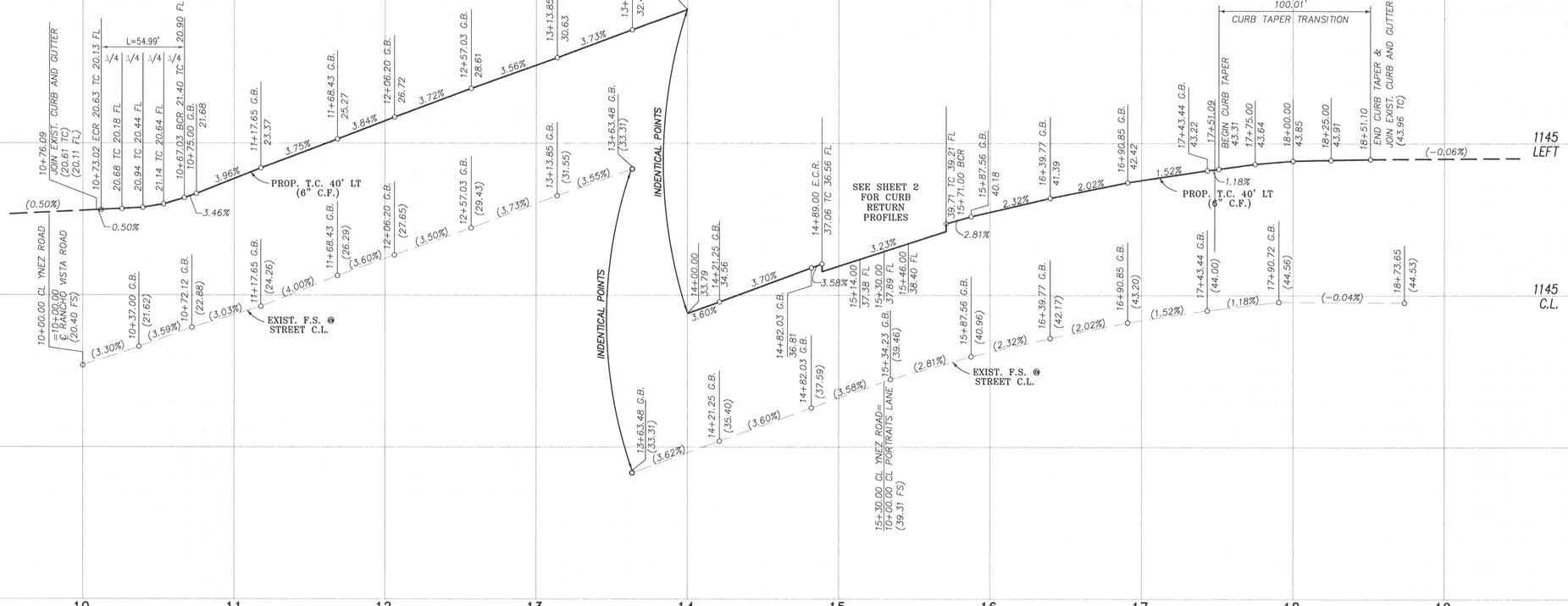
RECOMMENDED BY: S.K. Allegria DATE: 11/17/05
ACCEPTED BY: Ronald J. Parks DATE: 11/17/05
RONALD J. PARKS
DEPUTY DIRECTOR OF PUBLIC WORKS
R.C.E. No. 19744 Expires 09-30-07

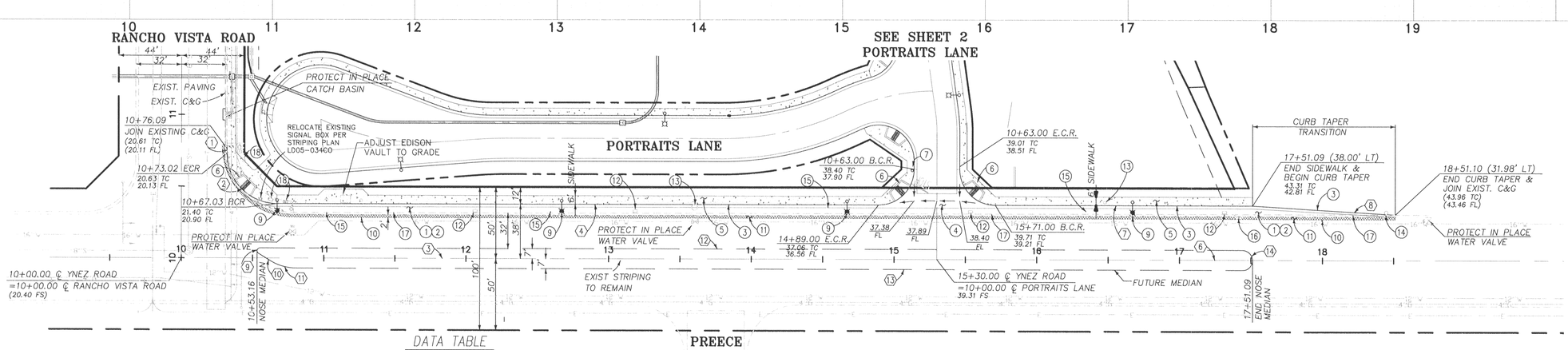
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

TRACT NO. 31344

STREET IMPROVEMENT PLANS
PORTRAITS LANE: STA. 10+00.00 TO STA. 14+36.66
PORTRAITS LANE: STA. 10+00.00 TO STA. 12+24.17

Drawing No.
Sheet 2 of 5





NOTE:
NO CHANGES TO BE MADE TO LANE STRIPING AT THIS TIME. FUTURE MEDIAN LOCATION IS SHOWN FOR REFERENCE ONLY.

DATA TABLE

NO	DELTA/BRG	RADIUS	LENGTH	TANGENT
1	N41°44'35"E	–	3.06'	–
2	90°01'26"	35.00'	54.99'	35.01'
3	N48°16'52W	–	530.00'	–
4	N48°16'52"W	–	421.97'	–
5	90°00'00"	25.00'	39.27'	25.00'
6	N48°16'52"W	–	487.56'	–
7	N48°16'52"W	–	180.09'	–
8	N44°50'19"W	–	100.19'	–
9	148°13'44"	2.00'	5.17'	7.03'
10	N16°30'36"W	–	9.60'	–
11	31°46'16"	35.00'	19.41'	9.96'
12	N48°16'52"W	–	688.94'	–
13	N48°16'52"W	–	663.41'	–
14	180°00'00"	7.00'	21.99'	∞

CONSTRUCTION NOTES:

1. CONST. 0.25' A.C. PAVEMENT
2. CONST. 0.54' CRUSHED AGGREGATE BASE
3. CONST. 6" CURB & GUTTER TYPE A-6 PER CITY OF TEMECULA STD. NO. 200
4. CONST. CROSS GUTTER PER CITY OF TEMECULA STD. NO. 210 & 211
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14. RELOCATE WATER METER
15. RELOCATE SIGN
16. REMOVE EXISTING TREE
17. REMOVE EXISTING CURB & GUTTER
18. ADJUST TO FINISH GRADE

LEGEND:

FEATHER TO MATCH 0.1' AC OVERLAY

GRAPHIC SCALE

40 0 20 40 80 120

(IN FEET)
1 inch = 40 ft.

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REGISTERED PROFESSIONAL ENGINEER DAVID GLENN CURRINGTON No. C58883 Exp. 6/30/07 CIVIL STATE OF CALIFORNIA

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	ACC'D
Contractor			1 ARTERIAL STREET LIGHT CHANGED FROM 8000 LUMIN TO 22,500 LUMIN.	3/6/06	
Inspector					
Date completed					

BENCH MARK: SEE SHEET 1

SCALE: Horizontal AS SHOWN Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER DAVID G. CURRINGTON RCE No. 58883 Exp. 06-30-07 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
IBS	OS	D.G.C.

Plans Prepared Under Supervision Of
DAVID G. CURRINGTON Date: 11/10/05
R.C.E. No. C58883 Expires 06/30/07

RECOMMENDED BY: S Kalegnia DATE: 11/17/05
ACCEPTED BY: Ronald J. Parks DATE: 11/17/05
RONALD J. PARKS
DEPUTY DIRECTOR OF PUBLIC WORKS
R.C.E. No. 19744 Expires 09-30-07

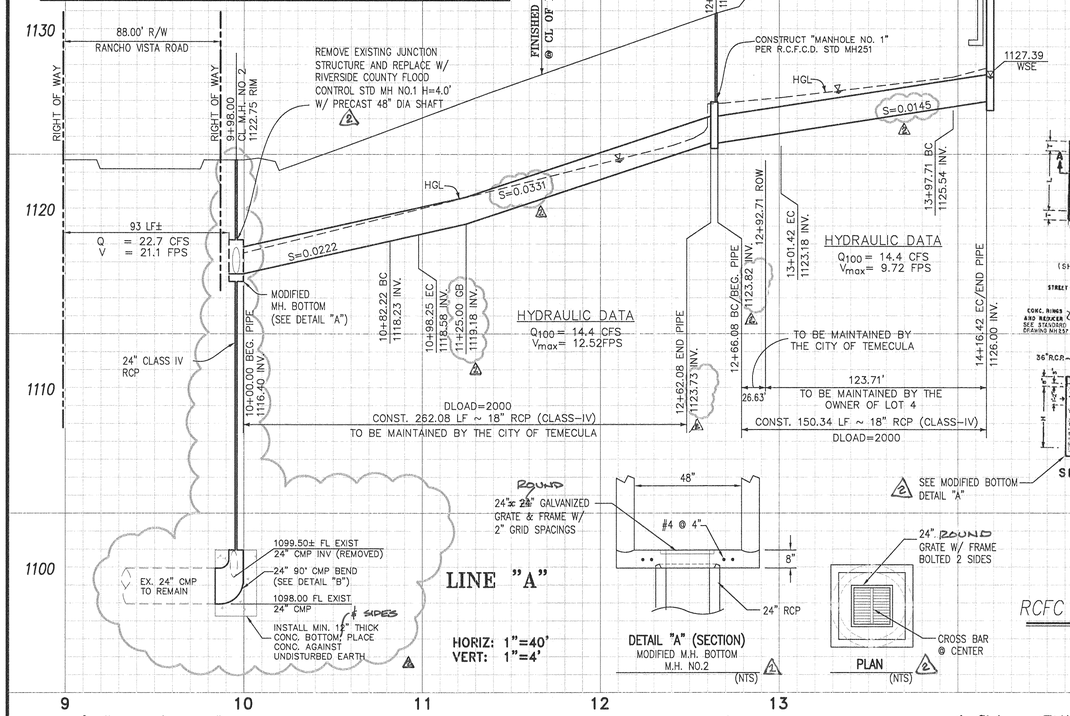
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

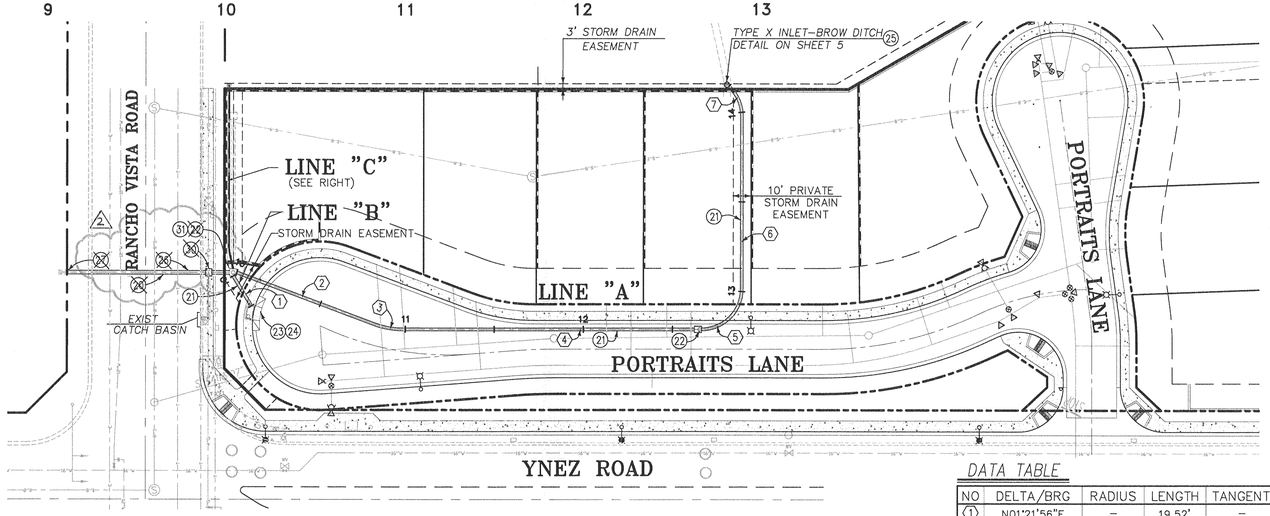
TRACT NO. 31344
STREET IMPROVEMENT PLANS
YNEZ ROAD: STA. 10+00.00 TO STA. 18+51.10

Drawing No.

Sheet 3 of 5

CONTRACTOR SHALL "POTHOLE" AND VERIFY ALL EXISTING STORM DRAIN CONNECTION POINTS PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY DISCREPANCIES BEFORE BEGINNING CONSTRUCTION.





MANHOLE NOTES:

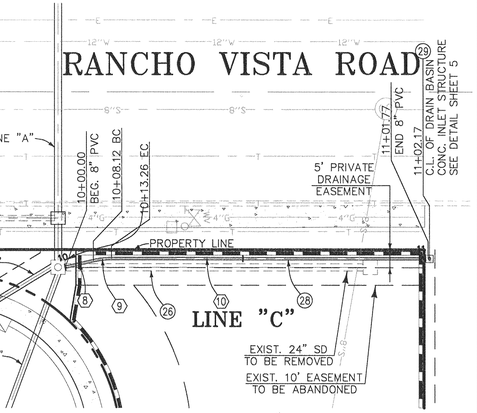
1. HEIGHT H SHALL BE NOT LESS THAN 4'-0" BUT MAY BE INCREASED AT OPTION OF CONTRACTOR PROVIDED THAT THE VALUE OF M SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED AND THAT THE REDUCER SHALL BE USED. FOR H (IN SEC. C-C) SEE NOTE 4.
2. LENGTH L SHALL BE 4' UNLESS OTHERWISE SHOWN ON IMPROVEMENT PLAN. L MAY BE INCREASED OR LOCATION OF MANHOLE SHIFTED TO MEET PIPE ENDS, AT THE OPTION OF CONTRACTOR, EXCEPT THAT ANY CHANGE IN LOCATION OF MANHOLE MUST BE APPROVED BY THE ENGINEER.
3. SHAFT SHALL BE CONSTRUCTED AS PER SEC. C-C AND DETAIL N WHEN DEPTH M FROM STREET GRADE TO TOP OF BOX IS LESS THAN 2'-10½" FOR PAVED STREETS OR 3'-6" FOR UNPAVED STREET.
4. DEPTH P MAY BE REDUCED TO AN ABSOLUTE LIMIT OF 6 INCHES WHEN LARGER VALUES OF P WOULD REDUCE H (IN SEC. C-C) TO BE 3'-6" OR LESS.
5. T SHALL BE 8" FOR VALUES OF H UP TO AND INCLUDING 8 FT.
   T SHALL BE 10" FOR VALUES OF H OVER 8 FT.
6. STEPS SHALL BE ¾" ROUND, GALVANIZED STEEL AND ANCHORED NOT LESS THAN 4 INCHES IN THE WALLS OF STRUCTURES. UNLESS OTHERWISE SHOWN, STEPS SHALL BE SPACED 16" ON CENTER. THE LOWEST STEP SHALL BE NOT MORE THAN 2 FEET ABOVE THE INVERT.
7. REINFORCING STEEL SHALL BE NO. 4 AND 1½" CLEAR FROM INSIDE FACE OF CONCRETE.
8. STATIONS REFER TO PLAN & PROFILE SHEETS. ELEVATIONS AT CL AND PROLONGED INVERT GRADE LINE. SEE NOTE 2 FOR SHIFTING LOCATION.
9. RINGS, REDUCER, AND PIPE FOR ACCESS SHAFT SHALL BE SEATED IN CEMENT MORTAR AND NEATLY POINTED OR WIPED INSIDE SHAFT.
10. FLOOR OF MANHOLE SHALL BE STEEL-TROWELED.
11. CONCRETE SHALL BE CLASS "A".

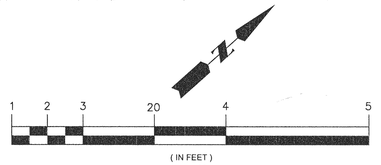
CONSTRUCTION NOTES:

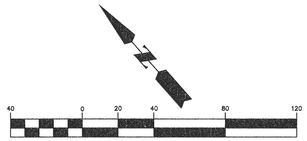
DELETE 2 (20) ~~CONSTRUCT 24" RCP (CLASS- IV)~~
(21) CONSTRUCT 18" RCP (CLASS- IV)
(22) CONSTRUCT MANHOLE NO.1 PER R.C.F.C & W.C.D. STD. DWG. NO. MH 251
(23) CONSTRUCT CATCH BASIN NO.1 PER R.C.F.C. & W.C.D. STD. DWG. NO. CB 100
(24) CONSTRUCT LOCAL DEPRESSION NO.2 CASE "C" PER R.C.F.C. & W.C.D. STD. DWG. NO. LD 201
(25) CONSTRUCT TYPE X INLET PER R.C.F.C. & W.C.D. STD. DWG. NO. CB 108
(26) REMOVE EXISTING 24" CMP
DELETE 2 (27) ~~CONSTRUCT COLLAR FOR PIPE 12" THROUGH 66" PER RIVERSIDE COUNTY FLOOD CONTROL DISTRICT STD. NO.M803~~
(28) CONSTRUCT 8" PVC (102 LF)
(29) PREBUILT DRAIN BASIN ADS #2824 OR EQUIVALENT. 24" SQ GRATE. (1 EA.)
DELETE 2 (30) ~~JUNCTION STRUCTURE NO. 2 PER R.C.F.C. STD 227~~
(31) CONSTRUCT MANHOLE #1 PER RIVERSIDE COUNTY FLOOD CONTROL STD M.H. 251 W/ PRECAST 48" DIA SHAFT

DATA TABLE

NO	DELTA/BRG	RADIUS	LENGTH	TANGENT
1	N01°21'56"E	–	19.52'	–
2	N27°50'52"W	–	82.22'	–
3	20°24'33"	45.00'	16.03'	8.10'
4	N48°15'25"W	–	167.83'	–
5	90°00'00"	22.50'	35.34'	22.50'
6	N41°44'35"W	–	96.29'	–
7	47°38'14"	22.50'	18.71'	9.93'
8	S28°40'00"W	–	8.12'	–
9	13°06'02"	22.50'	5.14'	2.58'
10	N41°44'35"W	–	96.29'	–







2 LD06-122CO
LD04-197CO

Underground Service Alert
Call: TOLL FREE 1-800 227-2600
TWO WORKING DAYS BEFORE YOU DIG

ENGINEERING SOLUTIONS
ENGINEERING-LAND PLANNING-SURVEYING-MAPPING
2155 CHICAGO AVE. SUITE 201
RIVERSIDE, CA. 92507
PHONE - 951.784.0286
FAX - 951.784.0287

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	ACC'D
Contractor	8/12/06	DC	2 REVISE STORM DRAIN @ RANCHO VISTA ROAD TO MATCH FIELD CONDITIONS - RAISED 18" RCP 1.5' @ 12+62.08 TO AVOID CONFLICT WITH SEWER CHIMNEYS	8/14/06	SG
Inspector					
Date completed					

BENCH MARK: SEE SHEET 1

SCALE: Horizontal AS SHOWN Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER — DAVID G. CURRINGTON — RCE No. 58883 — Exp. 06-30-07 — CIVIL — STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
IBS	OS	D.G.C.

Plans Prepared Under Supervision Of
DAVID G. CURRINGTON Date: 8/11/06
R.C.E. No. C58883 Expires 06/30/07

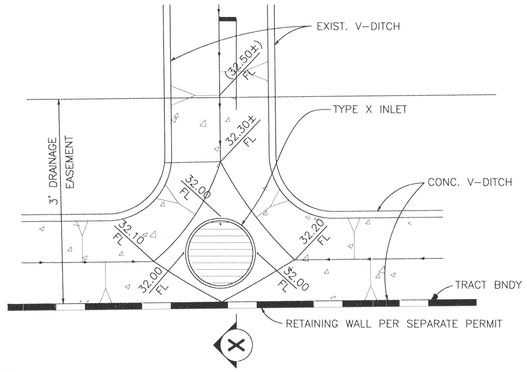
RECOMMENDED BY: S.R. Callegria DATE: 8/14/06
ACCEPTED BY: Ronald J. Parks DATE: 8/14/06
RONALD J. PARKS
DEPUTY DIRECTOR OF PUBLIC WORKS
R.C.E. No. 19744 Expires 09-30-07

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

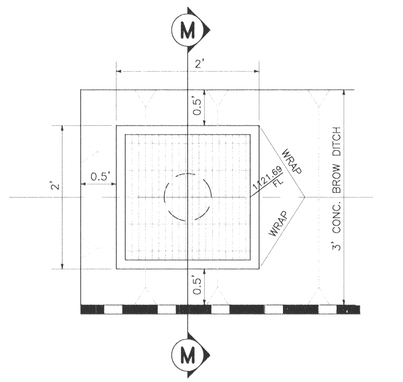
TRACT NO. 31344
STORM DRAIN IMPROVEMENT PLANS
LINE "A"
LINE "B"

Drawing No.
Sheet 4 of 5

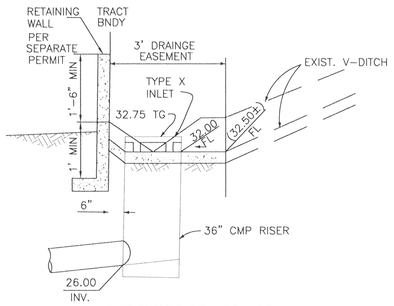
B:\CAD\Gallery Portraits - GPOR\Plans\Sheet\GPOR ST04.dwg, 8/11/2006 3:39:05 PM, Terry Fritz



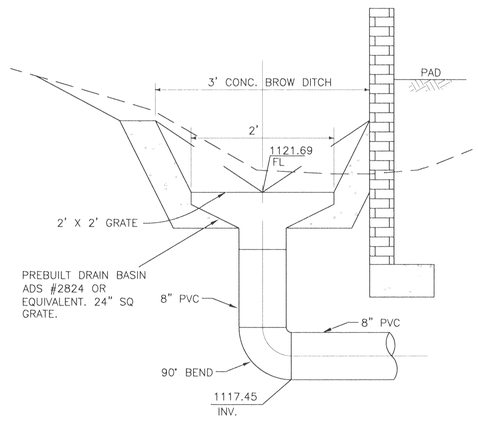
25 *TYPE X INLET–BROW DITCH DETAIL*
NOT TO SCALE



29 *CONC. INLET STRUCTURE DETAIL*
NOT TO SCALE



SECTION X–X
NOT TO SCALE



SECTION M–M
NOT TO SCALE

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2155 CHICAGO AVE. SUITE 201
RIVERSIDE, CA. 92507
PHONE – 951.784.0286
FAX – 951.784.0287

REGISTERED PROFESSIONAL ENGINEER
DAVID GLENN CURRINGTON
No. C58883 Exp. 6/30/07
CIVIL
STATE OF CALIFORNIA

LD04-197CO

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	ACC'D
Contractor					
Inspector					
Date completed					

BENCH MARK
ELEV.: 1131.02 FROM THE INT. OF FRONT STREET AND RANCHO CALIF. ROAD, 0.6 MILES W. ON RANCHO CALIF. RD.; 44' S. OF THE C/L OF RANCHO CALIF. RD., SW. OF 1" I.P., FLUSH W/ R.C.E. 21914 TAG (PM 6835 NE. COR. OF PARCEL 150). SET FIBERGLASS POST 1' S. OF MONUMENT

SCALE
Horizontal
AS SHOWN
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER — DAVID G. CURRINGTON — RCE No. 58883 — Exp. 06-30-07 — CIVIL — STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
IBS	OS	D.G.C.

Plans Prepared Under Supervision Of
DAVID G. CURRINGTON Date: 11/10/05
R.C.E. No. C58883 Expires 06/30/07

RECOMMENDED BY: S.K. Allegria DATE: 11/17/05
ACCEPTED BY: Ronald J. Parks DATE: 11/17/05
RONALD J. PARKS
DEPUTY DIRECTOR OF PUBLIC WORKS
R.C.E. No. 19744 Expires 09-30-07

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

TRACT NO. 31344
STORM DRAIN DETAILS

Drawing No.

Sheet 5 of 5

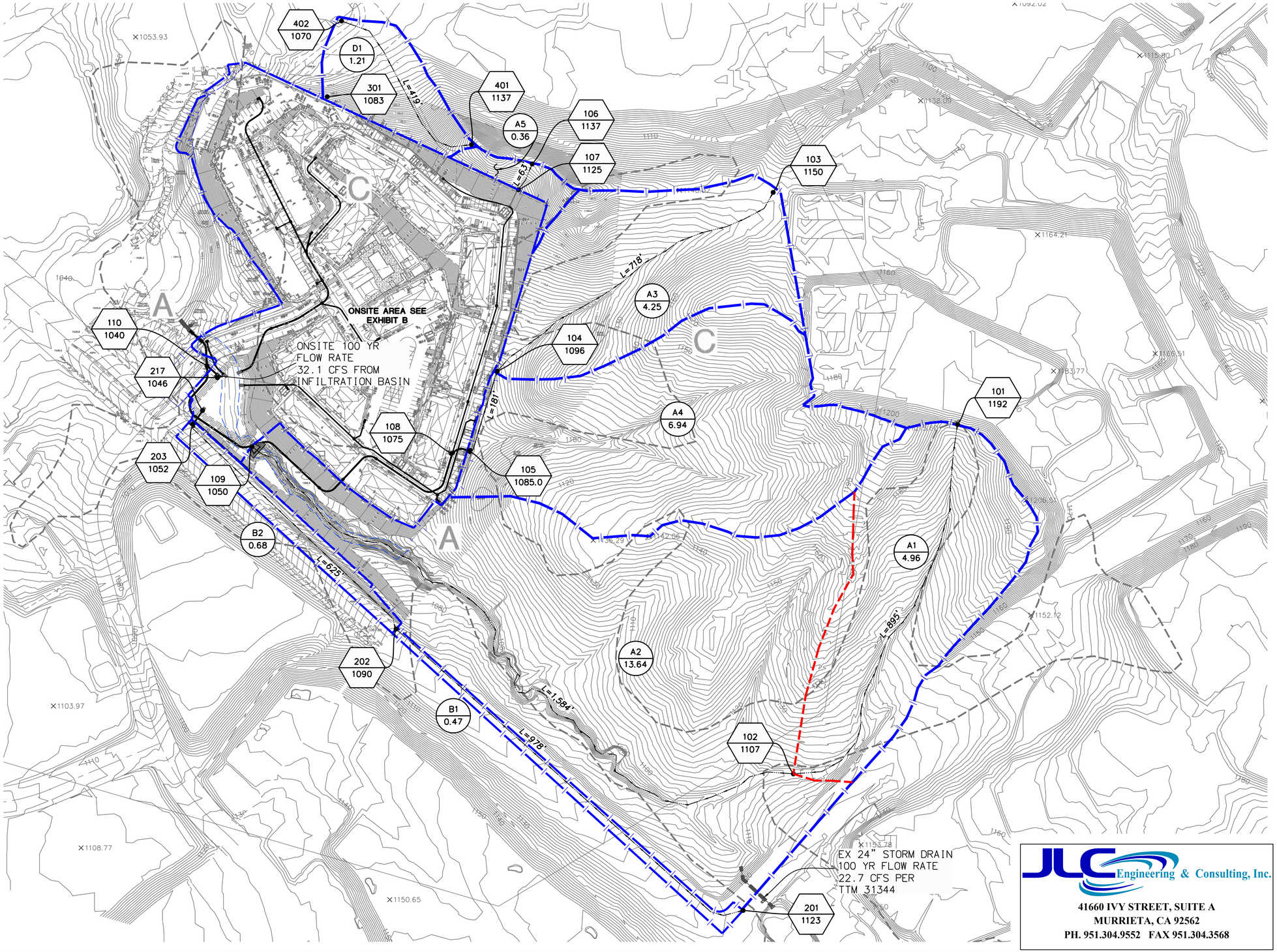
EXCERPT B: RANCHO HIGHLANDS APPROVED HYDROLOGY MAP

SHEET 1 OF 1

RANCHO HIGHLANDS

IN THE CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

POST-PROJECT CONDITION OFFSITE HYDROLOGY MAP



LEGEND:

X.X / X.X	NODE/CONCENTRATION POINT / FLOWLINE ELEVATION
XXXX.X	APPROXIMATE INVERT ELEVATION
XXX / X.X	SUB AREA / ACRES
L=XXX'	FLOW DISTANCE
	FLOW PATH
	WATERSHED SUB-BOUNDARY
	WATERSHED BOUNDARY

N

GRAPHIC SCALE
100' 0 50' 100' 200'
1" = 100'

EXHIBIT "C"

RANCHO HIGHLANDS

POST-PROJECT CONDITION OFFSITE HYDROLOGY MAP

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A
MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Drawing Name: G:\27\01 Engineering\Hydrology_Plan\Exhibits\Exhibit C-Post-Project Condition Hydrology_OFFSITE.dwg
Last Opened: Sep 16, 2021 - 1:30pm by jcarver

EXCERPT C: RANCHO HIGHLANDS APPROVED HYDROLOGY MODEL

Riverside County Rational Hydrology Program

CIVILCADD/CIVILDESIGN Engineering Software,(c) 1989 - 2014 Version 9.0
Rational Hydrology Study Date: 09/01/21 File:ARAOFF100.out

RANCHO HIGHLANDS PROJECT
100 YEAR STORM EVENT OFFSITE HYDROLOGY
ARAOFF100.OUT

********* Hydrology Study Control Information **********

English (in-lb) Units used in input data file

Program License Serial Number 6279

Rational Method Hydrology Program based on
Riverside County Flood Control & Water Conservation District
1978 hydrology manual

Storm event (year) = 100.00 Antecedent Moisture Condition = 2

2 year, 1 hour precipitation = 0.530(In.)
100 year, 1 hour precipitation = 1.200(In.)

Storm event year = 100.0
Calculated rainfall intensity data:
1 hour intensity = 1.200(In/Hr)
Slope of intensity duration curve = 0.5500

++

Process from Point/Station 101.000 to Point/Station 102.000
**** INITIAL AREA EVALUATION ****

Initial area flow distance = 895.000(Ft.)
Top (of initial area) elevation = 1192.000(Ft.)
Bottom (of initial area) elevation = 1107.000(Ft.)
Difference in elevation = 85.000(Ft.)
Slope = 0.09497 s(percent)= 9.50
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration = 12.867 min.
Rainfall intensity = 2.799(In/Hr) for a 100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.778
Decimal fraction soil group A = 0.570
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.430
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2) = 75.17
Pervious area fraction = 1.000; Impervious fraction = 0.000
Initial subarea runoff = 10.794(CFS)
Total initial stream area = 4.960(Ac.)
Pervious area fraction = 1.000

++

Process from Point/Station 102.000 to Point/Station 109.000
**** IRREGULAR CHANNEL FLOW TRAVEL TIME ****

Estimated mean flow rate at midpoint of channel = 23.446(CFS)
Depth of flow = 1.943(Ft.), Average velocity = 6.212(Ft/s)
******* Irregular Channel Data **********

```
------------------------------------------------------------------
Information entered for subchannel number 1 :
Point number      'X' coordinate     'Y' coordinate
       1              0.00              4.00
       2              3.00              3.00
       3              7.00              0.00
       4              9.00              3.00
       5             11.00              4.00
Manning's 'N' friction factor =   0.035
------------------------------------------------------------------
Sub-Channel flow  =     23.446(CFS)
  '     '       flow top width =      3.886(Ft.)
  '     '    velocity=    6.212(Ft/s)
  '     '       area =      3.775(Sq.Ft)
  '     '       Froude number =     1.111

Upstream point elevation =  1107.000(Ft.)
Downstream point elevation =  1050.000(Ft.)
Flow length =  1584.000(Ft.)
Travel time  =    4.25 min.
Time of concentration =   17.12 min.
Depth of flow =   1.943(Ft.)
Average velocity =   6.212(Ft/s)
Total irregular channel flow =    23.446(CFS)
Irregular channel normal depth above invert elev. =   1.943(Ft.)
Average velocity of channel(s) =   6.212(Ft/s)
 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.773
Decimal fraction soil group A = 0.460
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.540
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  77.26
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.392(In/Hr) for a   100.0 year storm
Subarea runoff =     25.226(CFS) for     13.640(Ac.)
Total runoff =     36.021(CFS)        Total area =      18.600(Ac.)
Depth of flow =   2.282(Ft.), Average velocity =   6.915(Ft/s)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      102.000 to Point/Station      109.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     18.600(Ac.)
Runoff from this stream =     36.021(CFS)
Time of concentration =   17.12 min.
Rainfall intensity =     2.392(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      103.000 to Point/Station      104.000
**** INITIAL AREA EVALUATION ****
________________________________________________________________________
Initial area flow distance =   718.000(Ft.)
Top (of initial area) elevation =  1150.000(Ft.)
Bottom (of initial area) elevation =  1096.000(Ft.)
Difference in elevation =    54.000(Ft.)
Slope =    0.07521  s(percent)=       7.52
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Initial area time of concentration =   12.344 min.
Rainfall intensity =      2.863(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.807
Decimal fraction soil group A = 0.310
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.690
```

```
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  80.11
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      9.817(CFS)
Total initial stream area =        4.250(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      104.000 to Point/Station      105.000
**** IMPROVED CHANNEL TRAVEL TIME ****
________________________________________________________________________
Upstream point elevation =  1096.000(Ft.)
Downstream point elevation =  1085.000(Ft.)
Channel length thru subarea  =   181.000(Ft.)
Channel base width     =    2.000(Ft.)
Slope or 'Z' of left channel bank =   2.000
Slope or 'Z' of right channel bank =   2.000
Estimated mean flow rate at midpoint of channel =     17.832(CFS)
Manning's 'N'    = 0.015
Maximum depth of channel  =    2.000(Ft.)
Flow(q) thru subarea =     17.832(CFS)
Depth of flow =   0.493(Ft.), Average velocity =  12.126(Ft/s)
Channel flow top width =    3.970(Ft.)
Flow Velocity =   12.13(Ft/s)
Travel time  =    0.25 min.
Time of concentration =   12.59 min.

Sub-Channel No. 1 Critical depth =      0.984(Ft.)
  '     '       '     Critical flow top width =      5.938(Ft.)
  '     '       '     Critical flow velocity=    4.564(Ft/s)
  '     '       '     Critical flow area =      3.907(Sq.Ft)

 Adding area flow to channel
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.815
Decimal fraction soil group A = 0.220
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 0.780
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  81.82
Pervious area fraction =  1.000; Impervious fraction =  0.000
Rainfall intensity =      2.832(In/Hr) for a   100.0 year storm
Subarea runoff =     16.013(CFS) for      6.940(Ac.)
Total runoff =     25.830(CFS)       Total area =      11.190(Ac.)
Depth of flow =   0.599(Ft.), Average velocity =  13.471(Ft/s)

Sub-Channel No. 1 Critical depth =      1.188(Ft.)
  '     '       '     Critical flow top width =      6.750(Ft.)
  '     '       '     Critical flow velocity=    4.972(Ft/s)
  '     '       '     Critical flow area =      5.195(Sq.Ft)



++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      108.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
________________________________________________________________________
Upstream point/station elevation =  1085.000(Ft.)
Downstream point/station elevation =  1075.000(Ft.)
Pipe length  =    40.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    25.830(CFS)
Nearest computed pipe diameter  =     15.00(In.)
Calculated individual pipe flow  =    25.830(CFS)
Normal flow depth in pipe =   10.15(In.)
Flow top width inside pipe =   14.03(In.)
Critical depth could not be calculated.
Pipe flow velocity =     29.24(Ft/s)
Travel time through pipe =    0.02 min.
Time of concentration (TC) =    12.62 min.
```

```
++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      105.000 to Point/Station      108.000
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 2 in normal stream number 1
Stream flow area =     11.190(Ac.)
Runoff from this stream =     25.830(CFS)
Time of concentration =   12.62 min.
Rainfall intensity =     2.829(In/Hr)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      106.000 to Point/Station      107.000
**** INITIAL AREA EVALUATION ****
____________________________________________________________________________
Initial area flow distance =    63.000(Ft.)
Top (of initial area) elevation =  1137.000(Ft.)
Bottom (of initial area) elevation =  1125.000(Ft.)
Difference in elevation =    12.000(Ft.)
Slope =    0.19048  s(percent)=      19.05
TC = k(0.530)*[(length^3)/(elevation change)]^0.2
Warning: TC computed to be less than 5 min.; program is assuming the
time of concentration is 5 minutes.
Initial area time of concentration =    5.000 min.
Rainfall intensity =      4.707(In/Hr) for a   100.0 year storm
UNDEVELOPED (poor cover) subarea
Runoff Coefficient = 0.860
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  86.00
Pervious area fraction =  1.000; Impervious fraction =  0.000
Initial subarea runoff =      1.458(CFS)
Total initial stream area =        0.360(Ac.)
Pervious area fraction = 1.000


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      108.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
____________________________________________________________________________
Upstream point/station elevation =  1110.000(Ft.)
Downstream point/station elevation =  1075.000(Ft.)
Pipe length  =   565.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =     1.458(CFS)
Nearest computed pipe diameter  =      9.00(In.)
Calculated individual pipe flow  =     1.458(CFS)
Normal flow depth in pipe =    3.70(In.)
Flow top width inside pipe =    8.86(In.)
Critical Depth =    6.67(In.)
Pipe flow velocity =      8.52(Ft/s)
Travel time through pipe =    1.11 min.
Time of concentration (TC) =     6.11 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      107.000 to Point/Station      108.000
**** CONFLUENCE OF MINOR STREAMS ****
____________________________________________________________________________
Along Main Stream number: 2 in normal stream number 2
Stream flow area =      0.360(Ac.)
Runoff from this stream =      1.458(CFS)
Time of concentration =    6.11 min.
Rainfall intensity =     4.217(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                (In/Hr)
```

```
1       25.830     12.62                2.829
2        1.458      6.11                4.217
Largest stream flow has longer time of concentration
Qp =     25.830 + sum of
          Qb         Ia/Ib
           1.458 *    0.671 =      0.978
Qp =     26.808

Total of 2 streams to confluence:
Flow rates before confluence point:
      25.830       1.458
Area of streams before confluence:
       11.190        0.360
Results of confluence:
Total flow rate =     26.808(CFS)
Time of concentration =    12.616 min.
Effective stream area after confluence =     11.550(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      108.000 to Point/Station      109.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1075.000(Ft.)
Downstream point/station elevation =  1050.000(Ft.)
Pipe length  =   555.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    26.808(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    26.808(CFS)
Normal flow depth in pipe =   14.18(In.)
Flow top width inside pipe =   19.67(In.)
Critical depth could not be calculated.
Pipe flow velocity =     15.53(Ft/s)
Travel time through pipe =    0.60 min.
Time of concentration (TC) =    13.21 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      108.000 to Point/Station      109.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     11.550(Ac.)
Runoff from this stream =     26.808(CFS)
Time of concentration =   13.21 min.
Rainfall intensity =     2.758(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                (In/Hr)


1       36.021     17.12               2.392
2       26.808     13.21               2.758
Largest stream flow has longer time of concentration
Qp =     36.021 + sum of
          Qb         Ia/Ib
          26.808 *    0.867 =     23.249
Qp =     59.270

Total of 2 main streams to confluence:
Flow rates before confluence point:
      36.021      26.808
Area of streams before confluence:
       18.600       11.550


Results of confluence:
Total flow rate =     59.270(CFS)
```

```
Time of concentration =    17.117 min.
Effective stream area after confluence  =     30.150(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      109.000 to Point/Station      109.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     30.150(Ac.)
Runoff from this stream =     59.270(CFS)
Time of concentration =   17.12 min.
Rainfall intensity =     2.392(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      109.000 to Point/Station      109.000
**** USER DEFINED FLOW INFORMATION AT A POINT ****
______________________________________________________________________________
Rainfall intensity =      2.497(In/Hr) for a   100.0 year storm
SINGLE FAMILY (1/2 Acre Lot)
Runoff Coefficient = 0.796
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  69.00
Pervious area fraction =  0.600; Impervious fraction =  0.400
User specified values are as follows:
TC =  15.83 min.  Rain intensity =       2.50(In/Hr)
Total area =        40.00(Ac.)  Total runoff =     22.70(CFS)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      109.000 to Point/Station      110.000
**** PIPEFLOW TRAVEL TIME (Program estimated size) ****
______________________________________________________________________________
Upstream point/station elevation =  1050.000(Ft.)
Downstream point/station elevation =  1040.000(Ft.)
Pipe length  =   276.00(Ft.)   Manning's N = 0.013
No. of pipes = 1  Required pipe flow  =    22.700(CFS)
Nearest computed pipe diameter  =     21.00(In.)
Calculated individual pipe flow  =    22.700(CFS)
Normal flow depth in pipe =   13.59(In.)
Flow top width inside pipe =   20.07(In.)
Critical Depth =   19.80(In.)
Pipe flow velocity =     13.77(Ft/s)
Travel time through pipe =    0.33 min.
Time of concentration (TC) =    16.16 min.


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      109.000 to Point/Station      110.000
**** CONFLUENCE OF MAIN STREAMS ****
______________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     40.000(Ac.)
Runoff from this stream =     22.700(CFS)
Time of concentration =   16.16 min.
Rainfall intensity =     2.469(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                (In/Hr)


1       59.270     17.12              2.392
2       22.700     16.16              2.469
```

```
Largest stream flow has longer time of concentration
Qp =     59.270 + sum of
          Qb         Ia/Ib
          22.700 *    0.969 =     21.996
Qp =     81.265

Total of 2 main streams to confluence:
Flow rates before confluence point:
      59.270      22.700
Area of streams before confluence:
       30.150       40.000


Results of confluence:
Total flow rate =     81.265(CFS)
Time of concentration =    17.117 min.
Effective stream area after confluence  =     70.150(Ac.)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      109.000 to Point/Station      110.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 1
Stream flow area =     70.150(Ac.)
Runoff from this stream =     81.265(CFS)
Time of concentration =   17.12 min.
Rainfall intensity =     2.392(In/Hr)
Program is now starting with Main Stream No. 2


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      217.000 to Point/Station      217.000
**** USER DEFINED FLOW INFORMATION AT A POINT ****
________________________________________________________________________
Rainfall intensity =      3.511(In/Hr) for a   100.0 year storm
USER INPUT of soil data for subarea
Runoff Coefficient = 0.845
Decimal fraction soil group A = 0.000
Decimal fraction soil group B = 0.000
Decimal fraction soil group C = 1.000
Decimal fraction soil group D = 0.000
RI index for soil(AMC 2)  =  55.70
Pervious area fraction =  0.262; Impervious fraction =  0.738
User specified values are as follows:
TC =   8.52 min.  Rain intensity =       3.51(In/Hr)
Total area =        11.22(Ac.)  Total runoff =     32.10(CFS)


++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
Process from Point/Station      217.000 to Point/Station      110.000
**** CONFLUENCE OF MAIN STREAMS ****
________________________________________________________________________
The following data inside Main Stream is listed:
In Main Stream number: 2
Stream flow area =     11.220(Ac.)
Runoff from this stream =     32.100(CFS)
Time of concentration =    8.52 min.
Rainfall intensity =     3.511(In/Hr)
Summary of stream data:

Stream   Flow rate      TC            Rainfall Intensity
 No.       (CFS)       (min)                 (In/Hr)


1       81.265     17.12               2.392
2       32.100      8.52               3.511
Largest stream flow has longer time of concentration
Qp =     81.265 + sum of
          Qb         Ia/Ib
```

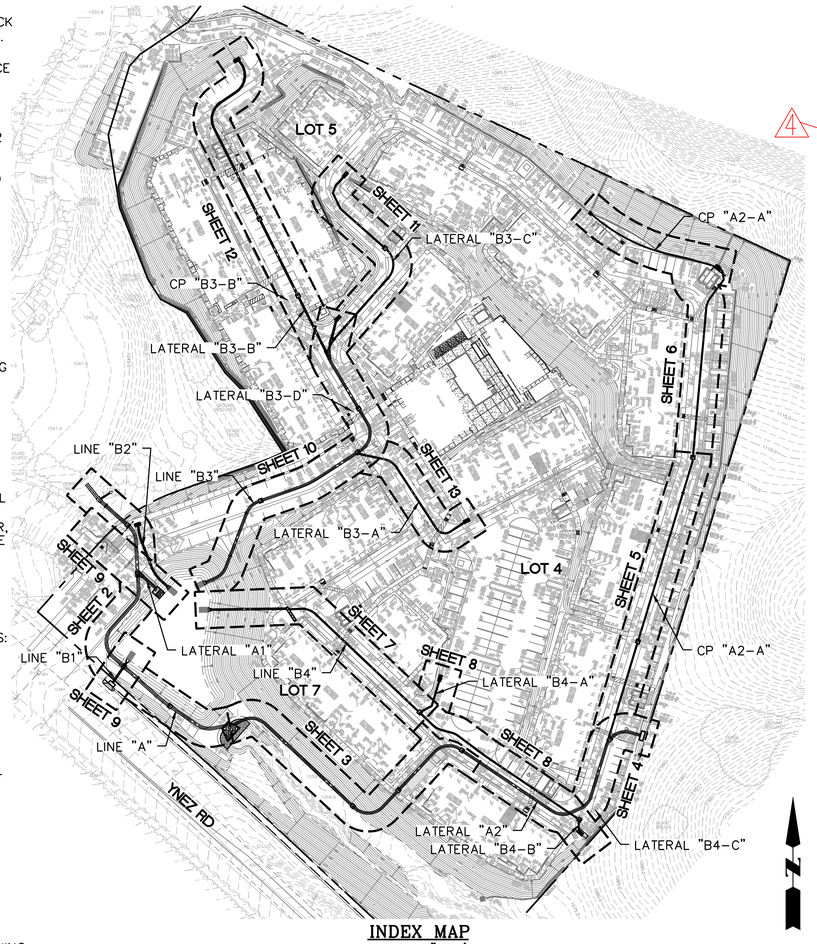
```
          32.100 *    0.681 =     21.870
Qp =    103.136

Total of 2 main streams to confluence:
Flow rates before confluence point:
      81.265      32.100
Area of streams before confluence:
       70.150       11.220


Results of confluence:
Total flow rate =    103.136(CFS)
Time of concentration =    17.117 min.
Effective stream area after confluence  =     81.370(Ac.)
End of computations, total study area =           81.37 (Ac.)
The following figures may
be used for a unit hydrograph study of the same area.

Area averaged pervious area fraction(Ap) = 0.702
Area averaged RI index number =  70.7
```

EXCERPT D: RANCHO HIGHLANDS APPROVED STORM DRAIN PLANS

RANCHO HIGHLANDS
TRACT 23992, LOT 4 , 5, AND 7
STORM DRAIN IMPROVEMENT PLANS

GENERAL NOTES

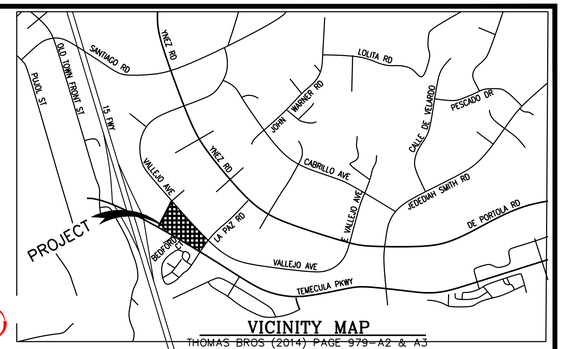
1. STANDARDS. ALL WORK AND MATERIALS (I.E., ASPHALT CONCRETE (AC) PAVEMENT, PORTLAND CONCRETE CEMENT (PCC) BASE COURSE, ETC.) SHALL CONFORM TO THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (I.E., GREENBOOK) LATEST EDITION, THE ENGINEERING AND CONSTRUCTION MANUAL, CITY AND ENGINEERING STANDARDS AND REQUIREMENTS.
2. PERMIT REQUIREMENTS. A GRADING OR ENCROACHMENT PERMIT(S) SHALL BE OBTAINED PRIOR TO PAVING. BEFORE OBTAINING AN ENCROACHMENT PERMIT, A CERTIFICATE OF INSURANCE AND THE REQUIRED BONDING (FOR PUBLIC IMPROVEMENTS) SHALL BE PROVIDED TO THE CITY ENGINEER. A CALTRANS ENCROACHMENT PERMIT MAY BE REQUIRED.
3. SOIL STERILIZER. AN APPROVED SOIL STERILIZER SHALL BE USED ON ALL BASE GRADE SURFACES PRIOR TO PAVING, IF SPECIFIED.
4. TACK COAT. A TACK COAT SHALL BE APPLIED TO EXISTING PAVEMENT AND VERTICAL JOINTS, CONCRETE SURFACES, AND ASPHALT CONCRETE BASE COURSE, IF IT HAS BEEN EXPOSED TO VEHICULAR LOADS. THE TACK COAT SHALL BE SLOW SETTING ANIONIC EMULSIFIED ASPHALT TYPE "SS-1h" CONFORMING TO THE GREENBOOK.
5. CERTIFICATION/TESTING. ALL SUB-GRADE AND BASE GRADE SHALL BE CERTIFIED BY A LICENSED LAND SURVEYOR. BASE AND AC MATERIALS SHALL BE TESTED IN ACCORDANCE WITH THE CITY'S QUALITY ASSURANCE PROGRAM (QAP) AND/OR AS DIRECTED BY THE CITY ENGINEER.
   A. AC MATERIALS.
      1. AC MATERIALS SHALL CONFORM TO SECTION 203-6 OF THE GREENBOOK AND CITY STANDARDS.
         I. TYPE C2 PG70-10 FOR FINISH AND OVERLAY COURSES. THIS COURSE SHALL BE A MINIMUM OF 0.12 FOOT (1 ½ INCHES) THICK INCLUDING GRIND AND OVERLAY INSTALLATIONS.
         II. TYPE B PG70-10 FOR BASE COURSE. THIS COURSE SHALL CONTAIN THE BALANCE OF THE REQUIRED ASPHALT CONCRETE THICKNESS. THE MINIMUM AC LIFT BASE COURSE IS 0.21 FOOT (2 ½ INCHES)
      2. THE MINIMUM AC THICKNESS IS 033. FOOT (4 INCHES)
      3. THE MAXIMIMUM AC LIFT IS 0.33 FOOT (4 INCHES)
   B. BASE MATERIALS.
      1. BASE MATERIALS SHALL CONFORM TO PROVISIONS OF THE GREENBOOK AND CURRENT CITY STANDARDS.
      2. FOR STREET SECTIONS, BASE COURSE MATERIAL SHALL BE CRUSHED AGGREGATE BASE (CAB). PRINCIPAL AND URBAN ARTERIAL ROADS REQUIRE CAB.
   C. PORTLAND CONCRETE CEMENT. ALL PCC USED SHALL BE IN CONFORMANCE TO THE GREENBOOK.
6. MIX DESIGNS. TEN (10) WORKING DAYS PRIOR TO PAVING, THE PROPOSED MIX DESIGN(S) FROM THE SUPPLYING ASPHALT OR CONCRETE PLANT SHALL BE SUBMITTED TO THE CITY FOR REVIEW AND APPROVAL. THE MIX DESIGN(S) SHALL CLEARLY SHOW THAT THE DESIGN MEETS ALL CITY AND GREENBOOK REQUIREMENTS.
7. STREET SECTIONS. STREET STRUCTURAL SECTIONS SHOWN ON PLANS ARE TENTATIVE (I.E., THEY'RE USED FOR BONDING PURPOSES). THE FINAL STRUCTURAL SECTION REQUIREMENTS SHALL BE DETERMINED BY ADDITIONAL SOIL TESTS, AFTER ROUGH GRADING. THE STRUCTURAL SECTION DESIGN SHALL BE REVIEWED AND APPROVED BY THE CITY ENGINEER. SAID DESIGN SHALL ADHERE TO THE METHODOLOGY SET FORTH IN CHAPTER 600 OF CALTRANS HIGHWAY DESIGN MANUAL AND SHALL UTILIZE THE "R" VALUE METHOD (I.E., "R" VALUE TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH CALIFORNIA TEST NO. 301 AND SHALL BE CERTIFIED BY A REGISTERED CIVIL ENGINEER) THE NUMBER AND LOCATIONS OF THESE TESTS SHALL BE SUBJECT TO APPROVAL BY THE CITY ENGINEER.
8. COMPACTION. PRIOR TO PLACEMENT OF BASE MATERIAL AND AC, COMPACTION REPORTS BY A SOILS ENGINEER, CERTIFYING 95% COMPACTION OF SUB-GRADE BASE MATERIAL AND TOP 1 FOOT, SHALL BE SUBMITTED TO THE CITY ENGINEER. COMPACTION TEST OBSERVATION OF SUB-GRADE AND BASE GRADE MATERIALS SHALL BE COORDINATED TO INCLUDE THE SOILS ENGINEER AND THE PUBLIC WORKS INSPECTOR.
9. PAVING INSPECTIONS.
   A. BASE GRADE INSPECTION. ONE (1) INSPECTION AT SUB-GRADE COMPLETION (PRIOR TO PLACEMENT OF BASE) IS REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS.
   B. PAVING INSPECTIONS. TWO (2) PAVING INSPECTIONS ARE REQUIRED BY THE DEPARTMENT OF PUBLIC WORKS: (1) PRIOR TO PAVING, AT BASE GRADE COMPLETION; AND (1) DURING PLACEMENT OF AC.
   C. DRIVEWAYS. ALL ONSITE PRIVATE RESIDENTIAL DRIVEWAYS SHALL COMPLY WITH THE APPROVED PLANS AND CITY STANDARDS, AND SHALL BE INSPECTED AND CLEARED BY THE CITY ENGINEER PRIOR TO PAVING.
10. UTILITIES. ALL UNDERGROUND FACILITIES AND LATERALS SHALL BE IN PLACE PRIOR TO PAVING. PROVIDE CLEARANCE FROM UTILITY COMPANIES PRIOR TO FINAL CAP.
11. TRENCHING FOR UTILITIES. ALL STREET TRENCHES SHALL CONFORM TO CITY AND ENGINEERING STANDARDS. REFER TO CITY STANDARD NO. 407 "TRENCH/POTHOLE REPAIR" FOR TRENCH MAINTENANCE AND/OR REPAIRS. IF TRENCHES IN CLOSE PROXIMITY AND PARALLEL TO CUTTER LINES RESULT IN LEAVING PAVEMENT STRIPS IN DISTRESS ON LESS THAN TWO FEET (2') IN WIDTH (BETWEEN THE TRENCH AND GUTTER LINE), SAID PAVEMENT STRIPS SHALL BE REMOVED AND REPAVED, AT THE DISCRETION OF THE CITY ENGINEER. A TACK COAT SHALL BE APPLIED TO JOIN EXISTING ASPHALT CONCRETE AND VERTICAL SURFACES IN COMPLIANCE WITH THE GREENBOOK.
12. PARKING LOT GRADE. THE MINIMUM AC OR CONCRETE PAVEMENT GRADE SHALL BE ONE PERCENT (1%)
13. GUTTER LIP. A ⅜ INCH LIP SHALL BE PLACED ADJACENT TO CONCRETE GUTTERS IN ACCORDANCE WITH CITY AND ENGINEERING STANDARDS. REFER TO STANDARD NO. 200.
14. PAVING DETAIL AROUND MANHOLES, VALVE COVERS, ETC. ALL PAVING AROUND MANHOLES, UTILITY VALVE COVERS, ETC. SHALL BE IN ACCORDANCE WITH THE GREENBOOK REQUIREMENTS, UTILITY AGENCY REQUIREMENTS, AND CITY AND ENGINEERING STANDARDS. REFER TO CITY STANDARD NO. 503 "PAVING DETAIL AROUND MANHOLE."
15. AC PLACEMENT. THE METHOD OF DEPOSITING, DISTRIBUTING (I.E., USING A SELF-PROPELLED SPREADING/FINISHING MACHINE) AND ROLLING AC SHALL BE IN ACCORDANCE WITH THE GREENBOOK.
16. ACCEPTANCE OF PRODUCT. THE CONTRACTOR SHALL REPAIR ANY DEFECTIVE SURFACING DUE TO TO GRADE SETTLEMENT OF FILLS, TRENCH FILLS OR BASE MATERIAL, AS REQUIRED BY THE CITY ENGINEER. NO PAVEMENT "BIRDBATHS" OR DEVIATIONS GREATER THAN ⅛ INCH IN SIN SIX FEET (6') SHALL BE ACCEPTED.
17. PROTECTION OF WORK. THE CONTRACTOR SHALL: (A) PROTECT EXISTING STRUCTURES, CURB AND GUTTERS, SIDEWALKS, LANDSCAPING, CATCH BASIN DEPRESSIONS AND OTHER SURFACE FEATURES AGAINST DAMAGE CAUSED BY PAVING OPERATIONS AND ASPHALT SPRAY; (B) PROTECT COMPLETED WORK; ALL VEHICULAR TRAFFIC (I.E., MOVING OR STATIONARY LOADS) SHALL BE KEPT OFF NEWLY PAVED AREAS UNTIL PAVEMENT SURFACES HAVE COOLED DOWN ADEQUATELY; (C) CLEAN THE SITE (I.E., REMOVE LOOSE PAVEMENT AND AGGREGATE, CLEAN OUT ALL MANHOLE PITS, ENSURE FREE OPERATIONS OF VALVES AFTER PAVING, REMOVE ALL DEBRIS, RUBBISH AND EXCESS MATERIAL FROM WORK AREA, ETC.).
18. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "GENERAL," "GRADING," AND "EROSION AND SEDIMENT CONTROL" REQUIREMENTS.
19. OTHER PERTINENT INFORMATION. REFER TO THE CITY OF TEMECULA MUNICIPAL CODE, TITLE 18, "CONSTRUCTION, GRADING AND ENCROACHMENTS".



INDEX MAP
SCALE: 1"=80'

SHEET INDEX

1	TITLE SHEET
1A	GENERAL NOTES
2	LINE A PLAN SHEET
3-4	LATERAL A2 PLAN SHEET
5-6	CP A2-A PLAN SHEET
6	CP A2-A1 PLAN SHEET
7	LINE B4 PLAN SHEET
8	LINE B4, LAT. B4-A,LAT. B4-B,LAT B4-C PLAN SHEET
9	LAT. A1-A, LINE B1 & LINE B2 PLAN SHEET
10	LINE B3 PLAN SHEET
11	LATERAL B3-C PLAN SHEET
12	LATERAL B3-B PLAN SHEET
13	LATERAL B3-A PLAN SHEET
14	BASIN DETAIL SHEET
15	WINGWALL DETAIL SHEET
16-19	UNDERDRAIN PLAN SHEET
20	BIOCLEAN KRAKEN DETAIL
20A	KRAKEN AND FLOW GUARD DETAIL



VICINITY MAP
THOMAS BROS (2014) PAGE 979-A2 & A3
SEC. 18, T8S, R2W
SEC. 13, T8S, R3W
NOT-TO-SCALE

CONSTRUCTION NOTES

③	CONSTRUCT 12" HDPE PIPE	195	L.F.
④	CONSTRUCT 15" HDPE PIPE	539	L.F.
⑤	CONSTRUCT 18" HDPE PIPE	1,060	L.F.
⑥	CONSTRUCT 24" HDPE PIPE	547	L.F.
⑦	CONSTRUCT 30" HDPE PIPE	744	L.F.
⑨	CONSTRUCT 24" RCP PIPE CLASS IV	28	L.F.
⑩	CONSTRUCT 36" RCP PIPE CLASS IV	342	L.F.
⑪	CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.	13	EA
⑫	CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. DWG. NO. MH254.	1	EA
⑬	CONSTRUCT PIPE CULVERT WINGWALLS PER CALTRANS STD. PLAN D90	1	EA
⑭	CONSTRUCT CONCRETE DROP INLET PER RCFC & WCD STD. DWG. NO. CB110.	1	EA
⑮	CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 300.	6	EA
⑯	CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 311.	6	EA
⑰	CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 302.	5	EA
⑱	CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 312.	5	EA
⑲	CONSTRUCT CONCRETE DEPRESSION AND SPLASH WALL, SEE SHEET 6.	1	EA
⑳	CONSTRUCT CALTRANS HDPE FLARED END SECTION PER STANDARD PLAN D94A	3	EA
㉑	CONSTRUCT CALTRANS G1 INLET PER STANDARD PLAN D73	2	EA
㉒	CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.	9	EA
㉓	CONSTRUCT 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B, AND DETAIL ON SHEET 15.	368	S.F.
㉔	CONSTRUCT SOIL MEDIA PER RIVERSIDE COUNTY SMR LID BMP DESIGN HANDBOOK, SECTION 3.8 AND PER TYPICAL BIO-RETENTION BASIN MEDIA DETAIL.	8,974	S.F.
㉗	CONSTRUCT CALTRANS CONCRETE FLARED END SECTION PER STANDARD PLAN D94B	1	EA
㉙	CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.	8	EA
㉚	CONSTRUCT MODIFIED CONCRETE DROP INLET PER RCFC & WCD STD. DWG. NO. CB110 WITH WINGWALLS PER DETAILS.	1	EA
㉛	CONSTRUCT GROUTED 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B.	240	SF
㉜	CONSTRUCT 4" DIAMETER GALVANIZED STEEL DEBRIS POST WITH CONCRETE BACKFILL	20	L.F.
㉝	CONSTRUCT MANHOLE NO. 2 PER RCFC & WCD STD. DWG. NO. MH252.	2	EA
㉞	CONSTRUCT CONCRETE APRON	196	SF
㉟	CONSTRUCT TRANSITION STRUCTURE NO. 3 PER RCFC & WCD STD. DWG. NO. TS303.	1	EA
㊱	CONSTRUCT 6-INCH SCH 40 PVC PIPE	2,837	LF
㊲	CONSTRUCT 8-INCH SCH 40 PVC PIPE	411	LF
㊳	CONSTRUCT 12-INCH SCH 40 PVC PIPE	149	LF
㊴	CONSTRUCT NDS 12" CATCH BASIN PER MODEL #1200 WITH A 12" SQUARE ATRIUM GRATE PER MODEL #1280 AS SHOWN ON PLANS.	81	EA
㊵	INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.	8	EA
㊶	INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS WITH WINGS. SEE SHEET 20.	3	EA
~~㊷~~	~~MANHOLE FRAME & COVER PRESSURE TYPE PER RCFC & WCD STD. DWG. NO. MH256~~	~~1~~	~~EA~~
~~㊸~~	~~STANDARD PRESSURE MANHOLE SHAFT PER RCFC & WCD STD. DWG. NO. MH258~~	~~1~~	~~EA~~
㊹	INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FG08, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.	23	EA
㊺	INSTALL KRAKEN CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #BIO-CURB-KMF, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.	1	EA

LD19-4097

SYMBOLS LEGEND:

- 1090 — EXISTING MAJOR CONTOURS
- EXISTING MINOR CONTOURS
- BOUNDARY LINE
- PROP BUILDING BOUNDARY
- CENTERLINE
- RIGHT OF WAY LINE
- EXISTING WATER
- EXISTING SEWER
- EXISTING ASPHALT PAVEMENT
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- ADA PATH OF TRAVEL
- PAVEMENT TO BE REMOVED

ABBREVIATIONS

EX .....EXISTING
EX L.U. .....EXISTING LAND USE
APN .....ASSESSORS PARCEL NUMBER
PMB .....PARCEL MAP BOOK
TR .....TRACT MAP
PM .....PARCEL MAP
CL .....CENTERLINE
R/W .....RIGHT OF WAY
CONC .....EXISTING CONCRETE
HC SIGN .....HANDICAPPED SIGN
PROP S/W .....PROPOSED SIDEWALK
WALL MON .....WALL MONUMENT
FH .....FIRE HYDRANT
ELEC MET .....ELECTRIC METER
TSPB .....TRAFFIC SIGNAL PULL BOX
TRAF CAB .....TRAFFIC CABINET
SCE VENT .....SOUTHERN CALIFORNIA
PP .....POWER POLL
MH .....MAN HOLE

NOTE:

THE PROPERTY OWNER/ENGINEER OF RECORD/CONTRACTOR SHALL ADHERE TO THE CITY OF TEMECULA'S STANDARD NOTES AS SPECIFIED IN APPENDICES D, E, F, AND G OF THE "ENGINEERING & CONSTRUCTION MANUAL" (I.E. SECTION 6-2) IN ACCORDANCE TO CHAPTER 18.06 OF THE "CONSTRUCTION, GRADING AND ENCROACHMENT" ORDINANCE NO. 13-01. COPIES OF THE NOTES SHALL BE AVAILABLE ONSITE AT ALL TIMES DURING THE CONSTRUCTION OF THE PROJECT.

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

APN NO.
944-330-004, 944-330-005, 944-330-007

SOURCE OF TOPO:
INLAND VALLEY SURVEYING, INC.
130 WEST WALNUT AVENUE SUITE A-5
PERRIS, CA 92571
PH: (951) 657-1200
TOPOGRAPHY COMPILATION DATE:
JULY 19, 2019

OWNER/APPLICANT
RED TAIL ACQUISITIONS, LLC
REID BRADSHAW
EMAIL: rbradshaw@fpamf.com
2082 MICHELSON DRIVE 4TH FLOOR
IRVINE, CA. 92612
PH: (949) 299-0973

SOILS ENGINEER:
LGC VALLEY, INC.
RANDY WAGNER
EMAIL: rwagner@lgcvalley.com
2420 GRAND AVENUE, SUITE F2
VISTA, CA 92081

ENGINEER:
JLC ENGINEERING & CONSULTING, INC.
JOSEPH L. CASTANEDA
EMAIL: JOE@JLCENGINEERING.COM
41660 IVY STREET, SUITE A
MURRIETA, CA 92562

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE	BENCH MARK	SCALE
Contractor_____	12/16/21	JG	⚠ ADDED REPLACEMENT SHEET 2A AND 11A.			RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'	Horizontal
Inspector_____	04/04/23	JG	⚠ REVISE LINE A-R1 ADDED TRANS. STRUCTURE. LINE A-R2 ADDED M.H., REVISED DATA TABLE & PROFILE, ADDED FLOGARD, ADDED KRAKEN.				Vertical
Date Completed_____							

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

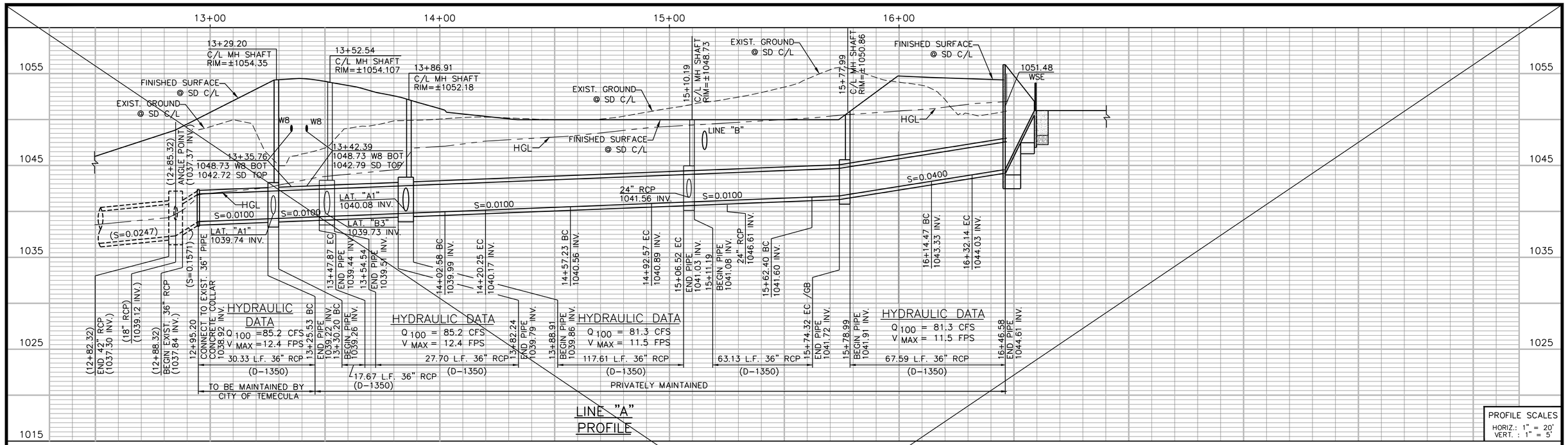
RECOMMENDED BY:_____ DATE:_____
ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
TITLE SHEET

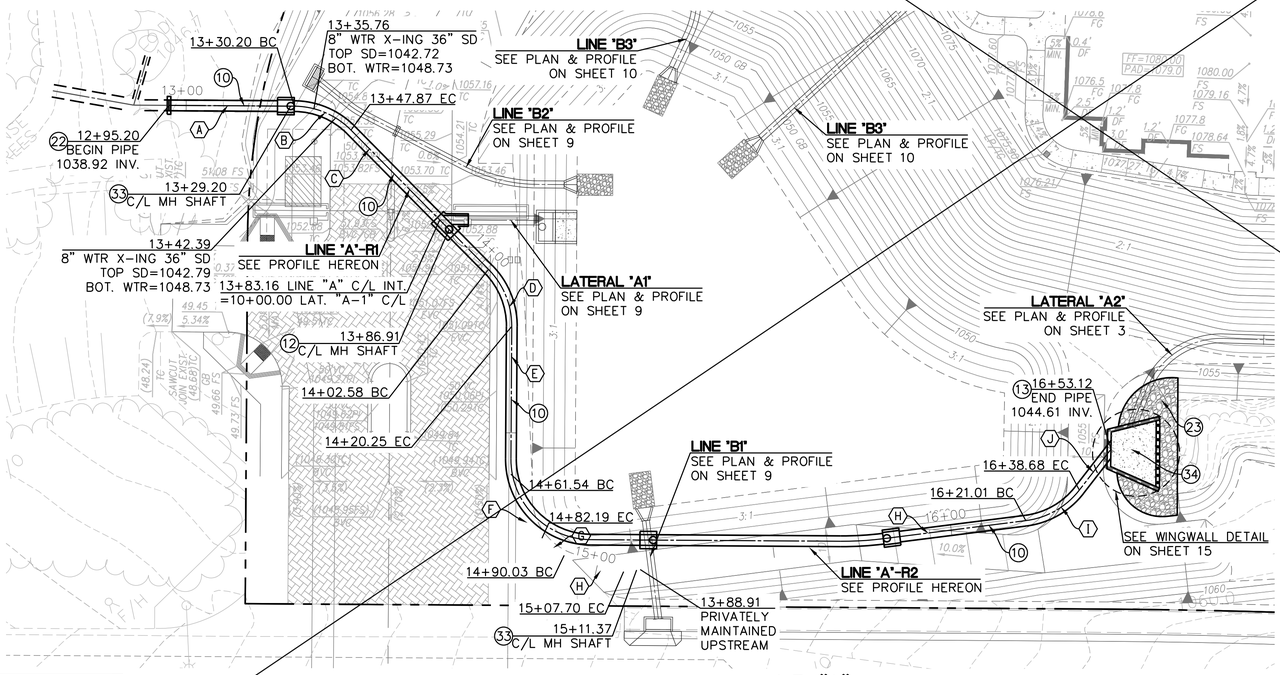
1

Sheet 1 of 20



LINE "A" PROFILE

PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'



LINE "A" PLAN

CONSTRUCTION NOTES

10	CONSTRUCT 36" RCP PIPE CLASS IV
12	CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. DWG. NO. MH254.
13	CONSTRUCT PIPE CULVERT WINGWALLS PER CALTRANS STD. PLAN D90
22	CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.
23	CONSTRUCT 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B, AND DETAIL ON SHEET 15.
33	CONSTRUCT MANHOLE NO. 2 PER RCFC & WCD STD. DWG. NO. MH252.
34	CONSTRUCT CONCRETE APRON

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N48°15'12"W	–	44.87'	–
B	45°00'00"	22.50'	17.67'	9.32'
C	N03°15'12"W	–	54.71'	–
D	45°00'01"	22.50'	17.67'	9.32'
E	N41°44'50"E	–	41.29'	–
F	52°35'20"	22.50'	20.65'	11.12'
G	N10°50'30"W	–	7.84'	–
H	N55°50'30"W	–	108.10'	–
I	45°00'00"	22.50'	17.67'	9.32'
J	N79°09'30"E	–	14.44'	–

JUNCTION STRUCTURE DATA

MAIN LINE	LATERAL	STRUCTURE TYPE	A	B	C	D_1	D_2	E	F	G	L	ELEV. "S"	ELEV. "R"
LINE "A"-R1	LAT. "A1"-R1	M.H. NO. 4	45°00'00"	30"	8'	36"	36"	–	–	–	6.67'	1040.08	1040.49

LD19-4097

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor					
Inspector					
Date Completed					

BENCH MARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA
R.C.E. No. 59835
Date 04/04/23

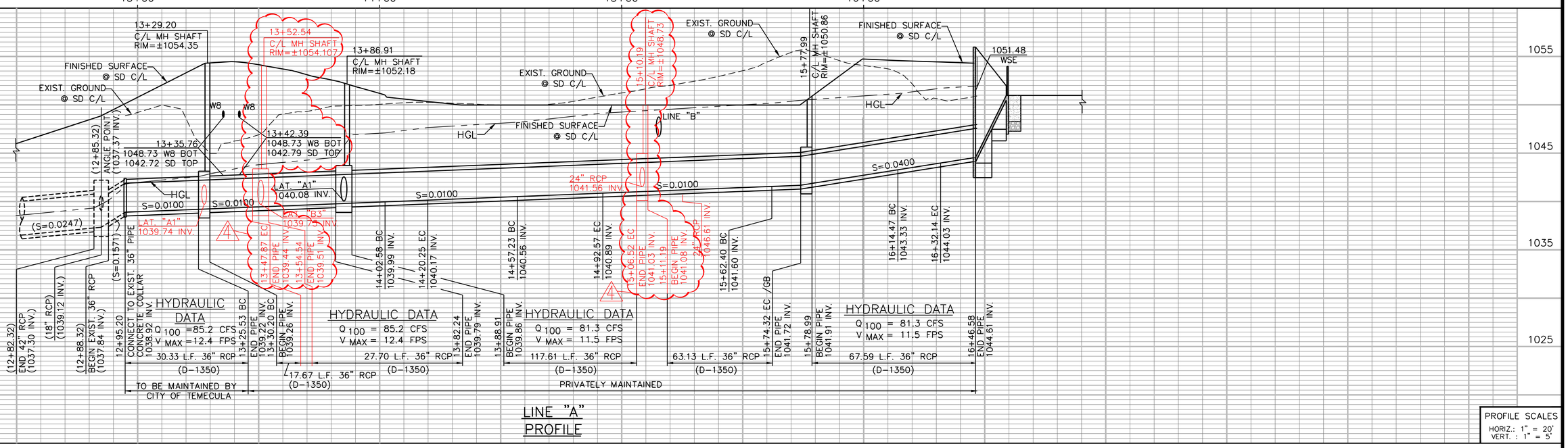
RECOMMENDED BY: _____ DATE: _____

ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

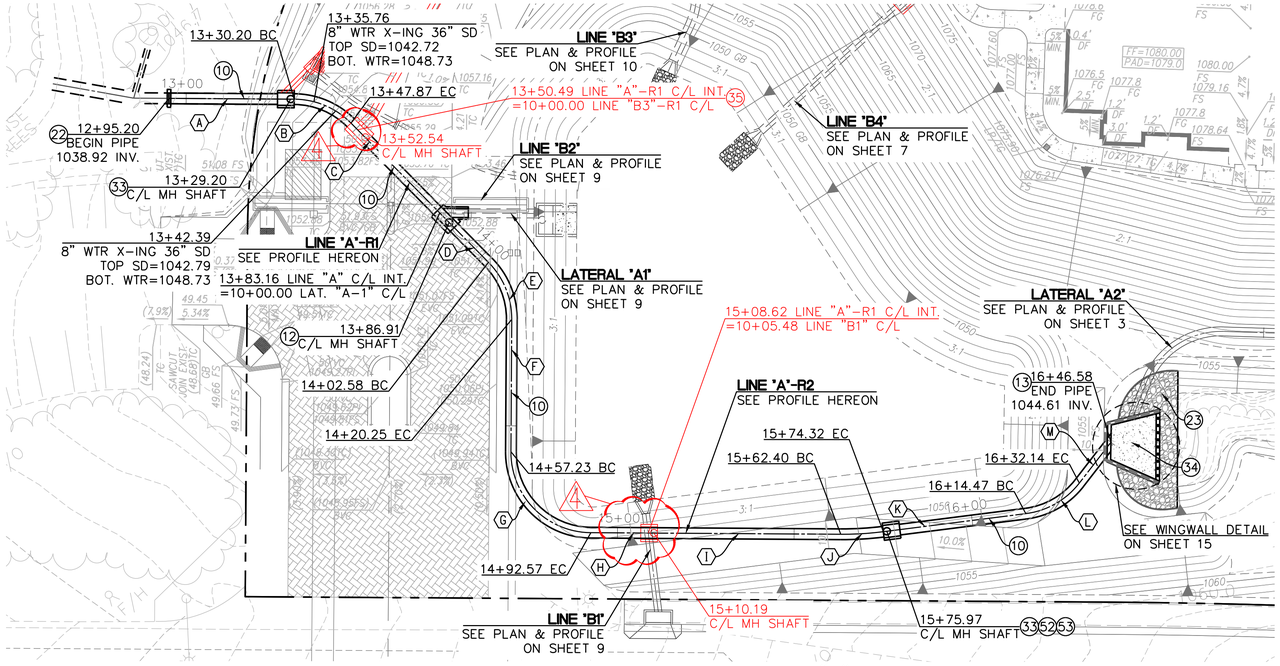
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LINE "A"

2
Sheet 2 of 20



LINE "A" PROFILE

PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'



LINE "A" PLAN

CONSTRUCTION NOTES

(10) CONSTRUCT 36" RCP PIPE CLASS IV
(12) CONSTRUCT MANHOLE NO. 4 PER RCFC & WCD STD. DWG. NO. MH254.
(13) CONSTRUCT PIPE CULVERT WINGWALLS PER CALTRANS STD. PLAN D90
(22) CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.
(23) CONSTRUCT 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B, AND DETAIL ON SHEET 15.
(33) CONSTRUCT MANHOLE NO. 2 PER RCFC & WCD STD. DWG. NO. MH252.
(34) CONSTRUCT CONCRETE APRON
(52) MANHOLE FRAME & COVER PRESSURE TYPE PER RCFC & WCD STD. DWG. NO. MH256
(53) STANDARD PRESSURE MANHOLE SHAFT PER RCFC & WCD STD. DWG. NO. MH258

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
(A)	N48°15'12"W	–	44.87'	–
(B)	45°00'00"	22.50'	17.67'	9.32'
(C)	N03°15'12"W	–	27.70'	–
(D)	N03°15'12"W	–	13.67'	–
(E)	45°00'01"	22.50'	17.67'	9.32'
(F)	N41°44'50"E	–	36.98'	–
(G)	89°59'54"	22.50'	35.34'	21.00'
(H)	N48°15'04"W	–	06.52'	–
(I)	N48°15'04"W	–	51.21'	–
(J)	07°35'26"	90.00'	11.92'	5.97'
(K)	N55°50'30"W	–	39.61'	–
(L)	45°00'00"	22.50'	17.67'	9.32'
(M)	N79°09'30"E	–	14.44'	–

JUNCTION STRUCTURE DATA

MAIN LINE	LATERAL	STRUCTURE TYPE	A	B	C	D_1	D_2	E	F	G	L	ELEV. "S"	ELEV. "R"
LINE "A"-R1	LAT. "A1"-R1	M.H. NO. 4	45°00'00"	30"	8'	36"	36"	–	–	–	6.67'	1040.08	1040.49

LD19-4097

Underground Service Alert
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CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	12/16/21	JG	⚠1 REVISE LINE A STA: 14+58.73 TO STA: 15+74.32, DATA TABLE AND PROFILE.		
Inspector	04/04/23	JG	⚠4 REVISE LINE A-R1 ADDED TRANS. STRUCTURE. LINE A-R2 ADDED M.H., REVISED DATA TABLE & PROFILE.		
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA Date 04/04/23
R.C.E. No. 59835

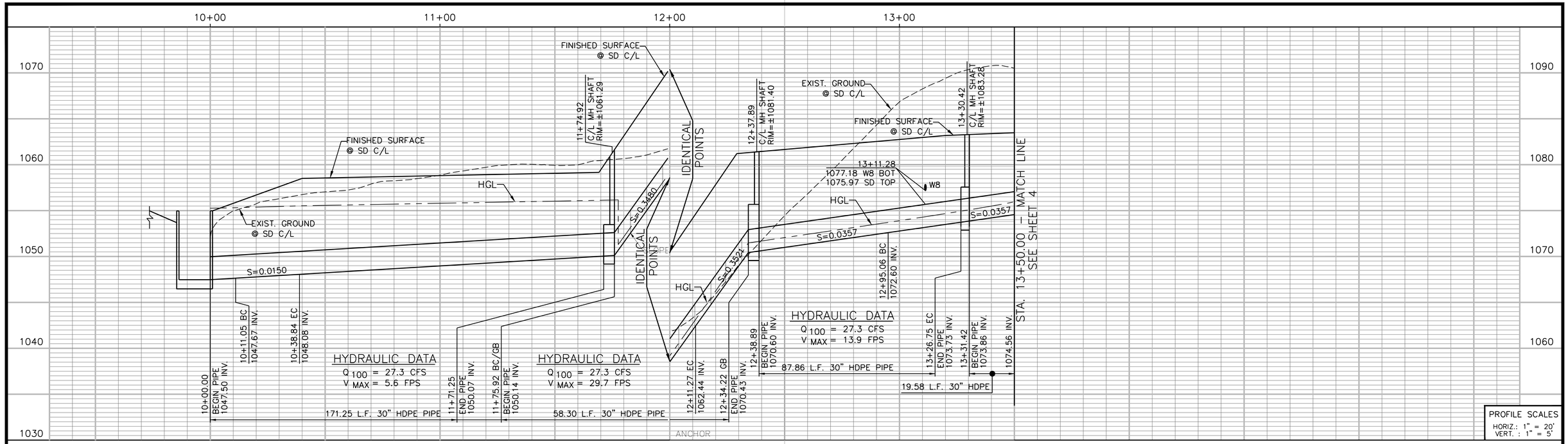
RECOMMENDED BY: _____ DATE: _____

ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

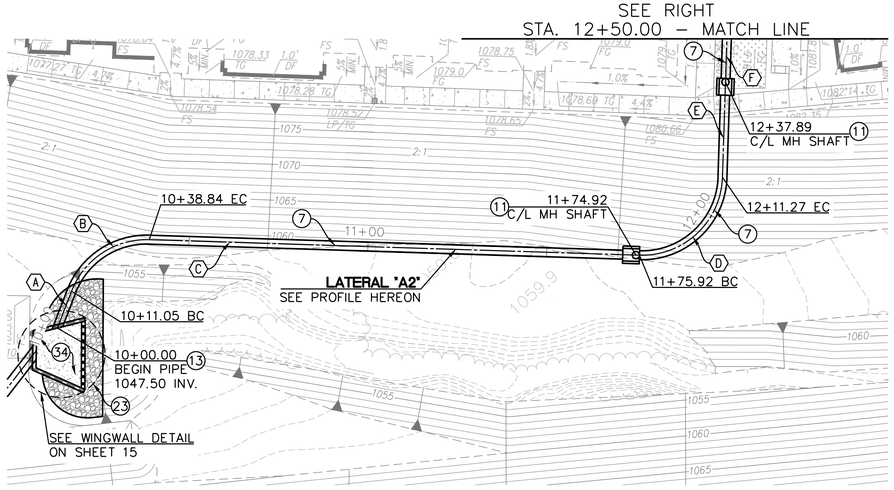
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LINE "A"

2A
Sheet 2A of 20

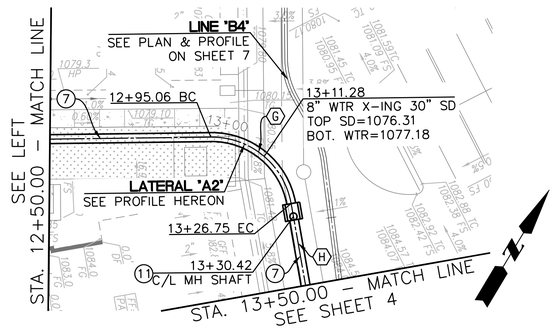


PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'

LINE "A2" PROFILE



LATERAL "A2" PLAN



LATERAL "A2" PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N62°25'44"E	–	11.05'	–
B	70°46'18"	22.50'	27.79'	15.98'
C	N46°47'58"W	–	57.65'	–
D	90°00'00"	22.50'	35.34'	22.50'
E	N43°12'02"E	–	83.79'	–
F	80°41'57"	22.50'	31.69'	19.11'
G	N56°06'01"W	–	26.28'	–

CONSTRUCTION NOTES

(7) CONSTRUCT 30" HDPE PIPE
(11) CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.
(13) CONSTRUCT PIPE CULVERT WINGWALLS PER CALTRANS STD. PLAN D90
(23) CONSTRUCT 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B, AND DETAIL ON SHEET 15.
(34) CONSTRUCT CONCRETE APRON

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LD19-4097

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor_____					
Inspector_____					
Date Completed_____					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

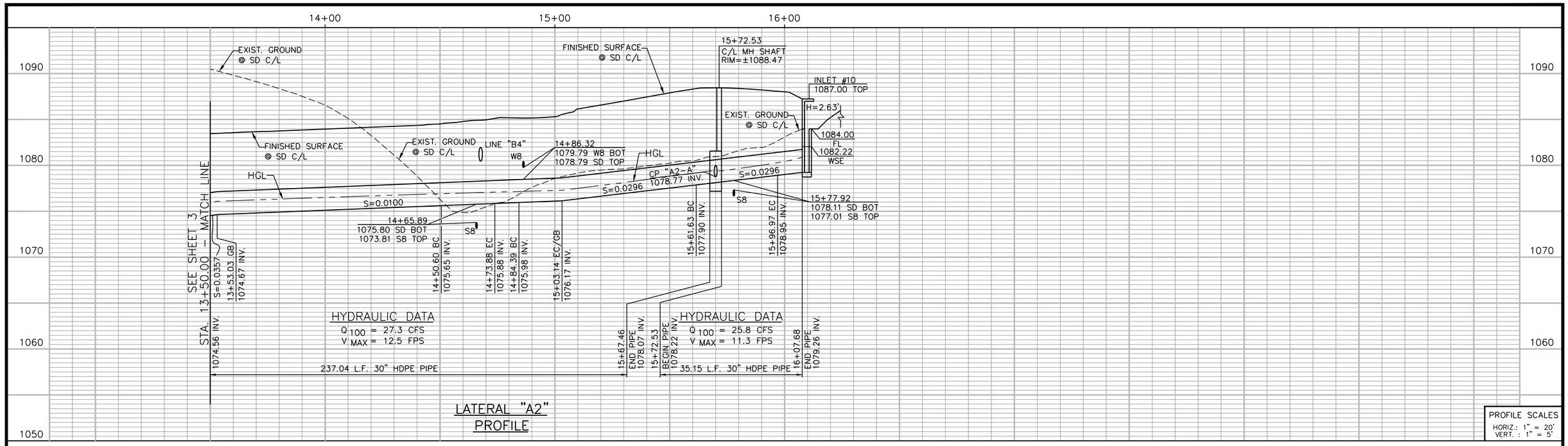
Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

RECOMMENDED BY:_____ DATE:_____
ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

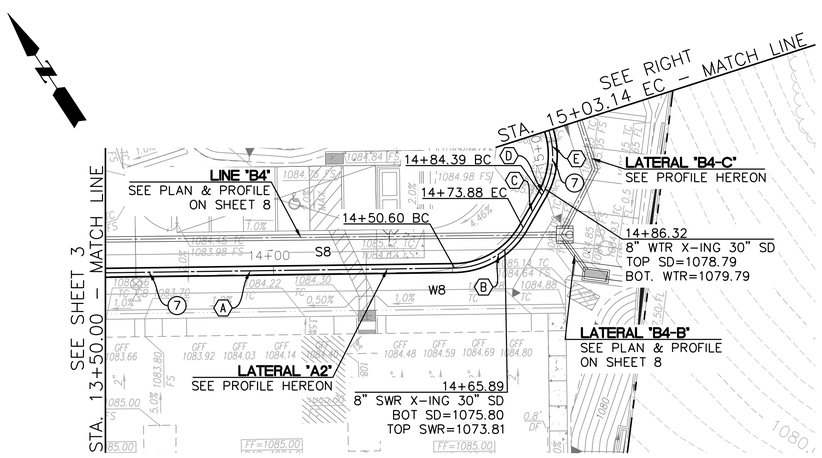
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LATERAL "A2"

3
Sheet 3 of 20

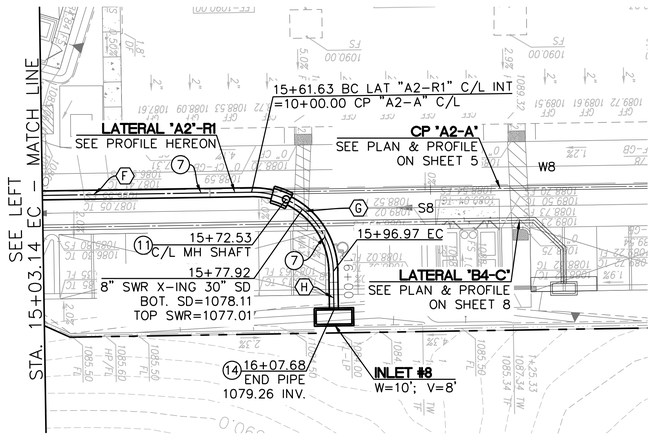


LATERAL "A2"
PROFILE

PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'



LATERAL "A2"
PLAN



LATERAL "A2"
PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N56°06'01"W	–	97.57'	–
B	59°17'38"	22.50'	23.58'	12.81'
C	N64°36'21"E	–	10.51'	–
D	04°54'24"	22.50'	1.93'	0.96'
E	42°50'00"	22.50'	16.82'	8.83'
F	N16°51'57"E	–	58.49'	–
G	89°59'53"	22.50'	35.34'	22.50'
H	N73°08'03"W	–	10.71'	–

CONSTRUCTION NOTES

(7) CONSTRUCT 30" HDPE PIPE

(11) CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.

(14) CONSTRUCT CONCRETE DROP INLET PER RCFC & WCD STD. DWG. NO. CB110.

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor					
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA Date 04/04/23
R.C.E. No. 59835

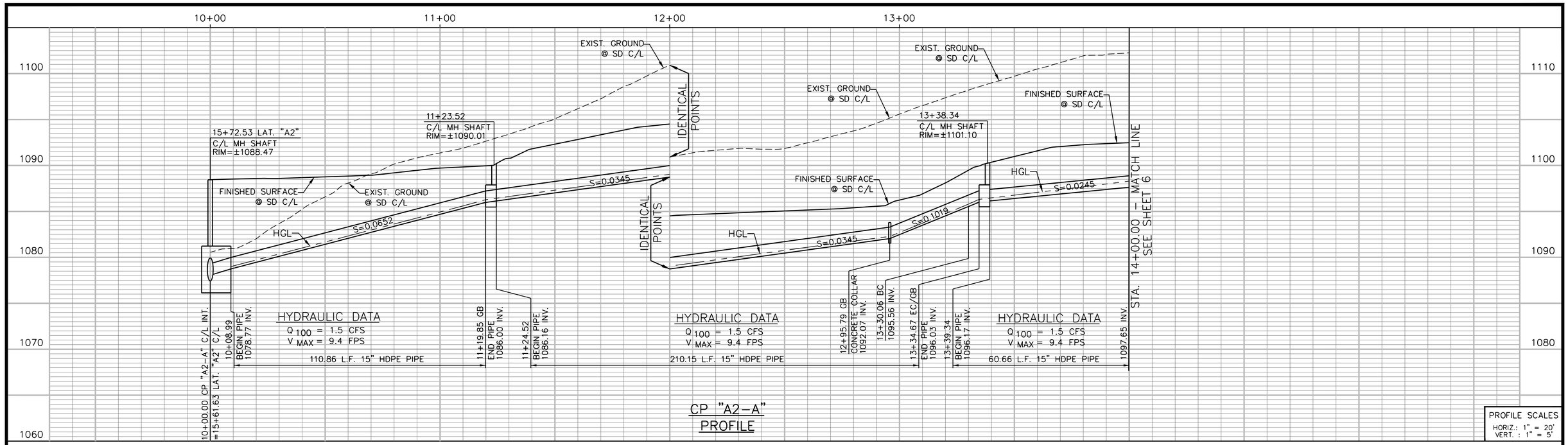
RECOMMENDED BY: _____ DATE: _____

ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

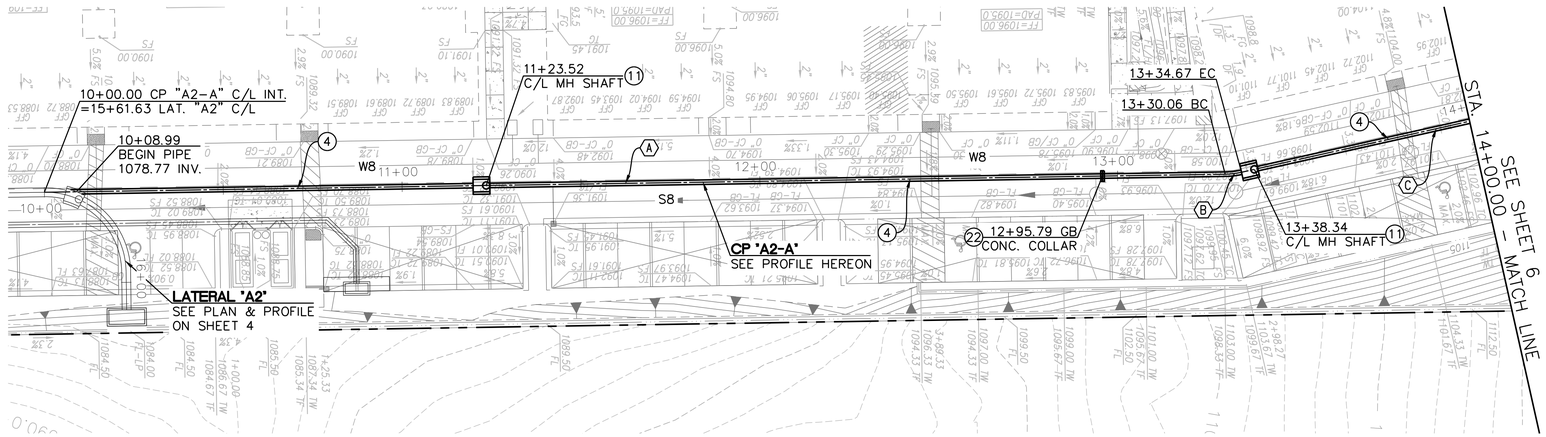
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LATERAL "A2"

4
Sheet 4 of 20



CP "A2-A"
PROFILE

PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'



CP "A2-A"
PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N16°51'57"E	–	330.06'	–
B	11°44'23"	22.50'	4.61'	2.31'
C	N88°49'21"W	–	65.33'	–

CONSTRUCTION NOTES

4. CONSTRUCT 15" HDPE PIPE
11. CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.
22. CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LD19-4097

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

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41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor_____					
Inspector_____					
Date Completed_____					

BENCH MARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

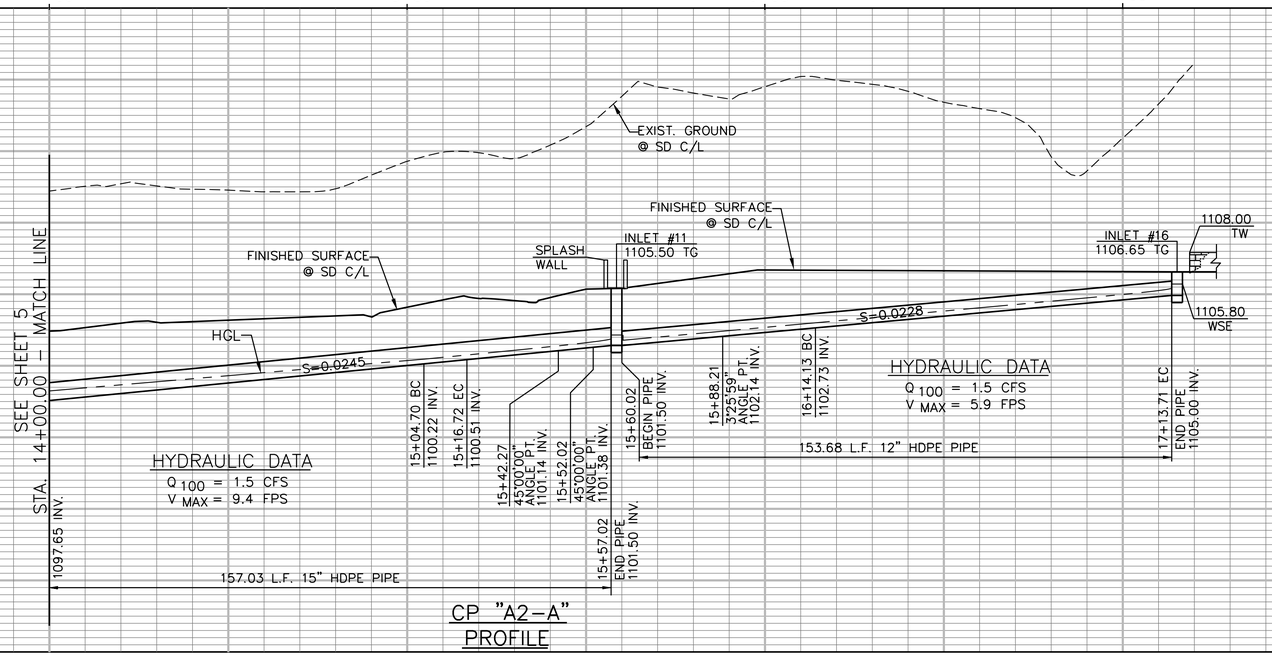
RECOMMENDED BY:_____ DATE:_____

ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

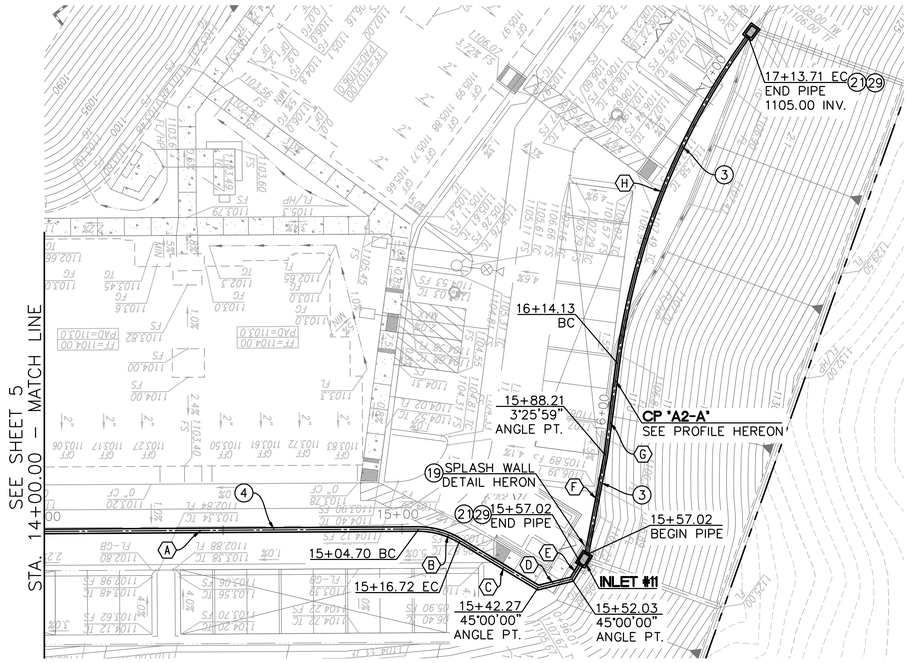
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
CP "A2-A"

5
Sheet 5 of 20



CP "A2-A"
PROFILE

PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'

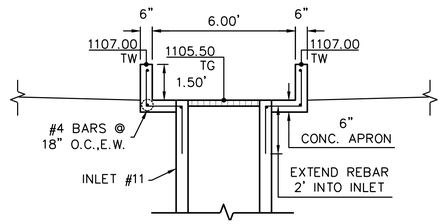


CP "A2-A"
PLAN

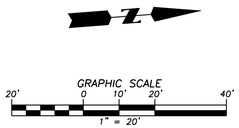
INLET #11
SPLASH WALL DETAIL
SCALE:1"=3'

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N05°07'38"E	–	140.70'	–
B	32°10'39"	21.42'	12.03'	6.18'
C	N36°30'43"E	–	25.56'	–
D	N68°29'17"W	–	9.75'	–
E	N53°29'17"W	–	5.00'	–
F	S73°37'28"E	–	28.18'	–
G	S77°03'27"E	–	25.92'	–
H	28°31'35"	200.00'	99.58'	50.84'



INLET #11
SPLASH WALL SECTION A–A
SCALE:1"=3'



CONSTRUCTION NOTES

(3) CONSTRUCT 12" HDPE PIPE
(4) CONSTRUCT 15" HDPE PIPE
(19) CONSTRUCT CONCRETE DEPRESSION AND SPLASH WALL, SEE SHEET 6.
(21) CONSTRUCT CALTRANS G1 INLET PER STANDARD PLAN D73
(29) CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.

LD19-4097

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Inspector					
Date Completed					

BENCH MARK
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SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA Date 04/04/23
R.C.E. No. 59835

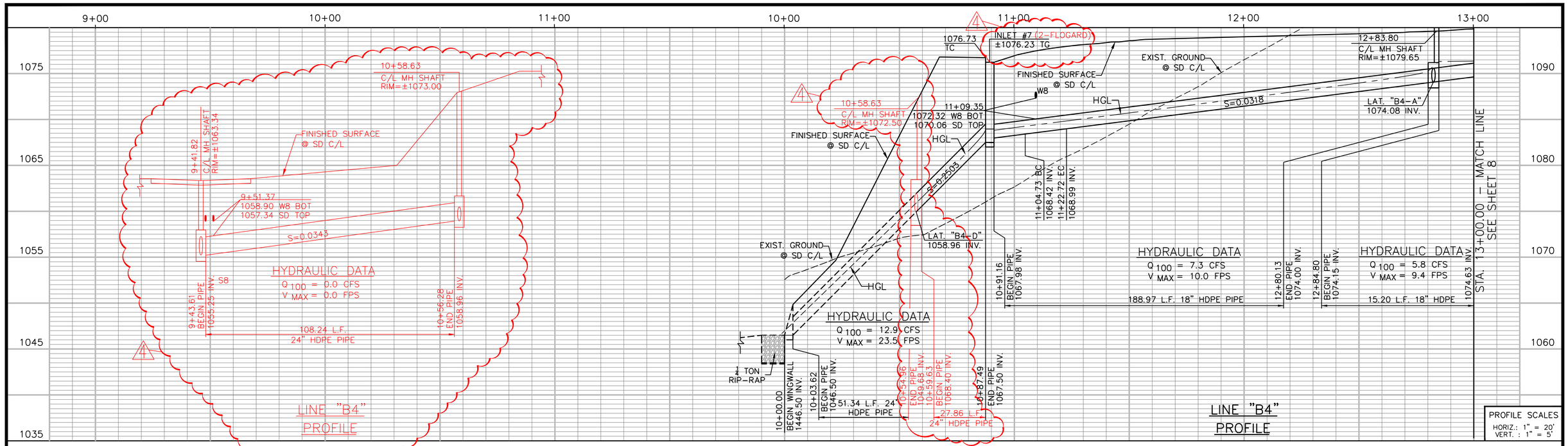
RECOMMENDED BY: _____ DATE: _____

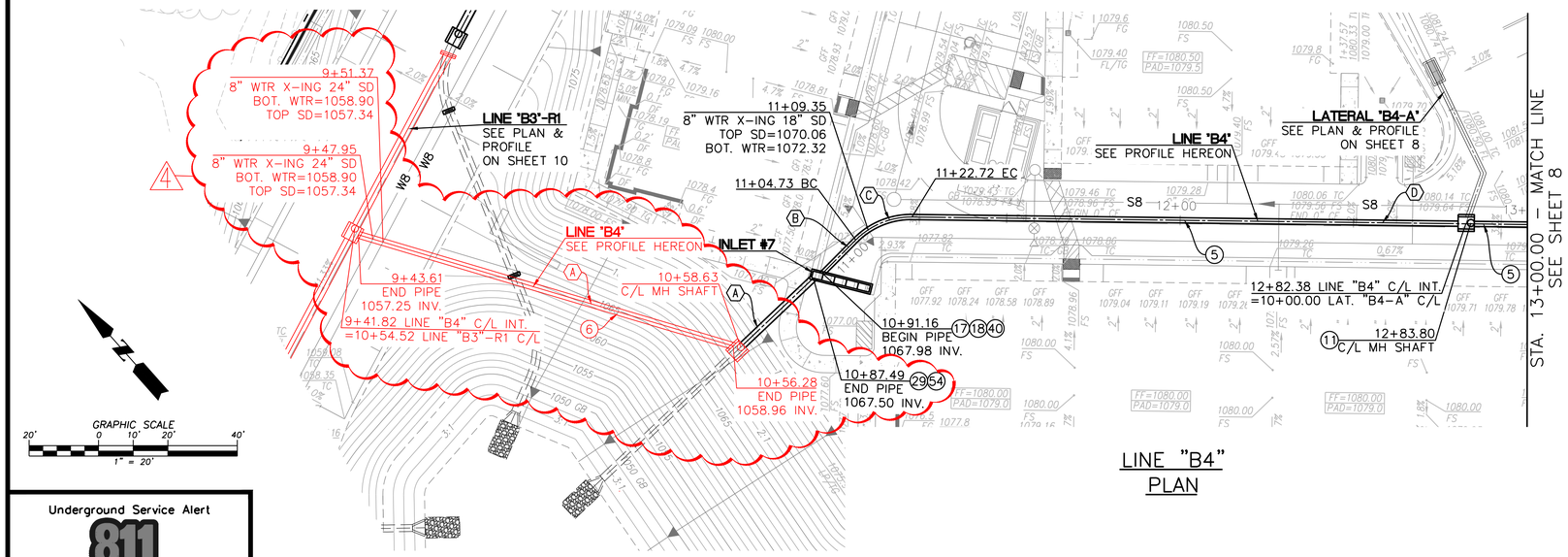
ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
CP "A2-A"

6
Sheet 6 of 20





CONSTRUCTION NOTES

(5) CONSTRUCT 18" HDPE PIPE

(6) CONSTRUCT 24" HDPE PIPE

(11) CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.

(17) CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 302.

(18) CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 312.

(20) CONSTRUCT CALTRANS HDPE FLARED END SECTION PER STANDARD PLAN D94A

(29) CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.

(31) CONSTRUCT GROUTED 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B.

(40) INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.

(54) INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FG08, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
(A)	N89°13'36"W	–	27.86'	–
(B)	N87°36'28"E	–	13.57'	–
(C)	45°48'45"	22.50'	17.99'	9.51'
(D)	N46°34'48"W	–	162.08'	–
(E)	S30°46'24"E	–	112.67'	–

LD19-4097

Underground Service Alert
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JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor_____	04/04/23	JC	⚠ REVISE LINE B4 ADDED M.H., REVISED DATA TABLE & PROFILE, ADDED FLOGARD.		
Inspector_____					
Date Completed_____					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

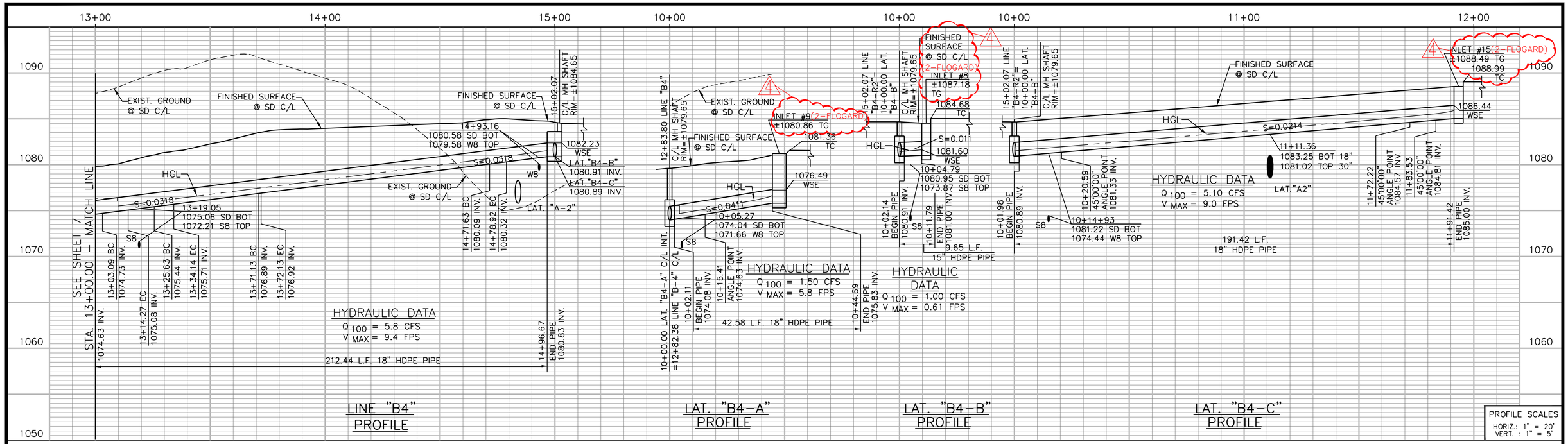
RECOMMENDED BY:_____ DATE:_____

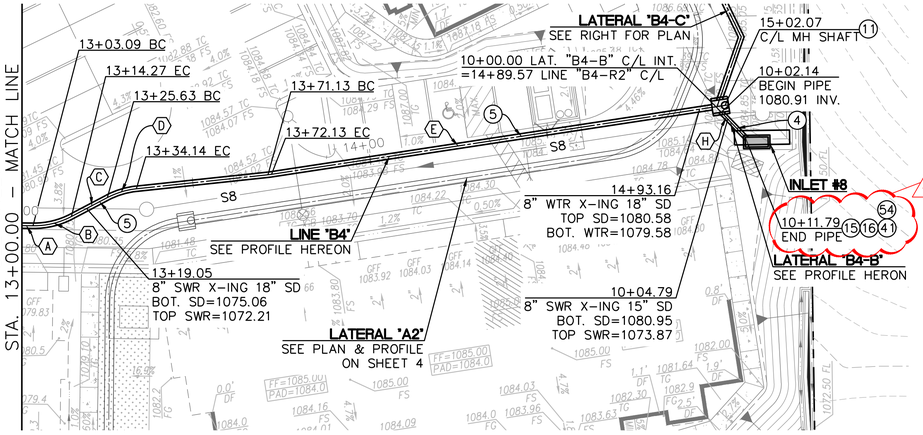
ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

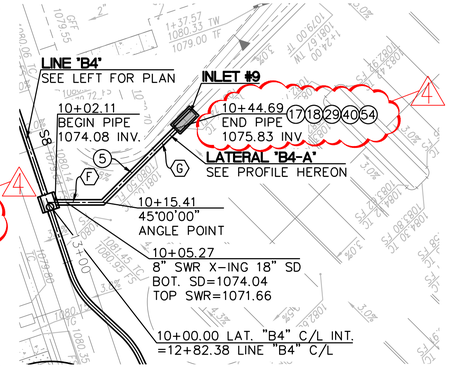
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LINE "B4"

7
Sheet 7 of 20

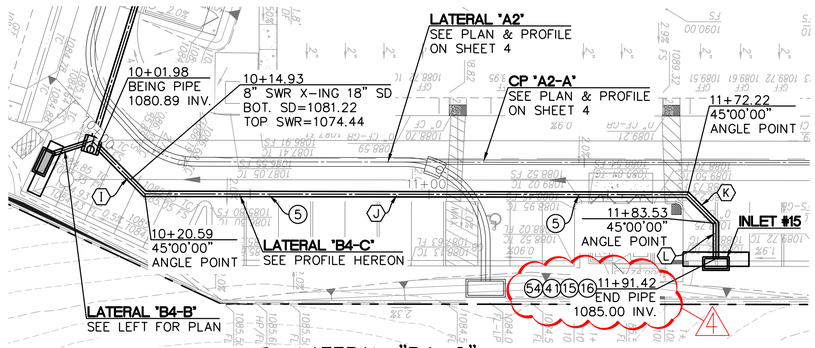




LINE "B4"
PLAN



LATERAL "B4-A"
PLAN



LATERAL "B4-C"
PLAN

LATERAL "B4-B"
PLAN

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N46°34'48"W	–	18.29'	–
B	28°27'49"	22.50'	11.18'	5.71'
C	N75°02'37"W	–	11.36'	–
D	21°41'00"	22.50'	8.51'	4.31'
E	N55°55'30"W	–	124.54'	–
F	N61°51'57"E	–	15.41'	–
G	N16°51'57"E	–	29.27'	–
H	S01°36'20"E	–	9.65'	–
I	N61°51'57"E	–	18.61'	–
J	N61°51'57"E	–	151.63'	–
K	N61°57'57"E	–	11.31'	–
L	S73°08'03"E	–	9.86'	–

CONSTRUCTION NOTES

4 CONSTRUCT 15" HDPE PIPE
5 CONSTRUCT 18" HDPE PIPE
11 CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.
15 CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 300.
16 CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 311.
17 CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 302.
18 CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 312.
29 CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.
40 INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.
41 INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS WITH WINGS. SEE SHEET 20.
54 INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FG08, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	04/04/23	JG	4 ADDED FLOGARD.		
Inspector					
Date Completed					

BENCH MARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

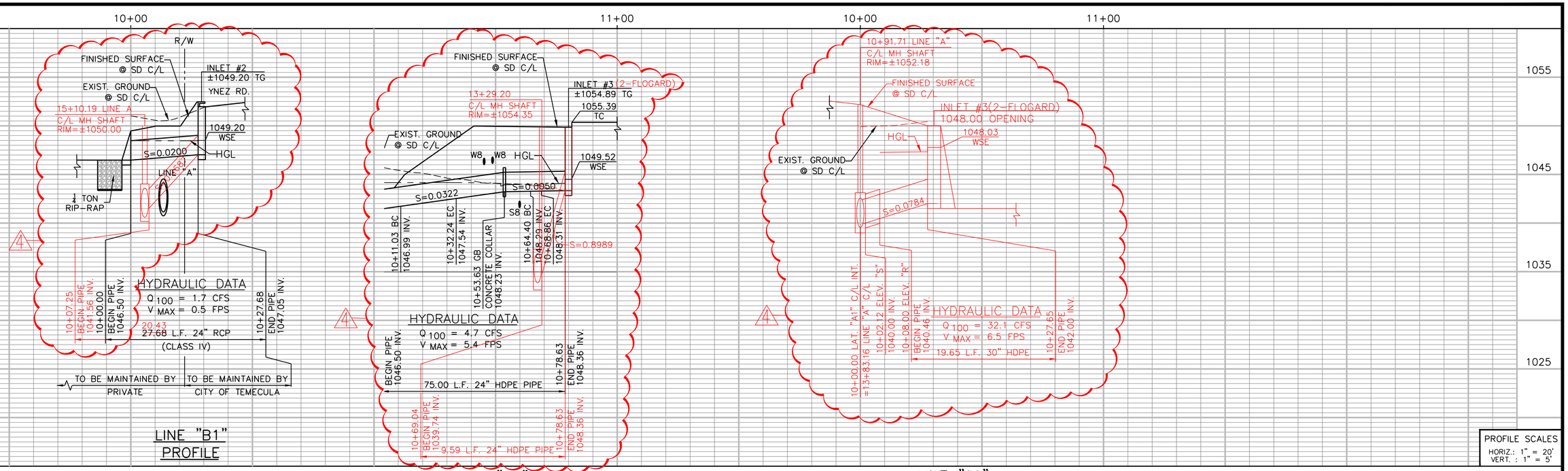
Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA
R.C.E. No. 59835
Date 04/04/23

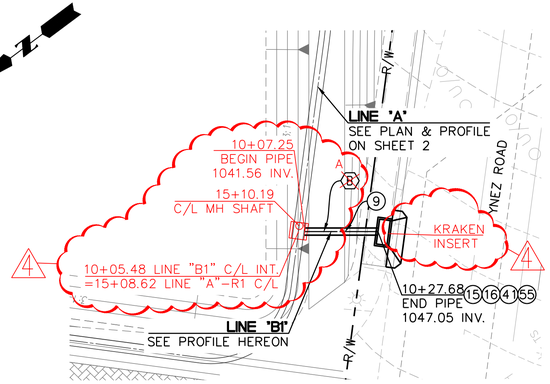
RECOMMENDED BY: _____ DATE: _____
ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

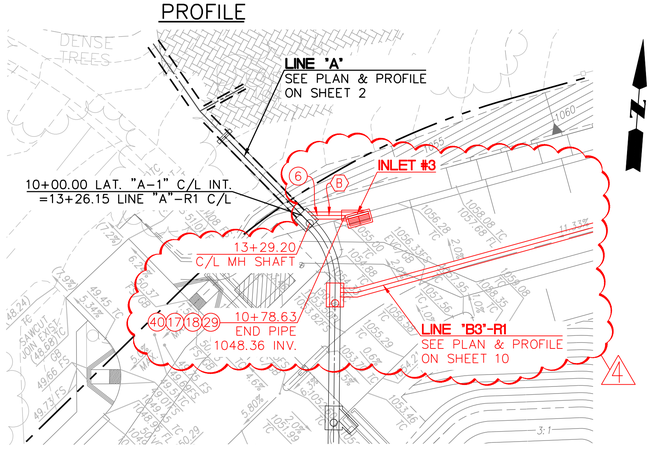
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LINE "B4" , LAT. "B4-A" , LAT. "B4-B" & , LAT. "B4-C"

8
Sheet 8 of 20

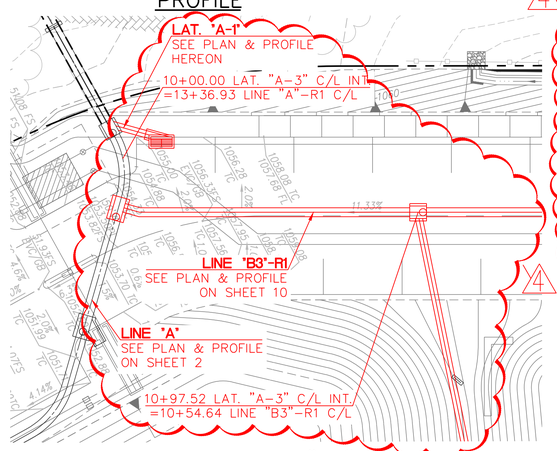




LINE "B1" PLAN



LATERAL "A-1" PLAN



LATERAL "B3" PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	S34°09'30"W	–	20.43'	–
B	N86°08'04"E	–	9.59'	–

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N34°09'30"E	–	22.19'	–
B	N86°08'04"E	–	12.04'	–
C	N70°45'00"E	–	21.64'	–
D	N70°45'00"E	–	37.35'	–
E	N19°15'00"W	–	13.25'	–
F	N19°15'00"W	–	3.38'	–

CONSTRUCTION NOTES

(3) CONSTRUCT 12" HDPE PIPE
(6) CONSTRUCT 24" HDPE PIPE
(7) CONSTRUCT 30" HDPE PIPE
(9) CONSTRUCT 24" RCP PIPE CLASS IV
(15) CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 300.
(16) CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 311.
(18) CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 312.
(20) CONSTRUCT CALTRANS HDPE FLARED END SECTION PER STANDARD PLAN D94A

CONSTRUCTION NOTES

(22) CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.
(27) CONSTRUCT CALTRANS CONCRETE FLARED END SECTION PER STANDARD PLAN D94B
(29) CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.
(30) CONSTRUCT MODIFIED CONCRETE DROP INLET PER RCFC & WCD STD. DWG. NO. CB110 WITH WINGWALLS PER DETAILS.
(31) CONSTRUCT GROUTED 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B.
(40) INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.
(41) INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS WITH WINGS. SEE SHEET 20.
(54) INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FGO8, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.
(55) INSTALL KRAKEN CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #BIO-CURB-KMF, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE	BENCH MARK	SCALE
Contractor_____	04/04/23	JG	4 ADDED MANHOLE SHAFT TO LINE A. ADDED LAT. A-1. ADDED LAT. B3. ADDED KRAKEN INSERT. ADDED FLOGARD.			RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'	Horizontal
Inspector_____							Vertical
Date Completed_____							

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

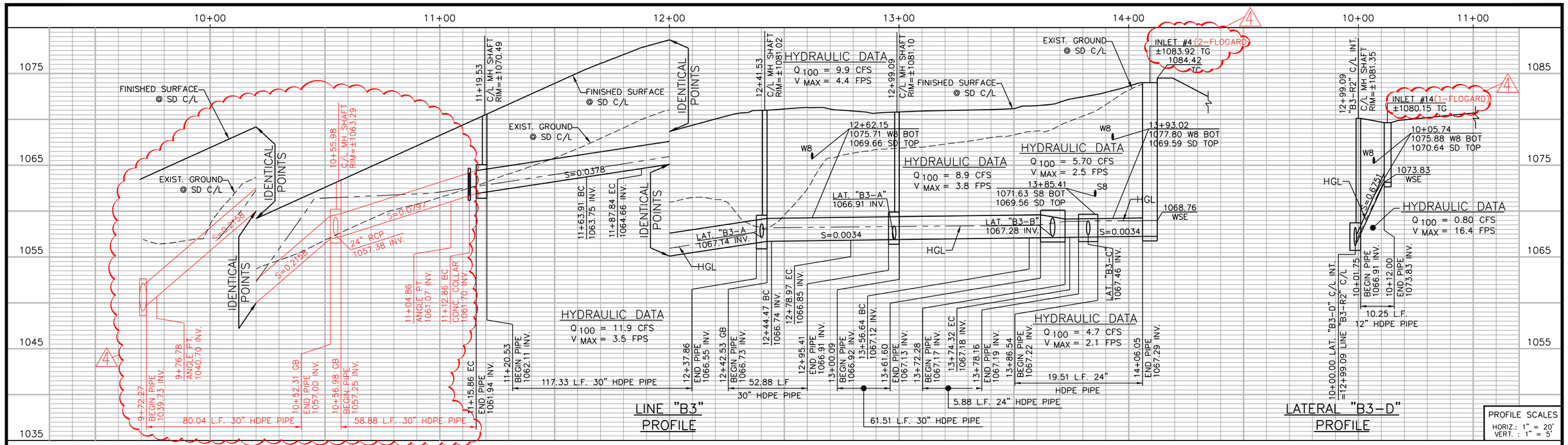
RECOMMENDED BY:_____ DATE:_____

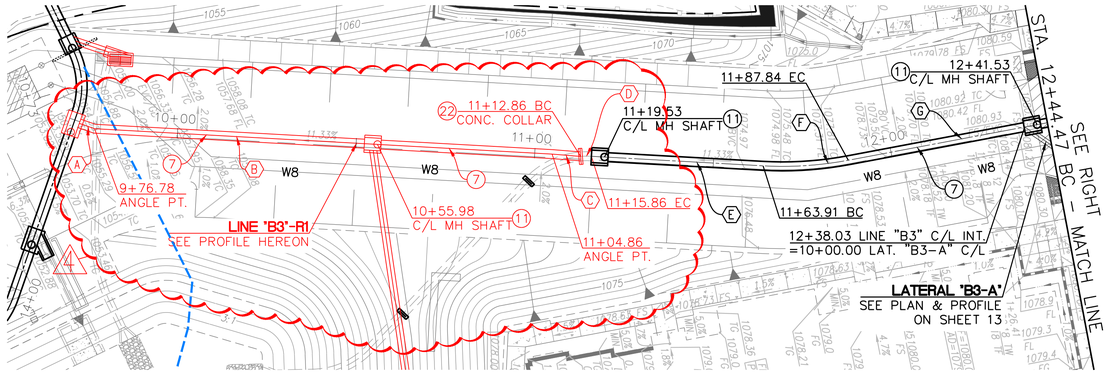
ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

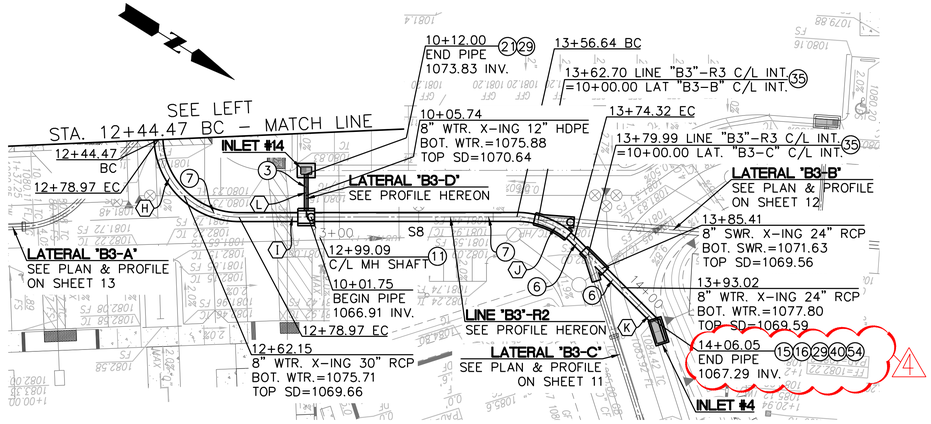
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LAT. "A1-A", LINE "B1" & LINE "B2"

9
Sheet 9 of 20





LINE "B3"-R1
PLAN



LINE "B3"-R2
PLAN

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

CONSTRUCTION NOTES

(3) CONSTRUCT 12" HDPE PIPE
(6) CONSTRUCT 24" HDPE PIPE
(7) CONSTRUCT 30" HDPE PIPE
(11) CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.
(15) CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 300.
(16) CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 311.

CONSTRUCTION NOTES

(21) CONSTRUCT CALTRANS G1 INLET PER STANDARD PLAN D73
(22) CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.
(29) CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.
(35) CONSTRUCT TRANSITION STRUCTURE NO. 3 PER RCFC & WCD STD. DWG. NO. TS303.
(40) INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS, SEE SHEET 20.
(54) INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FG08, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
(A)	N66°25'24"E	–	14.09'	–
(B)	45°21'53"	22.50'	17.81'	9.40'
(C)	N21°03'31"E	–	64.44'	–
(D)	49°41'29"	22.50'	19.51'	10.42
(E)	N70°45'00"E	–	48.05'	–
(F)	13°50'52"	99.00'	23.93'	19.02'
(G)	N56°54'08"E	–	56.63'	–
(H)	87°50'36"	22.50'	34.50'	21.67'
(I)	N30°56'28"W	–	77.58'	–
(J)	32°23'30"	22.50'	12.72'	6.54'
(K)	N14°03'48"E	–	31.73'	–
(L)	S59°03'32"W	–	10.25'	–

Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG

LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	04/04/23	JG	4 REVISE LINE B3-R1, REVISED DATA TABLE & PROFILE, ADDED FLOGARD.		
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA
R.C.E. No. 59835
Date 04/04/23

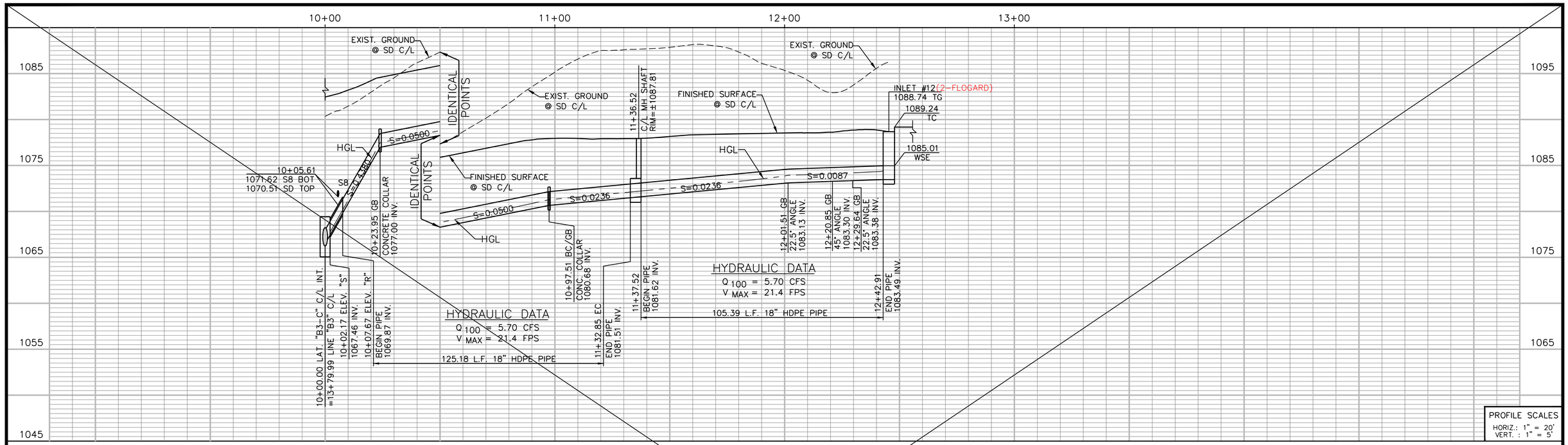
RECOMMENDED BY: _____ DATE: _____

ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

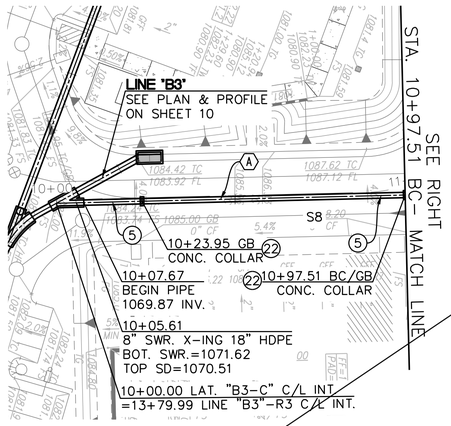
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LINE "B3"- R1 & R2

10
Sheet 10 of 20

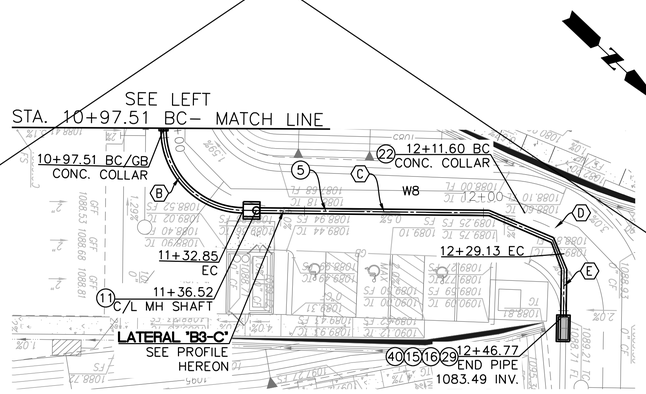


PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'

LINE "B3-C" PROFILE



LATERAL "B3-C" PLAN



LATERAL "B3-C" PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N41°29'05"E	–	97.51'	–
B	90°00'00"	22.50'	35.34''	22.50'
C	N48°30'55"W	–	48.47'	–
D	90°15'43"	11.13'	17.53'	11.18'
E	N41°44'48"E	–	17.64'	–

CONSTRUCTION NOTES

(5) CONSTRUCT 18" HDPE PIPE
(11) CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.
(15) CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 300.
(16) CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 311.
(22) CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.
(29) CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.
(40) INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LD19-4097

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

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41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor_____					
Inspector_____					
Date Completed_____					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

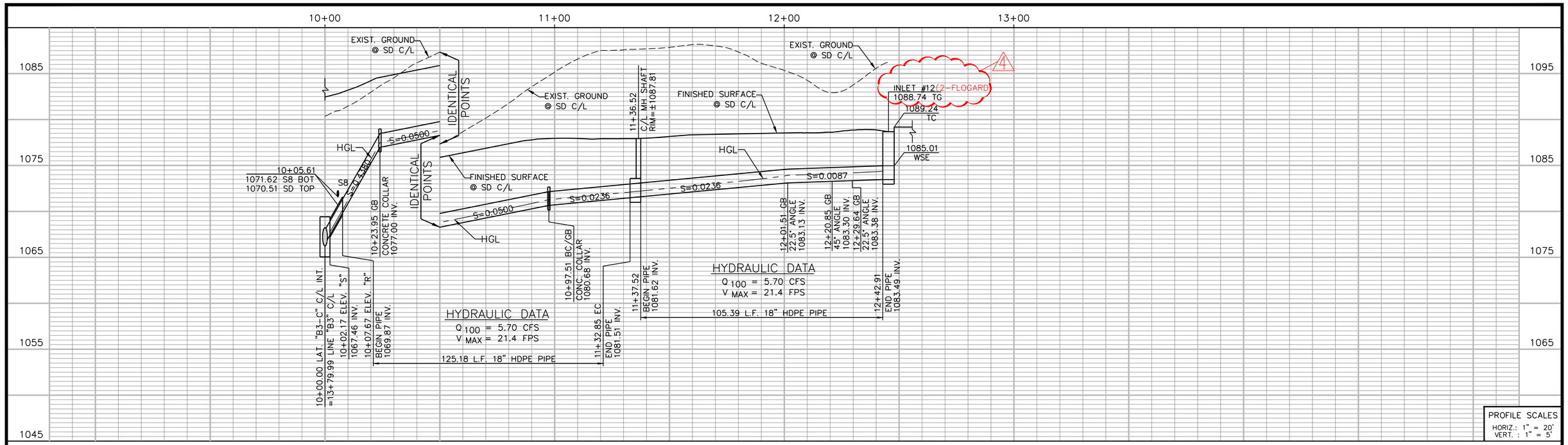
RECOMMENDED BY:_____ DATE:_____
ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

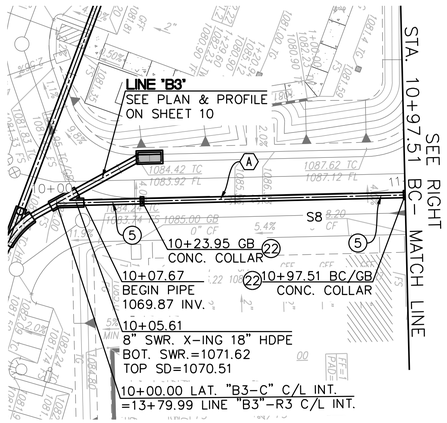
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

LATERAL "B3-C"

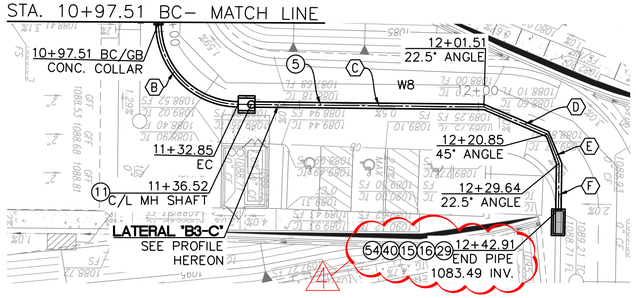
11
Sheet 11 of 20



LINE "B3-C" PROFILE



LATERAL "B3-C" PLAN



LATERAL "B3-C" PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N41°29'05"E	–	97.51'	–
B	90°00'00"	22.50'	35.34''	22.50'
C	N48°30'55"W	–	63.99'	–
D	N26°00'54"W	–	19.34'	–
E	N19°14'48"E	–	8.79'	–
F	N41°41'33"E	–	13.27'	–

CONSTRUCTION NOTES

(5) CONSTRUCT 18" HDPE PIPE

(11) CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.

(15) CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 300.

(16) CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 311.

(22) CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.

(29) CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.

(40) INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.

(54) INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FGO8, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.

LD19-4097

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	12/16/21	JG	1 REVISE LAT. B3-C STA: 12+06.60 TO STA: 12+42.26, DATA TABLE AND PROFILE.		
Inspector	04/04/23	JG	4 ADDED FLOGARD.		
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA Date 04/04/23
R.C.E. No. 59835

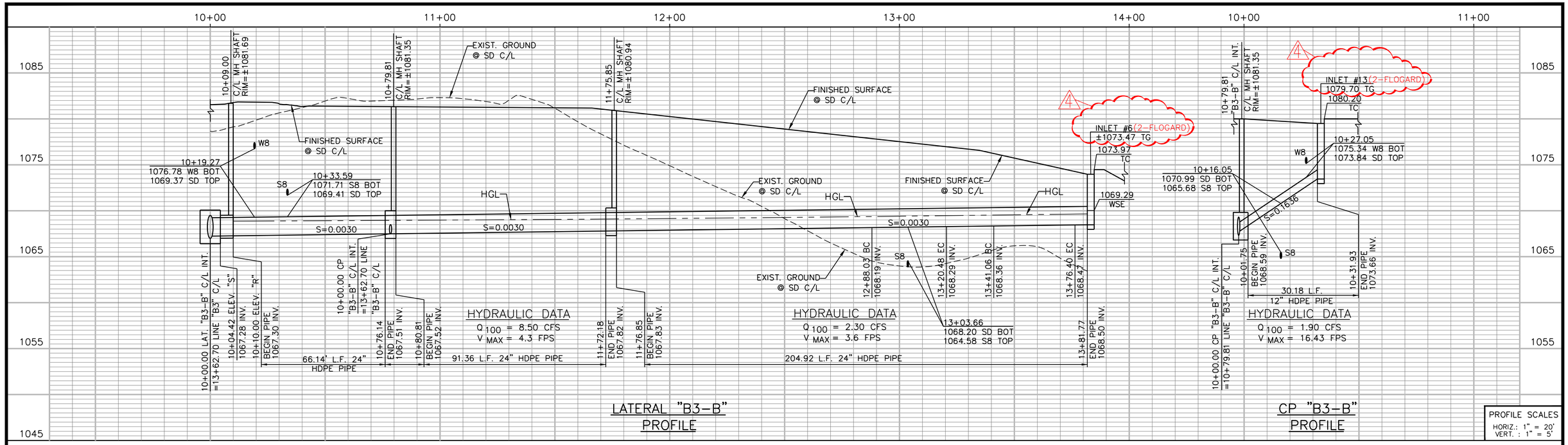
RECOMMENDED BY: _____ DATE: _____

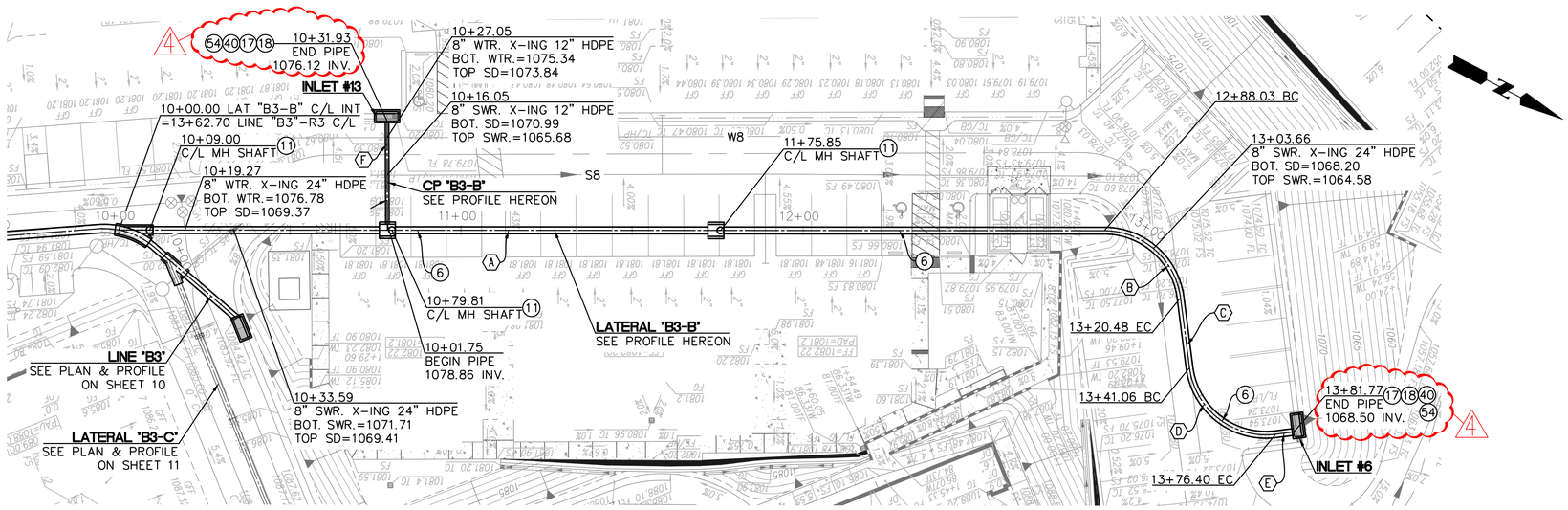
ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LATERAL "B3-C"

11A
Sheet 11A of 20





LATERAL "B3"–B
PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N26°36'11"W	–	288.03'	–
B	82°37'06"	22.50'	32.44'	19.77'
C	N56°00'55"E	–	20.58'	–
D	90°00'00"	22.50'	35.34'	22.50'
E	N33°59'05"W	–	5.38'	–
F	S63°10'57"W	–	30.18'	–

CONSTRUCTION NOTES

6 CONSTRUCT 24" HDPE PIPE

11 CONSTRUCT MANHOLE NO. 1 PER RCFC & WCD STD. DWG. NO. MH251.

17 CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 302.

18 CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 312.

40 INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.

54 INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FG08, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.

LD19-4097

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	04/04/23	JC	4 ADDED FLOGARD.		
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA
R.C.E. No. 59835
Date 04/04/23

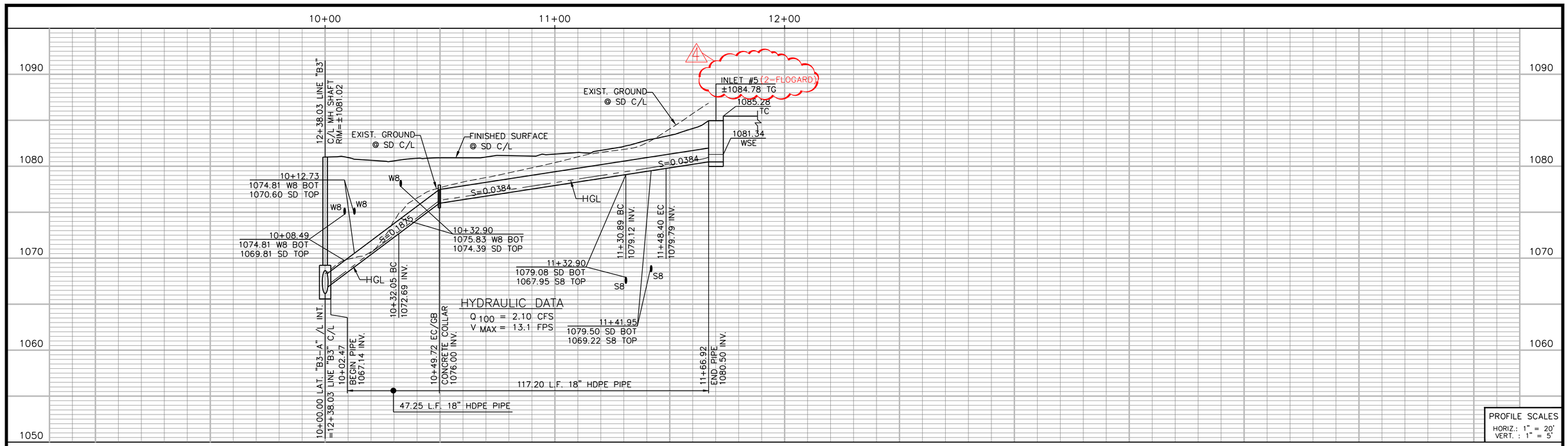
RECOMMENDED BY: _____ DATE: _____

ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

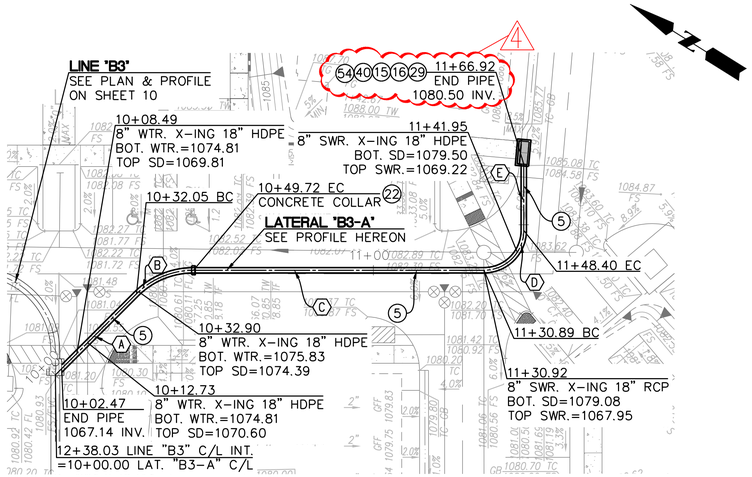
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LATERAL "B3-B"

12
Sheet 12 of 20



LATERAL "B3-A"
PROFILE

PROFILE SCALES
HORIZ.: 1" = 20'
VERT. : 1" = 5'



LATERAL "B3-A"
PLAN

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	N78°05'52"W	–	32.05'	–
B	45°00'00"	22.50'	17.67'	9.32'
C	N33°05'52"W	–	81.17'	–
D	90°00'00"	11.13'	17.51'	11.12'
E	N56°54'08"E	–	18.52'	–

CONSTRUCTION NOTES

(5) CONSTRUCT 18" HDPE PIPE
(15) CONSTRUCT CURB INLET CATCH BASIN PER RCTD STD. DWG. NO. 300.
(16) CONSTRUCT LOCAL DEPRESSION CASE "C" PER RCTD STD. DWG. NO. 311.
(22) CONSTRUCT CONCRETE COLLAR PER RCFC & WCD STD. DWG. NO. M803.
(29) CONSTRUCT SPECIAL CONNECTION TO CATCH BASIN PER RCFC & WCD STD. DWG. NO. CB 109.
(40) INSTALL BIO CLEAN FULL CAPTURE WITH THROUGH SYSTEM FOR CURB INLETS. SEE SHEET 20.
(54) INSTALL FLOGARD CATCH BASIN INSERT PER MANUFACTURE TREATMENT, MODEL #FGP-2436FG08, CONTRACTOR WILL SUBMIT SHOPE DRAWINGS.

4

LD19-4097

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	04/04/23	JG	4 ADDED FLOGARD.		
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

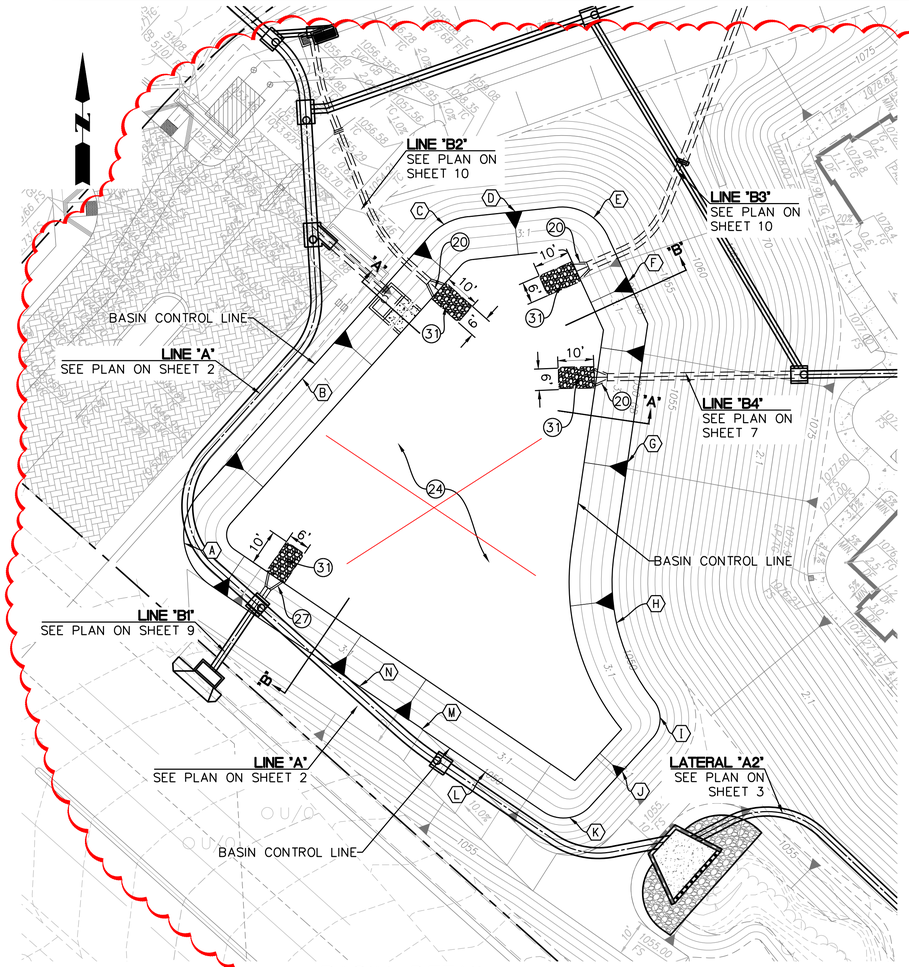
Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA Date 04/04/23
R.C.E. No. 59835

RECOMMENDED BY: _____ DATE: _____
ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
LATERAL "B3-A"

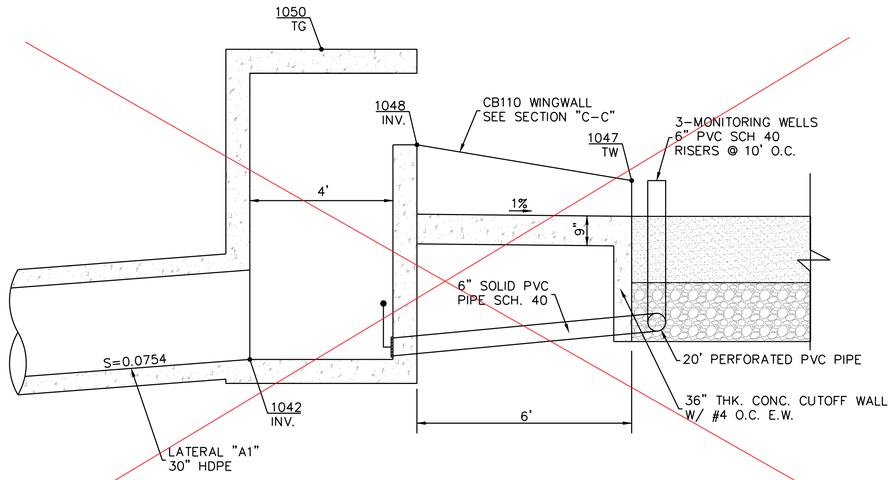
13
Sheet 13 of 20



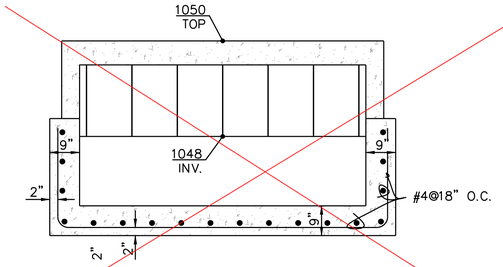
BASIN DETAIL
SCALE: 1"=20'

LINE/CURVE DATA

	DELTA/BEARING	RADIUS	LEN./DIST.	TANGENT
A	97°35'19"	17.00'	28.96	19.42'
B	N41°44'50"E	–	96.51'	–
C	42°43'32"	17.00'	12.68'	6.65'
D	N83°57'35"E	–	24.79'	–
E	71°34'42"	14.00'	17.49'	10.00'
F	N24°34'29"W	–	26.90'	–
G	N08°18'26"E	–	65.25'	–
H	47°02'49"	53.00'	43.52'	23.07'
I	81°10'07"	8.00'	11.33'	6.85'
J	N42°25'44"E	–	25.90'	–
K	81°45'10"	10.00'	14.27'	8.66'
L	N55°49'07"W	–	40.69'	–
M	N44°51'35"W	–	0.81'	–
N	N55°50'30"W	–	71.16'	–

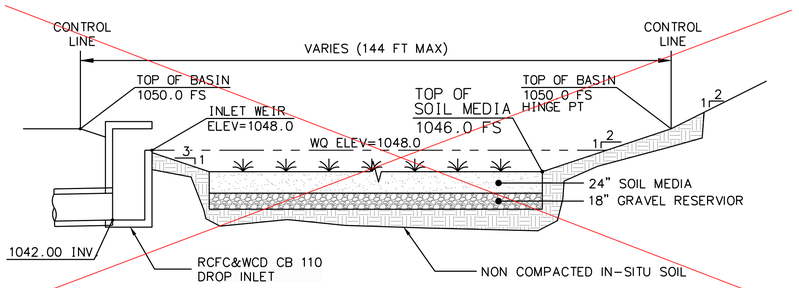


MODIFIED CB110 DETAIL
SCALE: 1"=2'
(3250 PSI CONCRETE OR EQUIVALENT)

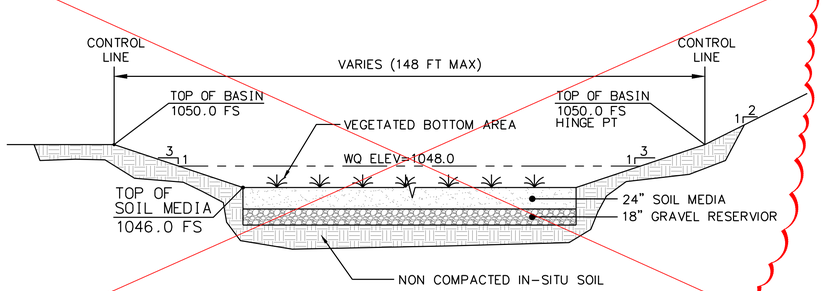


MODIFIED CB110 WINGWALL DETAIL
SCALE: 1"=2'
(3250 PSI CONCRETE OR EQUIVALENT)

NOTE: BASIN WAS NOT CONSTRUCTED DUE TO CULTURAL RESOURCES LOCATED ON SITE.



SECTION "A-A"
SCALE: 1"=10'



SECTION "B-B"
SCALE: 1"=10'

CONSTRUCTION NOTES

20 CONSTRUCT CALTRANS HDPE FLARED END SECTION PER STANDARD PLAN D94A
24 CONSTRUCT SOIL MEDIA PER RIVERSIDE COUNTY SMR LID BMP DESIGN HANDBOOK, SECTION 3.8 AND PER TYPICAL BIO-RETENTION BASIN MEDIA DETAIL.
27 CONSTRUCT CALTRANS CONCRETE FLARED END SECTION PER STANDARD PLAN D94B
31 CONSTRUCT GROUTED 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B.

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	04/04/23	JG	4 BASIN WAS NOT CONSTRUCTED.		
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

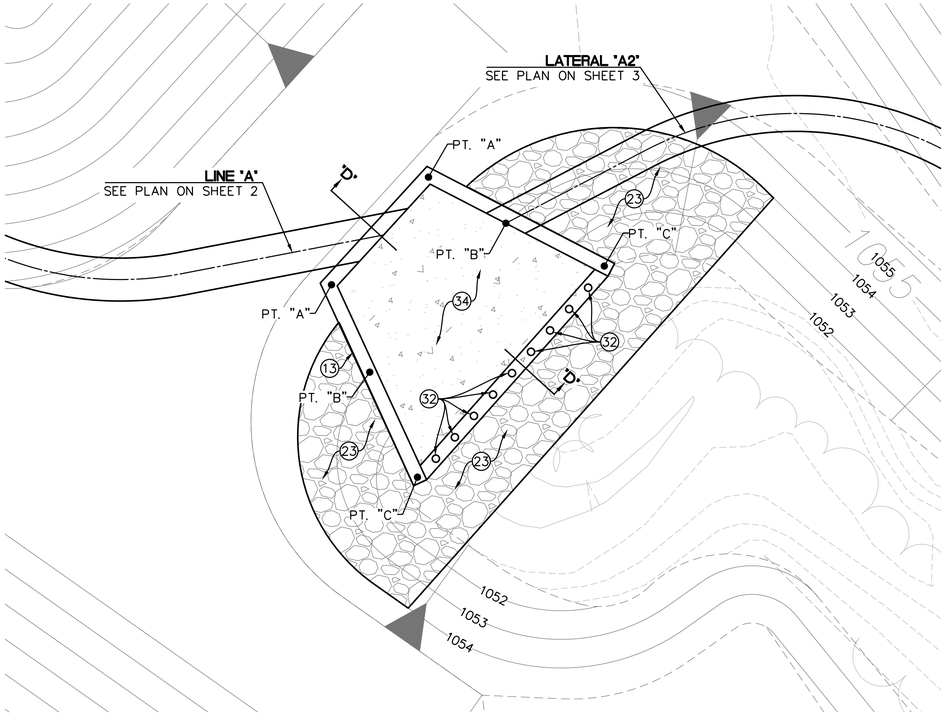
Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA Date 04/04/23
R.C.E. No. 59835

RECOMMENDED BY: _____ DATE: _____
ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
BASIN DETAIL

14
Sheet 14 of 20



WINGWALL DETAIL
SCALE: 1"=5'

	TOP OF WALL	TOP OF FOOTING
PT. "A"	1056.0	1044.0
PT. "B"	1054.0	1044.0/1047.5
PT. "C"	1052.0	1047.5

NOTES:

1. POINT B IS MIDPOINT OF WINGWALL.
2. AT POINT B PROVIDE A STEP ON FOOTING PER DETAIL AS SHOWN ON CALTRANS B3-5.

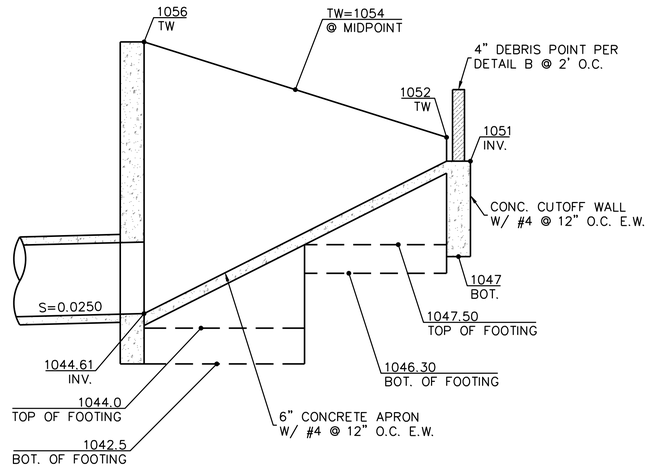
CONSTRUCTION NOTES

(13) CONSTRUCT PIPE CULVERT WINGWALLS PER CALTRANS STD. PLAN D90

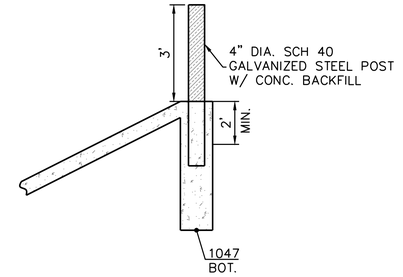
(23) CONSTRUCT 1/4 RIP-RIP PER CALTRANS SPEC. 72, METHOD B, AND DETAIL ON SHEET 15.

(32) CONSTRUCT 4" DIAMETER GALVANIZED STEEL DEBRIS POST WITH CONCRETE BACKFILL

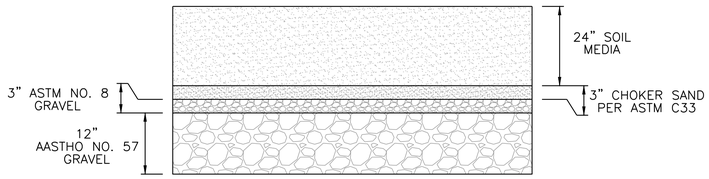
(34) CONSTRUCT CONCRETE APRON



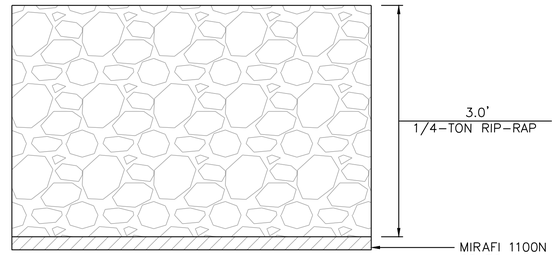
SECTION "D-D"
SCALE: 1"=3'
(3250 PSI CONCRETE OR EQUIVALENT)



DEBRIS POST-DETAIL "B"
SCALE: N.T.S.
(3250 PSI CONCRETE OR EQUIVALENT)



SOIL MEDIA & GRAVEL SECTION
SCALE: N.T.S.



1/4 TON RIP-RAP PAD SECTION
SCALE: N.T.S.

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LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor_____					
Inspector_____					
Date Completed_____					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER — JOSEPH L. CASTANEDA — NO. 59835 EXP. 12/31/23 — CIVIL — STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
JOSEPH L. CASTANEDA Date 04/04/23
R.C.E. No. 59835

RECOMMENDED BY:_____ DATE:_____

ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
WINGWALL DETAIL

15
Sheet 15 of 20

PVC LINE DATA

	PVC PIPE SIZE	BEARING	DISTANCE	*SLOPE
A	6"	N27°58'42"E	11.98'	14.7%
B	6"	N41°44'22"E	34.04'	5.0%
C	6"	N63°23'49"E	35.41'	–
D	6"	N50°58'41"W	31.17'	–
E	6"	N25°46'18"W	21.39'	–
F	8"	N72°28'21"W	17.46'	58.9%
G	8"	N60°06'30"W	41.83'	5.0%
H	6"	N60°06'30"W	44.33'	–
I	6"	N41°57'30"W	6.31'	–
J	6"	N60°06'30"W	46.94'	5.0%
K	6"	N46°38'33"W	8.38'	5.0%
L	6"	N64°44'18"W	14.20'	21.07%
M	6"	N40°12'06"W	31.94'	5.0%
N	6"	N48°15'12"W	25.77'	5.0%
O	6"	N60°07'57"W	28.41'	–
P	6"	N48°15'12"W	12.52'	–
Q	6'	N53°41'37"W	7.03'	–
R	6"	N48°15'12"W	53.18'	5.0%
S	6"	N84°52'26"W	31.38'	–
T	6"	N05°07'51"E	10.00'	3.0%
U	6"	N63°31'38"E	13.68'	10.2%
V	6"	N41°29'05"E	25.13	10.2%
W	6"	N48°33'03"W	75.60'	–
X	6'	N10°21'09"W	23.99'	–
Y	6'	N41°29'05"E	31.26'	–
Z	6"	N59°03'32"E	44.32'	40.5%
A1	6"	N49°42'18"E	29.00'	–
B1	6"	N56°54'12"E	16.08'	3.7%
C1	6"	N41°29'05"E	25.88'	–
D1	6"	N61°54'08"E	53.53'	2.8%
E1	6"	N56°54'08"E	36.01'	13.8%
F1	6"	N70°08'37"W	13.53'	31.0%
G1	6"	N46°39'37"E	16.63'	–
H1	6"	N61°54'08"E	14.17'	–
I1	6"	N56°51'30"E	60.44'	4.0%
J1	6"	N68°20'03"W	9.53'	–
K1	6"	N63°23'49"E	14.14'	70.5%
L1	6"	N48°15'12"W	53.18'	–
M1	6"	N47°32'42"W	61.50'	–
N1	6"	N61°54'08"E	49.46'	–
O1	6"	N33°08'30"W	8.37'	–
P1	6"	N33°08'35"W	5.99'	–
Q1	6"	N28°05'52"W	6.00'	–
R1	6"	N28°05'52"W	6.00'	–
S1	6"	N28°05'52"W	6.00'	–
T1	6"	N61°54'08"E	9.43'	–
U1	6"	N05°07'34"E	7.25'	–
V1	6"	S05°07'34"W	7.50'	–
W1	6"	S41°44'48"W	7.50'	–
X1	6'	S41°44'48"W	7.50'	–
Y1	6'	S41°44'48"W	7.50'	–
Z1	6"	S41°44'48"W	7.50'	–
A2	6"	S41°44'48"W	6.00'	–
B2	6"	S41°44'48"W	6.00'	–
C2	6"	S49°47'54"W	6.00'	–
D2	6"	S49°47'54"W	6.00'	–
E2	6"	S29°53'30"W	6.00'	–
F2	6"	S29°53'30"W	6.00'	–
G2	6"	S29°53'30"W	6.00'	–
H2	6"	S29°53'30"W	5.61'	–
I2	6"	S63°11'04"W	5.68'	–
J2	6"	N48°15'38"W	6.27'	–
K2	6"	N48°15'38"W	6.00'	–
L2	6"	N48°15'38"W	6.00'	–
M2	6"	N79°38'51"E	6.00'	–
N2	6"	S48°30'55"E	7.50'	–
O2	6"	S48°30'55"E	8.37'	–
P2	6"	S33°05'52"E	30.85'	4.29'
Q2	6"	S07°41'52"W	3.00'	–
R2	6"	S82°18'07"E	21.76'	–
S2	6"	S07°41'52"W	2.91'	–
T2	6"	S23°16'45"E	56.47'	–
U2	6"	S28°19'18"E	58.56'	–
V2	6"	N61°36'35"E	95.32'	18.09'
W2	6"	S24°59'09"E	34.92'	–
X2	6"	N63°11'20"E	4.85'	–
Y2	6"	S26°52'03"E	84.47'	–
Z2	6"	N63°11'03"E	12.30'	–
A3	6"	S48°48'41"W	11.96'	–
B3	6"	N66°43'15"E	6.66'	–
C3	6"	N28°19'18"W	6.00'	–

*PVC PIPE SLOPE IS 1% UNLESS OTHERWISE STATED.

NOTE TO CONTRACTOR:

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Underground Service Alert

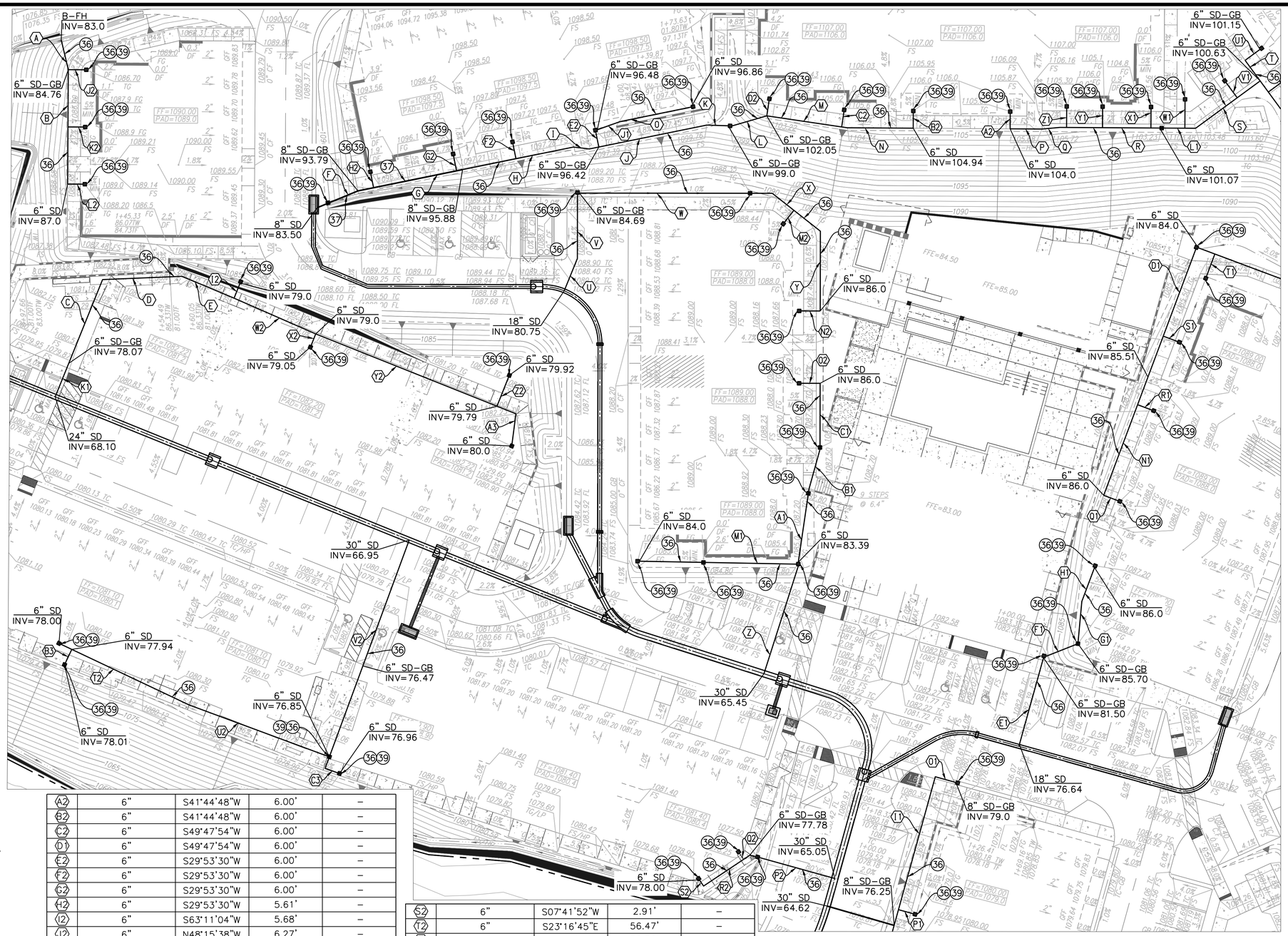
811

TWO WORKING DAYS BEFORE YOU DIG

GRAPHIC SCALE

20' 0 10' 20' 40'

1" = 20'



CONSTRUCTION NOTES

36 CONSTRUCT 6-INCH SCH 40 PVC PIPE

37 CONSTRUCT 8-INCH SCH 40 PVC PIPE

39 CONSTRUCT NDS 12" CATCH BASIN PER MODEL #1200 WITH A 12" SQUARE ATRIUM GRATE PER MODEL #1280 AS SHOWN ON PLANS.

LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor_____					
Inspector_____					
Date Completed_____					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of

JOSEPH L. CASTANEDA Date 04/04/23

R.C.E. No. 59835

RECOMMENDED BY:_____ DATE:_____

ACCEPTED BY:_____ DATE:_____

PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

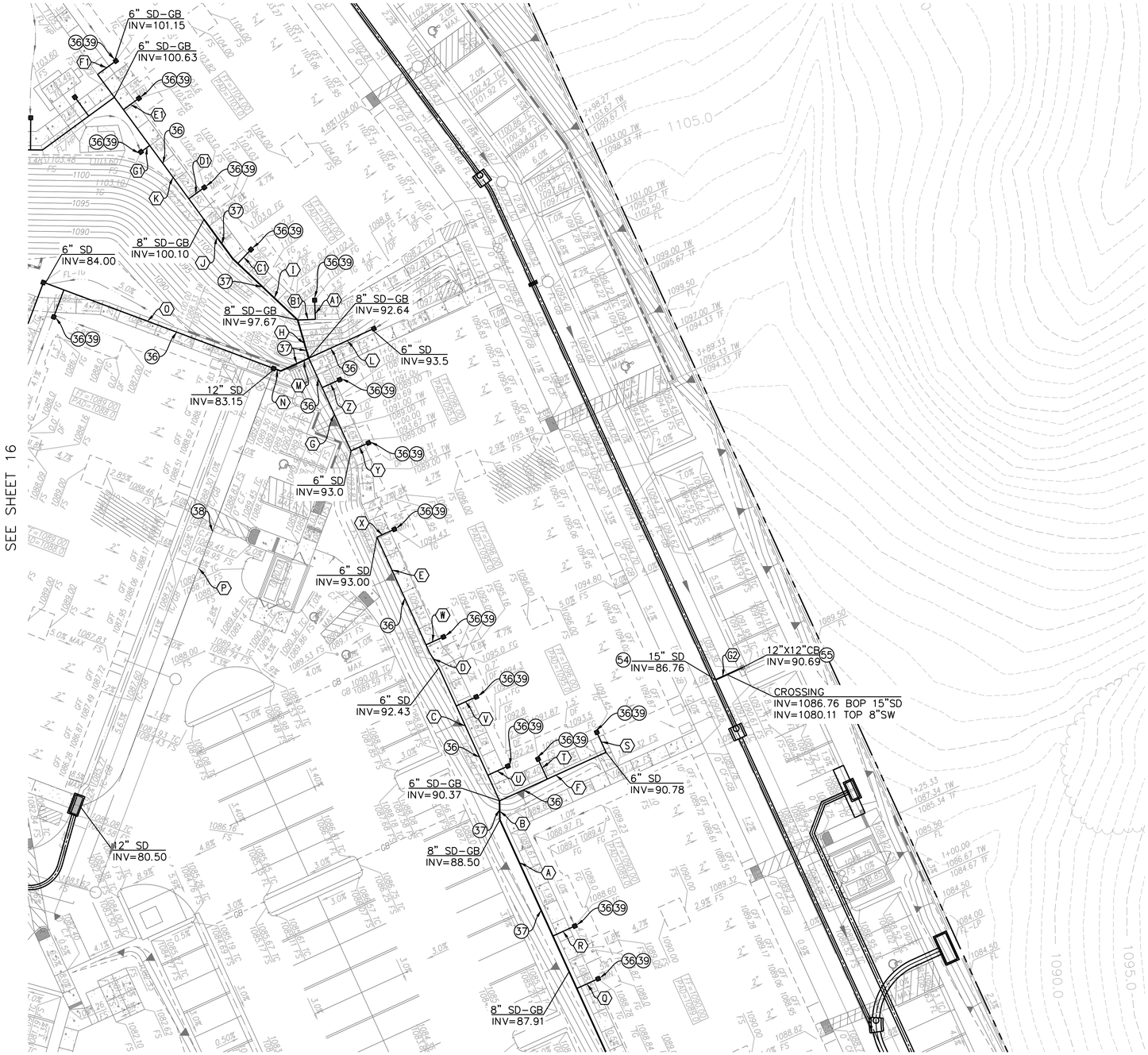
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

UNDERDRAIN PLAN SHEET

16

Sheet 16 of 20



PVC LINE DATA

	PVC PIPE SIZE	BEARING	DISTANCE	*SLOPE
A	8"	N16°51'57"E	58.78'	–
B	8"	N40°24'54"E	6.67'	28.0%
C	6"	N16°51'57"E	51.43'	4.0%
D	6"	N10°02'08"E	6.28'	–
E	6"	N16°52'13"E	44.69'	–
F	6"	N73°08'03"W	41.20'	–
G	6"	N16°51'57"E	35.84'	–
H	8"	N25°13'08"E	14.0'	35.9%
I	8"	N05°14'58"W	31.43'	5.0%
J	8"	N05°07'51"E	17.18'	–
K	6"	N05°07'51"E	63.33'	–
L	6"	N73°08'03"W	24.43'	3.5%
M	8"	N73°08'03"W	10.85'	74.4%
N	8"	N28°05'52"W	1.91'	74.4%
O	6"	N28°05'52"W	85.02'	–
P	12"	N61°54'08"E	148.79'	1.5%
Q	6"	N73°08'03"W	7.50'	–
R	6"	N73°08'03"W	7.75'	–
S	6"	S16°51'57"W	7.00'	–
T	6"	S16°51'57"W	7.00'	–
U	6"	N73°07'47"W	7.00'	–
V	6"	N73°07'47"W	7.00'	–
W	6"	N73°07'47"W	6.00'	–
X	6"	S73°07'47"E	6.00'	–
Y	6"	N73°08'03"W	6.00'	–
Z	6"	N73°08'03"W	6.00'	–
A1	6"	S39°09'05"W	6.01'	–
B1	6"	S50°50'55"E	6.23'	–
C1	6"	S84°45'02"W	6.00'	–
D1	6"	N84°52'09"W	6.00'	–
E1	6"	N84°52'09"W	6.00'	–
F1	6"	N84°52'26"W	7.25'	–
G1	6"	S84°53'00"E	3.08'	–
G2	8"	S73°08'03"E	10.38'	37.8%

*PVC PIPE SLOPE IS 1% UNLESS OTHERWISE STATED.

CONSTRUCTION NOTES

36 CONSTRUCT 6-INCH SCH 40 PVC PIPE

37 CONSTRUCT 8-INCH SCH 40 PVC PIPE

38 CONSTRUCT 12-INCH SCH 40 PVC PIPE

39 CONSTRUCT NDS 12" CATCH BASIN PER MODEL #1200 WITH A 12" SQUARE ATRIUM GRATE PER MODEL #1280 AS SHOWN ON PLANS.

54 NSTALL 15"X8" ADS DUAL WALL FABRICATED REDUCING TEE PART# 1562AN, AND "H" PROFILE ST COUPLER PART # 1566AA.

55 INSTALL 12"X12" BROOKS CATCH BASIN PART# 1212CB WITH STEEL GATE PART# 1212.

NOTE TO CONTRACTOR:

1. THE CONSTRUCTION AND INSTALLATION OF 6", 8" AND 12" SCHEDULE 40 PVC PIPE SHALL INCLUDE BUT NOT BE LIMITED TO PIPE, TRENCHING, BACKFILL, FITTINGS, ADHESIVES, MATERIALS, APPURTENANCES AND LABOR TO ENSURE SYSTEM IS COMPLETE AND OPERATIONAL. THE CONTRACTOR SHALL ENSURE THAT THE MANUFACTURER'S SPECIFICATIONS ARE IMPLEMENTED.

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GRAPHIC SCALE
20' 0 10' 20' 40'
1" = 20'

LD19-4097

Underground Service Alert
811
TWO WORKING DAYS BEFORE YOU DIG

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor					
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

RECOMMENDED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

ACCEPTED BY: _____ DATE: _____

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
UNDERDRAIN PLAN SHEET

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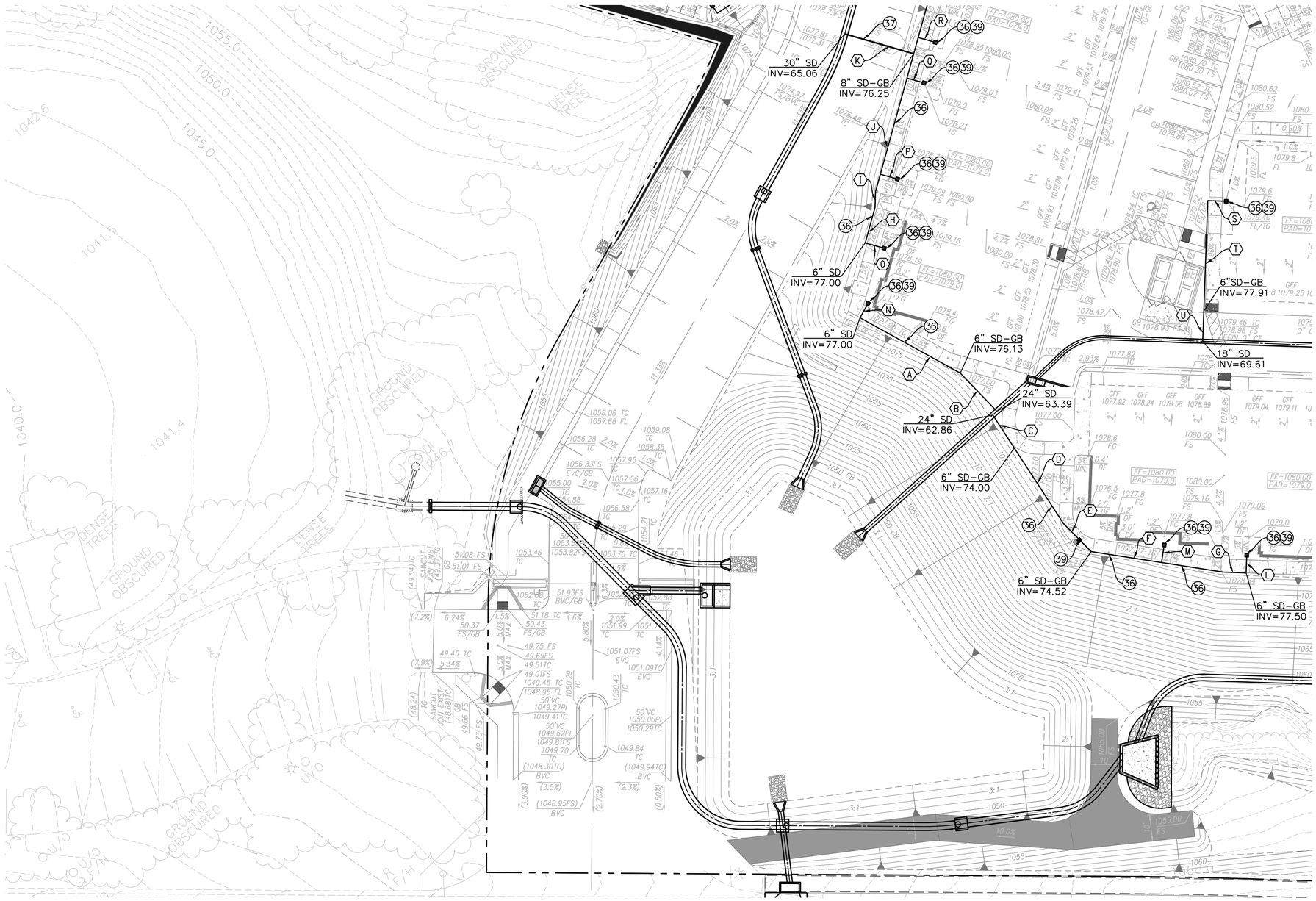
Sheet 17 of 20

SEE SHEET 16



SEE SHEET 19

PVC LINE DATA

	PVC PIPE SIZE	BEARING	DISTANCE	*SLOPE
A	6"	N19°42'56"W	43.55'	2.5%
B	6"	N02°23'32"W	18.10'	73.5%
C	6"	N08°18'26"E	17.0'	68%
D	6"	N08°18'26"E	34.27'	–
E	6"	N03°15'29"W	15.0'	–
F	6"	N39°46'39"W	50.84'	5.0%
G	6"	N46°34'47"W	8.70'	5.0%
H	6"	N56°51'25"E	14.05'	–
I	6"	N42°54'04"E	5.88'	–
J	6"	N56°51'30"E	54.53'	–
K	8"	N32°31'41"W	27.31'	40.9%
L	6"	S43°25'13"W	6.00'	–
M	6"	S50°13'21"W	6.00'	–
N	6"	S70°17'04"W	5.50'	–
O	6"	N33°07'35"W	6.75'	–
P	6"	N33°08'35"W	5.99'	–
Q	6"	N33°07'35"W	5.99'	–
R	6"	N33°08'35"W	5.99'	–
S	6"	N33°08'35"W	7.00	–
T	6"	N33°08'35"W	42.01'	–
U	6"	N33°08'35"W	11.50'	72.17%

*PVC PIPE SLOPE IS 1% UNLESS OTHERWISE STATED.

CONSTRUCTION NOTES

(36) CONSTRUCT 6-INCH SCH 40 PVC PIPE

(37) CONSTRUCT 8-INCH SCH 40 PVC PIPE

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Underground Service Alert 811
TWO WORKING DAYS BEFORE YOU DIG

LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor					
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81, LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84"

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

RECOMMENDED BY: _____ DATE: _____

ACCEPTED BY: _____ DATE: _____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
UNDERDRAIN PLAN SHEET

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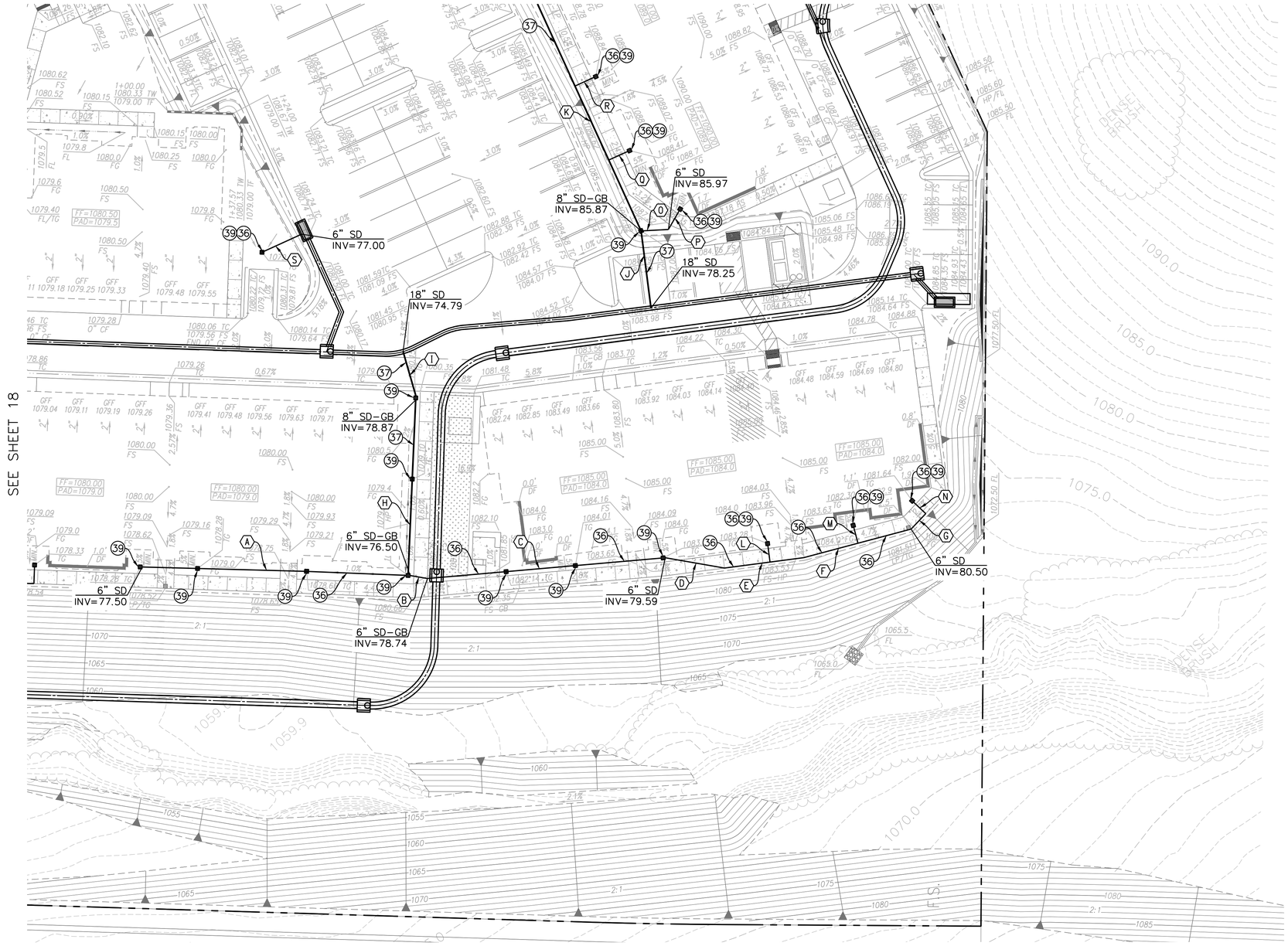
Sheet 18 of 20



PVC LINE DATA

⟨ ⟩	PVC PIPE SIZE	BEARING	DISTANCE	*SLOPE
⟨A⟩	6"	N46°20'08"W	36.55'	–
⟨B⟩	6"	N38°45'09"W	6.35'	35%
⟨C⟩	6"	N53°37'05"W	84.78'	–
⟨D⟩	6"	N38°43'53"W	21.75'	–
⟨E⟩	6"	N56°06'01"W	28.90'	–
⟨F⟩	6"	N63°31'02"W	40.18'	–
⟨G⟩	6"	N84°45'48"E	7.70'	–
⟨H⟩	8"	N43°51'50"E	62.77'	–
⟨I⟩	8"	N25°19'47"E	16.65'	6.4%
⟨J⟩	8"	N34°04'30"E	28.12'	27%
⟨K⟩	8"	N16°51'57"E	102.11'	2%
⟨L⟩	6"	S33°53'59"W	6.00'	–
⟨M⟩	6"	S26°28'58"W	5.93'	–
⟨N⟩	6"	S05°16'51"E	6.00'	–
⟨O⟩	6"	S51°31'39"E	9.88'	–
⟨P⟩	6"	S71°21'26"W	7.78'	–
⟨Q⟩	6"	N73°08'03"W	7.50'	–
⟨R⟩	6"	N73°08'03"W	7.50'	–
⟨S⟩	6"	S73°08'09"E	15.74'	10.80%

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CONSTRUCTION NOTES

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Inspector_____					
Date Completed_____					

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SCALE
Horizontal
Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

RECOMMENDED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

ACCEPTED BY:_____ DATE:_____

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.
UNDERDRAIN PLAN SHEET

19
Sheet 19 of 20

BIO CLEAN FULL CAPTURE FILTER WITH TROUGH SYSTEM

FOR USE IN CURB INLETS

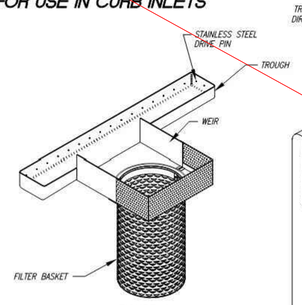


FIGURE 1:
DETAIL OF PARTS

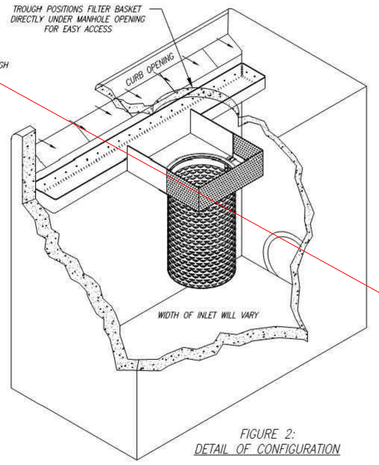


FIGURE 2:
DETAIL OF CONFIGURATION

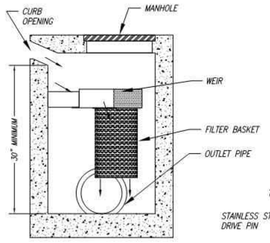


FIGURE 4:
DETAIL OF PROFILE

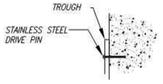


FIGURE 3:
DETAIL OF MOUNTING

MODEL NUMBER	TREATMENT FLOW (cfs)*	SOLIDS STORAGE CAPACITY (cu ft)
BIO-CURB-FULL-24	2.85	1.40
BIO-CURB-FULL-12	2.85	0.70

*SEE PAGE 2 FOR EXPLANATION OF FLOW RATES

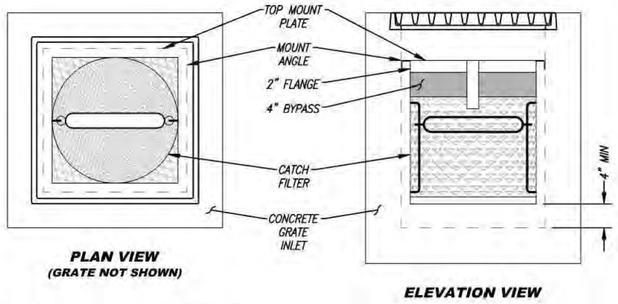
NOTES:

1. TROUGH SYSTEM PROVIDES FOR ENTIRE COVERAGE OF INLET OPENING SO TO DIVERT ALL FLOW TO FILTER.
2. TROUGH SYSTEM MANUFACTURED FROM MARINE GRADE FIBERGLASS, GEL COATED FOR UV PROTECTION.
3. SYSTEM ATTACHED TO THE CATCH BASIN WITH NON-CORROSIVE HARDWARE.
4. FILTER MANUFACTURED OF 100% STAINLESS STEEL.
5. FILTER MADE OF NON-CLOGGIN SCREEN WITH 4.7 MM OPENINGS AND MEETS FULL CAPTURE REQUIREMENTS.
6. FILTER CAN BE FITTED WITH HYDROCARBON ABSORBENT BOOM
7. FILTER IS LOCATED DIRECTLY UNDER THE MANHOLE FOR EASY REMOVAL AND MAINTENANCE.
8. LENGTH OF TROUGH CAN VARY FROM 2' TO 30'
9. OTHER STANDARD AND CUSTOM MODEL SIZES AVAILABLE - CONTACT BIO CLEAN FOR MORE INFORMATION.
10. CONSIDERS A SAFETY FACTOR OF 2.0
11. BYPASS IS FACILITATED VIA OVERFLOW OF THE TROUGH SYSTEM AND IS EQUAL TO THE CAPACITY OF THE CURB OPENING
12. STORAGE CAPACITY BASED ON THE BASKET HALF FULL.
13. ADDITIONAL TREATMENT AND STORAGE CAPACITY CAN BE ACHIEVED BY UTILIZING MULTIPLE FILTER BASKETS.

DRAWING: BIO CLEAN CURB INLET FILTER DETAILS		MEETS FULL CAPTURE REQUIREMENTS	
TREATMENT FLOW RATE: 2.85 cfs		MODEL #: BIO-CURB-FULL	
WARRANTY: 1 YEAR MANUFACTURER'S		PROJECT:	
BIO CLEAN ENVIRONMENTAL SERVICES, INC. 398 VIA EL CENTRO, OCEANSIDE CA 92058 PHONE: 760-433-7640 FAX: 760-433-3176		REVISIONS:	DATE:
		REVISIONS:	DATE:
DATE: 10/12/2017	SCALE: NTS	REVISIONS:	DATE:
DRAFTER: M.C.P.	UNITS = INCHES	REVISIONS:	DATE:

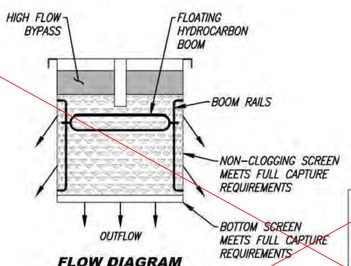
Bio Clean
A Forterra Company

PAGE 1



PLAN VIEW
(GRATE NOT SHOWN)

ELEVATION VIEW



FLOW DIAGRAM

INSTALLATION NOTES:

1. ALL HARDWARE, FLANGE, FRAME, SCREENS SHALL BE STAINLESS STEEL.
2. HYDROCARBON BOOM SHALL BE 2" DIAMETER AND CONNECTED, MECHANICALLY TO THE FILTER FRAME WITH RAILS ALLOWING IT TO FLOAT ON THE WATER SURFACE REGARDLESS OF HEIGHT.
3. SEE PERFORMANCE REPORTS IN MANUFACTURES SPECIFICATIONS.
4. OTHER STANDARD AND CUSTOM MODEL SIZES AVAILABLE - CONTACT BIO CLEAN FOR MORE INFORMATION.
5. BASED ON 37% OPEN AREA.
6. CONSIDERS A SAFETY FACTOR OF 2.0.
7. CONSIDERS A LOCAL DEPRESSION PONDING DEPTH OF 6 INCHES..
8. STORAGE CAPACITY BASED ON THE BASKET HALF FULL.
9. CONCRETE STRUCTURES SOLD SEPARATELY.

1:15 SCALE

MODEL #	TREATMENT FLOW RATE (CFS)	BYPASS FLOW (CFS)	SOLIDS STORAGE CAPACITY (CF)
BIO-GRATE-KMF 12-12-12	0.97	1.55	0.14
BIO-GRATE-KMF 18-18-12	1.86	3.68	0.35
BIO-GRATE-KMF 26-26-12	2.78	4.83	0.60
BIO-GRATE-KMF 24-40-12	6.71	6.59	1.04
BIO-GRATE-KMF 26-26-24	9.49	4.83	1.80
BIO-GRATE-KMF 24-40-24	13.53	6.59	3.12
BIO-GRATE-KMF 36-36-24	17.14	7.60	4.45

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GRATE INLET FILTER
FULL CAPTURE
STANDARD DETAIL

BIO CLEAN FULL CAPTURE FILTER WITH TROUGH SYSTEM

FOR USE IN CURB INLETS WITH WINGS

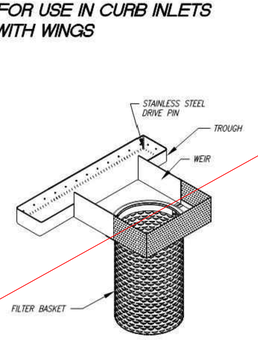

FIGURE 1:
DETAIL OF PARTS

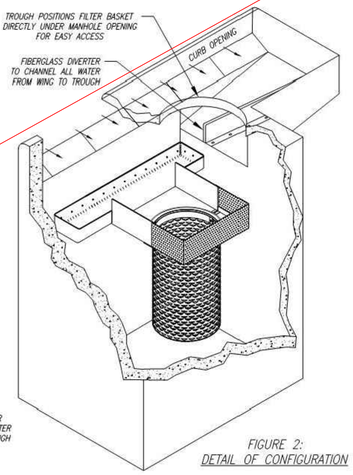

FIGURE 2:
DETAIL OF CONFIGURATION

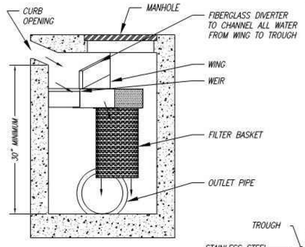

FIGURE 4:
DETAIL OF PROFILE

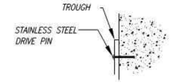

FIGURE 3:
DETAIL OF MOUNTING

NOTES:

1. TROUGH SYSTEM PROVIDES FOR ENTIRE COVERAGE OF INLET OPENING SO TO DIVERT ALL FLOW TO FILTER.
2. TROUGH SYSTEM MANUFACTURED FROM MARINE GRADE FIBERGLASS, GEL COATED FOR UV PROTECTION.
3. SYSTEM ATTACHED TO THE CATCH BASIN WITH NON-CORROSIVE HARDWARE.
4. FILTER MANUFACTURED OF 100% STAINLESS STEEL.
5. FILTER MADE OF NON-CLOGGIN SCREEN WITH 4.7 MM OPENINGS AND MEETS FULL CAPTURE REQUIREMENTS.
6. FILTER CAN BE FITTED WITH HYDROCARBON ABSORBENT BOOM
7. FILTER IS LOCATED DIRECTLY UNDER THE MANHOLE FOR EASY REMOVAL AND MAINTENANCE.
8. LENGTH OF TROUGH CAN VARY FROM 2' TO 30'
9. OTHER STANDARD AND CUSTOM MODEL SIZES AVAILABLE - CONTACT BIO CLEAN FOR MORE INFORMATION.
10. CONSIDERS A SAFETY FACTOR OF 2.0
11. BYPASS IS FACILITATED VIA OVERFLOW OF THE TROUGH SYSTEM AND IS EQUAL TO THE CAPACITY OF THE CURB OPENING
12. STORAGE CAPACITY BASED ON THE BASKET HALF FULL.
13. ADDITIONAL TREATMENT AND STORAGE CAPACITY CAN BE ACHIEVED BY UTILIZING MULTIPLE FILTER BASKETS.

DRAWING: BIO CLEAN CURB INLET FILTER DETAILS		MEETS FULL CAPTURE REQUIREMENTS	
TREATMENT FLOW RATE: 2.85 cfs		MODEL #: BIO-CURB-FULL	
WARRANTY: 1 YEAR MANUFACTURER'S		PROJECT:	
BIO CLEAN ENVIRONMENTAL SERVICES, INC. 398 VIA EL CENTRO, OCEANSIDE CA 92058 PHONE: 760-433-7640 FAX: 760-433-3176		REVISIONS:	DATE:
		REVISIONS:	DATE:
DATE: 10/12/2017	SCALE: NTS	REVISIONS:	DATE:
DRAFTER: M.C.P.	UNITS = INCHES	REVISIONS:	DATE:

Bio Clean
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PAGE 3

Underground Service Alert
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LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor	04/04/23	JG	1⚠ VOID SHEET, SEE SHEET 20A.		
Inspector					
Date Completed					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6' WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

RECOMMENDED BY:_____ DATE:_____

ACCEPTED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

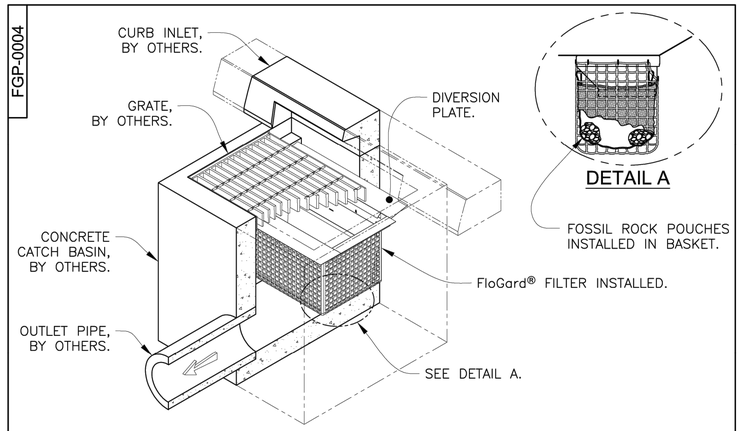
RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

BIO CLEAN KRAKEN DETAIL

20

Sheet 20 of 20

FGP-0004



SPECIFIER CHART

MODEL NO. STANDARD DEPTH	STANDARD & SHALLOW DEPTH (Data in these columes is the same for both STANDARD & SHALLOW versions)			STANDARD DEPTH -20 Inches-		MODEL NO. SHALLOW DEPTH	SHALLOW DEPTH -12 Inches-	
	INLET ID Inside Dimension (inch x inch)	GRATE OD Outside Dimension (inch x inch)	TOTAL BYPASS CAPACITY (cu. ft. / sec.)	SOLIDS STORAGE CAPACITY (cu. ft.)	FILTERED FLOW (cu. ft. / sec.)		SOLIDS STORAGE CAPACITY (cu. ft.)	FILTERED FLOW (cu. ft. / sec.)
FGP-1633FGO	16 X 33	18 X 36	7.0	2.5	1.7	FGP-1633FGO8	1.4	1.1
FGP-1836FGO	18 X 36	18 X 40	6.9	2.3	1.6	FGP-1836FGO8	1.3	.9
FGP-2234FGO	22 X 34	24 X 36	8.1	3.6	2.1	FGP-2234FGO8	2.1	1.4
FGP-2436FGO	24 X 36	24 X 40	8.0	3.4	2.0	FGP-2436FGO8	1.95	1.15
FGP-48FGO	48 X 48	20 X 54	6.3	2.2	1.5	FGP-48FGO8	1.25	.85

NOTES:

1. Filter insert shall have a high flow bypass feature.
2. Filter support frame shall be constructed from stainless steel Type 304.
3. Filter medium shall be *Fossil Rock ™*, installed and maintained in accordance with manufacturer specifications.
4. Storage capacity reflects 80% of maximum solids collection prior to impeding filtering bypass.

FloGard®
Catch Basin Insert Filter
Combination Inlet Style
Inlet Filtration

Oldcastle® Stormwater Solutions
7921 Southpark Plaza, Suite 200 | Littleton, CO | 80120 | Ph: 800.579.8819 | oldcastlestormwater.com

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DRAWING NO.	REV.	ECO	DATE	
FGP-0004	A	ECO-0127 JPR 5/18/15	JPR 1/25/13	SHEET 1 OF 1

KRAKEN MEDIA FILTER WITH TROUGH SYSTEM

FOR USE IN CURB INLETS

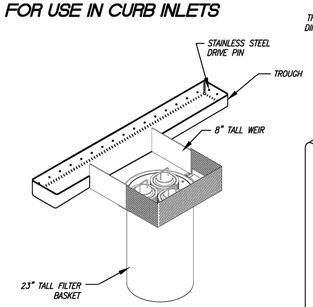

FIGURE 1: DETAIL OF PARTS

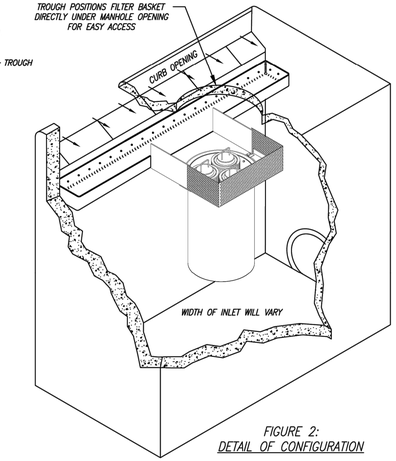

FIGURE 2: DETAIL OF CONFIGURATION

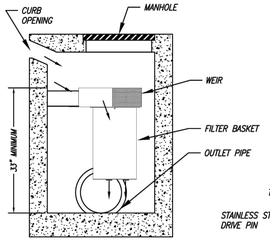

FIGURE 3: DETAIL OF PROFILE

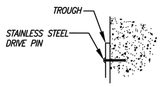

FIGURE 4: DETAIL OF MOUNTING

*SEE PAGE 2 FOR EXPLANATION OF FLOW RATES

(QTY) TROUGH LENGTH (ft)
--

NOTES:
1. TROUGH SYSTEM PROVIDES FOR ENTIRE COVERAGE OF INLET OPENING SO TO DIVERT ALL FLOW TO FILTER.
2. TROUGH SYSTEM MANUFACTURED FROM MARINE GRADE FIBERGLASS, GEL COATED FOR UV PROTECTION.
3. SYSTEM ATTACHED TO THE CATCH BASIN WITH NON-CORROSIVE HARDWARE.
4. FILTER MANUFACTURED OF 100% STAINLESS STEEL.
5. UTILIZES KRAKEN REUSABLE MEMBRANE FILTER CARTRIDGES
6. FILTER IS LOCATED DIRECTLY UNDER THE MANHOLE FOR EASY REMOVAL AND MAINTENANCE.
7. LENGTH OF TROUGH CAN VARY FROM 2' TO 30'
8. OTHER STANDARD AND CUSTOM MODEL SIZES AVAILABLE – CONTACT BIO CLEAN FOR MORE INFORMATION.
9. BYPASS IS FACILITATED VIA OVERFLOW OF THE TROUGH SYSTEM AND IS EQUAL TO THE CAPACITY OF THE CURB OPENING
10. STORAGE CAPACITY BASED ON THE BASKET HALF FULL.
11. ADDITIONAL TREATMENT AND STORAGE CAPACITY CAN BE ACHIEVED BY UTILIZING MULTIPLE FILTER BASKETS.

DRAWING: BIO CLEAN CURB INLET FILTER DETAILS		MODEL #: BIO-CURB-KMF	
MEDIA TREATMENT FLOW RATE: 0.071 CFS			
SCREEN TREATMENT FLOW RATE: 0.5 CFS		PROJECT:	
BIO CLEAN ENVIRONMENTAL SERVICES, INC. 398 VIA EL CENTRO, OCEANSIDE CA 92058 PHONE:760-433-7640 FAX:760-433-3176		REVISIONS:	DATE:
		REVISIONS:	DATE:
DATE: 5/9/18	SCALE: NTS	REVISIONS:	DATE:
DRAFTERS: MCP & STS	UNITS = INCHES	REVISIONS:	DATE:

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

MODEL # BIO-CURB-KMF-23 FILTER

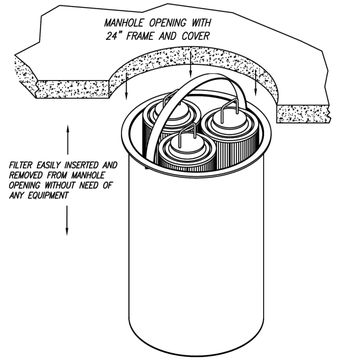

FIGURE 1: DETAIL OF INSTALLATION

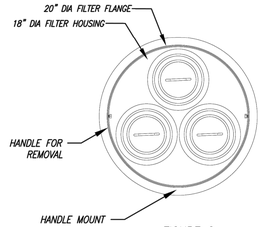

FIGURE 2: DETAIL OF DIAMETERS

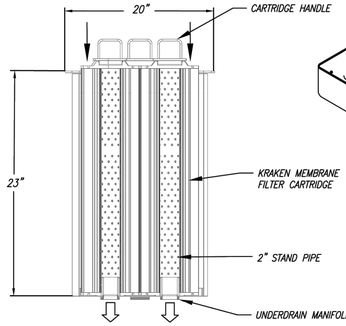

FIGURE 3: DETAIL OF PARTS

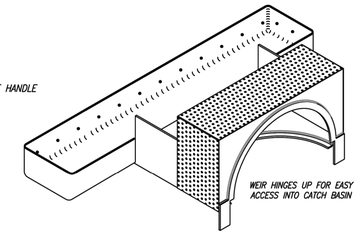

FIGURE 4: DETAIL OF WEIR

FLOW RATES – INLET KRAKEN MEDIA	
FILTER TREATMENT FLOW RATE	0.071 CFS

MEDIA SURFACE AREA = 104.5 SQ FT PER 20" TALL CARTRIDGE
TOTAL NUMBER OF CARTRIDGES = 3
LOADING RATE APPLIED = 0.101 GPM/SQ FT
FILTER TREATMENT FLOW RATE = 104.5 x 3 x 0.101
= 31.66 GPM = 0.071 CFS

*FILTER FLOW RATE CALCULATED BASED UPON INDEPENDENT PERFORMANCE TESTING USING A LOADING RATE OF 0.101 GPM/SQ FT OF MEDIA SURFACE AREA.

SEE PAGE 1 FOR NOTES

DRAWING: BIO-CURB-KMF-23 FILTER		MODEL #: BIO-CURB-KMF	
		PROJECT:	
BIO CLEAN ENVIRONMENTAL SERVICES, INC. 398 VIA EL CENTRO, OCEANSIDE CA 92058 PHONE:760-433-7640 FAX:760-433-3176		REVISIONS:	DATE:
		REVISIONS:	DATE:
DATE: 5/9/18	SCALE: NTS	REVISIONS:	DATE:
DRAFTERS: MCP & STS	UNITS = INCHES	REVISIONS:	DATE:

CONTECH ENGINEERED SOLUTIONS LLC
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LD19-4097

JLC Engineering & Consulting, Inc.
41660 IVY STREET, SUITE A, MURRIETA, CA 92562
PH. 951.304.9552 FAX 951.304.3568

CONSTRUCTION RECORD	DATE	BY	REVISIONS	ACC'D	DATE
Contractor_____	04/04/23	JG	⚠1 ADDED FLOGARD AND KRAKEN DETAIL.		
Inspector_____					
Date Completed_____					

BENCH MARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 ½" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL=1006-84" ELEVATION= 1006.84'

SCALE: Horizontal / Vertical

SEAL: REGISTERED PROFESSIONAL ENGINEER JOSEPH L. CASTANEDA NO. 59835 EXP. 12/31/23 CIVIL STATE OF CALIFORNIA

Designed By	Drawn By	Checked By
JLC	JLC	JLC

Plans Prepared Under Supervision Of
Joseph L. Castaneda Date 04/04/23
JOSEPH L. CASTANEDA
R.C.E. No. 59835

RECOMMENDED BY:_____ DATE:_____
PATRICK THOMAS
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER
R.C.E. No. 44232 EXP. 6-20-21

ACCEPTED BY:_____ DATE:_____

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

RANCHO HIGHLANDS
TRACT 23992, LOT 5 STORM DRAIN IMPROVEMENT PLANS
CITY OF TEMECULA, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA.

BIO CLEAN KRAKEN DETAIL

20A

Sheet 20 of 20

EXCERPT E: RANCHO HIGHLANDS LINE A HYDRAULIC MODEL

LINE A STORM DRAIN
RANCHO HIGHLANDS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1250.000	1036.500	2.068	1038.568	107.00	18.08	5.08	1043.65	.00	3.14	3.44	3.500	.000	.00	1 .0
32.320	.0248					.0265	.86	2.07	2.43	2.11	.013	.00	.00	PIPE
1282.320	1037.300	2.057	1039.357	107.00	18.20	5.15	1044.50	.00	3.14	3.45	3.500	.000	.00	1 .0
JUNCT STR	.0900					.0271	.16	2.06	2.46		.013	.00	.00	PIPE
1288.320	1037.840	2.298	1040.138	103.10	17.75	4.89	1045.03	.00	2.91	2.54	3.000	.000	.00	1 .0
2.329	.1570					.0262	.06	2.30	2.07	1.30	.013	.00	.00	PIPE
1290.649	1038.206	2.403	1040.609	103.10	16.99	4.48	1045.09	.00	2.91	2.40	3.000	.000	.00	1 .0
2.088	.1570					.0238	.05	2.40	1.88	1.30	.013	.00	.00	PIPE
1292.737	1038.533	2.532	1041.066	103.10	16.20	4.07	1045.14	.00	2.91	2.18	3.000	.000	.00	1 .0
1.599	.1570					.0219	.04	2.53	1.67	1.30	.013	.00	.00	PIPE
1294.336	1038.784	2.687	1041.471	103.10	15.44	3.70	1045.17	.00	2.91	1.83	3.000	.000	.00	1 .0
.864	.1570					.0211	.02	2.69	1.43	1.30	.013	.00	.00	PIPE
1295.200	1038.920	2.907	1041.827	103.10	14.72	3.37	1045.19	.00	2.91	1.04	3.000	.000	.00	1 .0
2.630	.0099					.0219	.06	2.91	1.00	3.00	.013	.00	.00	PIPE
1297.830	1038.946	3.000	1041.946	103.10	14.59	3.30	1045.25	.00	2.91	.00	3.000	.000	.00	1 .0
27.700	.0099					.0233	.65	3.00	.00	3.00	.013	.00	.00	PIPE
1325.530	1039.220	3.388	1042.608	103.10	14.59	3.30	1045.91	.00	2.91	.00	3.000	.000	.00	1 .0
4.670	.0086					.0239	.11	3.39	.00	3.00	.013	.00	.00	PIPE

LINE A STORM DRAIN
RANCHO HIGHLANDS

Station / L/Elem	Invert Elev / Ch Slope	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head / SF Ave	Energy Grd.El. / HF	Super Elev / SE Dpth	Critical Depth / Froude N	Flow Top Width / Norm Dp	Height/Dia.-FT / "N"	Base Wt or I.D. / X-Fall	ZL / ZR	No Wth Prs/Pip / Type Ch
1330.200	1039.260	3.625	1042.885	103.10	14.59	3.30	1046.19	.00	2.91	.00	3.000	.000	.00	1 .0
17.670	.0102					.0239	.42	.00	.00	3.00	.013	.00	.00	PIPE
1347.870	1039.440	4.334	1043.774	103.10	14.59	3.30	1047.08	.00	2.91	.00	3.000	.000	.00	1 .0
34.370	.0102					.0239	.82	4.33	.00	3.00	.013	.00	.00	PIPE
1382.240	1039.790	4.805	1044.595	103.10	14.59	3.30	1047.90	.00	2.91	.00	3.000	.000	.00	1 .0
JUNCT STR	.0105					.0194	.13	4.81	.00		.013	.00	.00	PIPE
1388.910	1039.860	7.062	1046.922	81.30	11.50	2.05	1048.98	.00	2.78	.00	3.000	.000	.00	1 .0
13.670	.0095					.0149	.20	7.06	.00	3.00	.013	.00	.00	PIPE
1402.580	1039.990	7.135	1047.125	81.30	11.50	2.05	1049.18	.00	2.78	.00	3.000	.000	.00	1 .0
17.670	.0102					.0149	.26	.00	.00	3.00	.013	.00	.00	PIPE
1420.250	1040.170	7.508	1047.678	81.30	11.50	2.05	1049.73	.00	2.78	.00	3.000	.000	.00	1 .0
41.290	.0099					.0149	.61	7.51	.00	3.00	.013	.00	.00	PIPE
1461.540	1040.580	7.712	1048.292	81.30	11.50	2.05	1050.35	.00	2.78	.00	3.000	.000	.00	1 .0
20.650	.0102					.0149	.31	.00	.00	3.00	.013	.00	.00	PIPE
1482.190	1040.790	8.123	1048.913	81.30	11.50	2.05	1050.97	.00	2.78	.00	3.000	.000	.00	1 .0
7.840	.0089					.0149	.12	8.12	.00	3.00	.013	.00	.00	PIPE
1490.030	1040.860	8.169	1049.029	81.30	11.50	2.05	1051.08	.00	2.78	.00	3.000	.000	.00	1 .0
17.670	.0108					.0149	.26	.00	.00	3.00	.013	.00	.00	PIPE

LINE A STORM DRAIN
RANCHO HIGHLANDS

Station	Invert Elev	Depth (FT)	Water Elev	Q (CFS)	Vel (FPS)	Vel Head	Energy Grd.El.	Super Elev	Critical Depth	Flow Top Width	Height/ Dia.-FT	Base Wt or I.D.	ZL	No Wth Prs/Pip
L/Elem	Ch Slope					SF Ave	HF	SE Dpth	Froude N	Norm Dp	"N"	X-Fall	ZR	Type Ch
1507.700	1041.050	8.532	1049.582	81.30	11.50	2.05	1051.64	.00	2.78	.00	3.000	.000	.00	1 .0
4.670	.0107					.0149	.07	8.53	.00	3.00	.013	.00	.00	PIPE
1512.370	1041.100	8.654	1049.754	81.30	11.50	2.05	1051.81	.00	2.78	.00	3.000	.000	.00	1 .0
108.640	.0249					.0149	1.61	8.65	.00	1.98	.013	.00	.00	PIPE
1621.010	1043.810	7.558	1051.369	81.30	11.50	2.05	1053.42	.00	2.78	.00	3.000	.000	.00	1 .0
17.670	.0249					.0149	.26	.00	.00	1.98	.013	.00	.00	PIPE
1638.680	1044.250	7.672	1051.922	81.30	11.50	2.05	1053.98	.00	2.78	.00	3.000	.000	.00	1 .0
14.440	.0249					.0149	.21	7.67	.00	1.98	.013	.00	.00	PIPE
1653.120	1044.610	7.526	1052.136	81.30	11.50	2.05	1054.19	.00	2.78	.00	3.000	.000	.00	1 .0
WALL	ENTRANCE													
1653.120	1044.610	10.551	1055.161	81.30	1.54	.04	1055.20	.00	2.02	5.00	10.000	5.000	.00	0 .0

Appendix E-2

Technical Memorandum for Water Quality Treatment for Ynez Road Extension

JLC Engineering & Consulting, Inc

December 12, 2023

TECHNCIAL MEMORANDUM
FOR WATER QUALITY TREATMENT FOR YNEZ ROAD EXTENSION
December 12, 2023

May 18, 2023

To: Ms. Kim Berry

From: Joseph Castaneda, P.E.

JLC is providing this technical memorandum to document the analyses performed by JLC Engineering to document the Design Capture Volume (DCV) that is required for the future extension of Ynez Road from Terra Vista Road to Rancho Vista Road. The proposed roadway improvements will create 0.50 acres of roadway area, see DMA B1.1, Exhibit A. As part of the analysis, the project design accounts for draining DMA B1.1 into the proposed catch basin which includes a Kraken insert that will be constructed as part of Tract Map utilized the additional pavement area to determine if the infiltration basin proposed by the project could treat the additional area.

Exhibit A has been developed to document the following:

1. The proposed catch basin and kraken insert that is being constructed as part of Rancho Highlands, Tract 23992.
2. Area B1 and Area B2 shown in blue that are part of the approved WQMP for Rancho Highlands, Tract 23992
3. Area B1.1 shown in red that represent the Ynez Roadway widening that is part of the road extension project.

The purpose of this memorandum is to determine the required DCV for DMA B1.1 that is part of the roadway extension and to assess the Water Quality Equivalency (WQE) by determining how much flow rate can be treated by the proposed catch basin and kraken insert that is being constructed as part of Rancho Highlands, Tract 23992.

Worksheet B1-1 has been used to calculate the DCV for DMA B1.1, DMA B2 and DMA B1, B1.1 and B2. The DCV is required as part of the WQE. The following table provides the DCVs.

DMA Area	Area (ac)	DCV (ft^3)
B1.1	0.5(1)	1,634
B2.2	0.32 (1)	1,045
B1, B1.1, B2	1.65	5,391

(1) Represents the pavement area created by the project.

After the DCV is calculated a WQE is performed. Table 1.1 attached provides the DCV and the design intensity based on the new pavement area for DMA B1.1 and B2. Table 2 has been created to document the total DCV for DMA D1, B1.1 and B2. This total DCV and total area is used to compute the “Water Quality Treatment Flow Rate” defined as 0.297 cfs. This flow rate

JLC ENGINEERING & CONSULTING, INC.
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is based on a Runoff Coefficient of 0.9 and Intensity of 0.2 in/hr and an area of 1.65 acres. Please note the Water Quality Treatment Flow Rate of 0.297 cfs is less than the Kraken Treatment Flow Rate of 0.071 cfs. However, a calculation can be done to determine the overall benefit the Kraken will have in treating DMA D1, B1.1 and B2. The benefits are calculated as follows:

1. Using the Kraken Treatment Flow Rate of 0.071 cfs, determine an BMP Flow Rate Design Intensity (I) from the rational method equation (Q=CIA) using a Runoff Coefficient of 0.9 and an area of 1.65 acres.
2. Based on the BMP Flow Rate Design Intensity (I) determine a Flow Thru BMP Design Capture (C_1) using the Figure B.4. For this project based on a time of concentration of 10 minutes C_1 is equal to 0.4.
3. Using Worksheet A.4 and the Pollutant removal efficiency for a Kraken Insert determine the BMP Efficacy. This is equal to 0.21.
4. Table 2 provides the documentation and based on the BMP Efficacy of 0.21, the total DCV Reduction allowed is 1,132.1 ft^3 based on the total area of 1.65 generated by area B1, B1.1 and B2.

Table 3 provides the final conclusions of the WQE. Table 3 indicates that the total DCV volume for DMA B1.1 and B2 is 2,679 ft^3. The project has a DCV reduction of 1,132.1 ft^3. As a result, the project has a remaining volume of **1,546.9 ft^3** that must be treated or can be offset with Water Quality Credits.

Based on meetings with the City of Temecula, the project will be using Water Quality Credits to offset the impacts associated with the Ynez Road Extension.

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EXHIBIT A – WQMP SITE PLAN

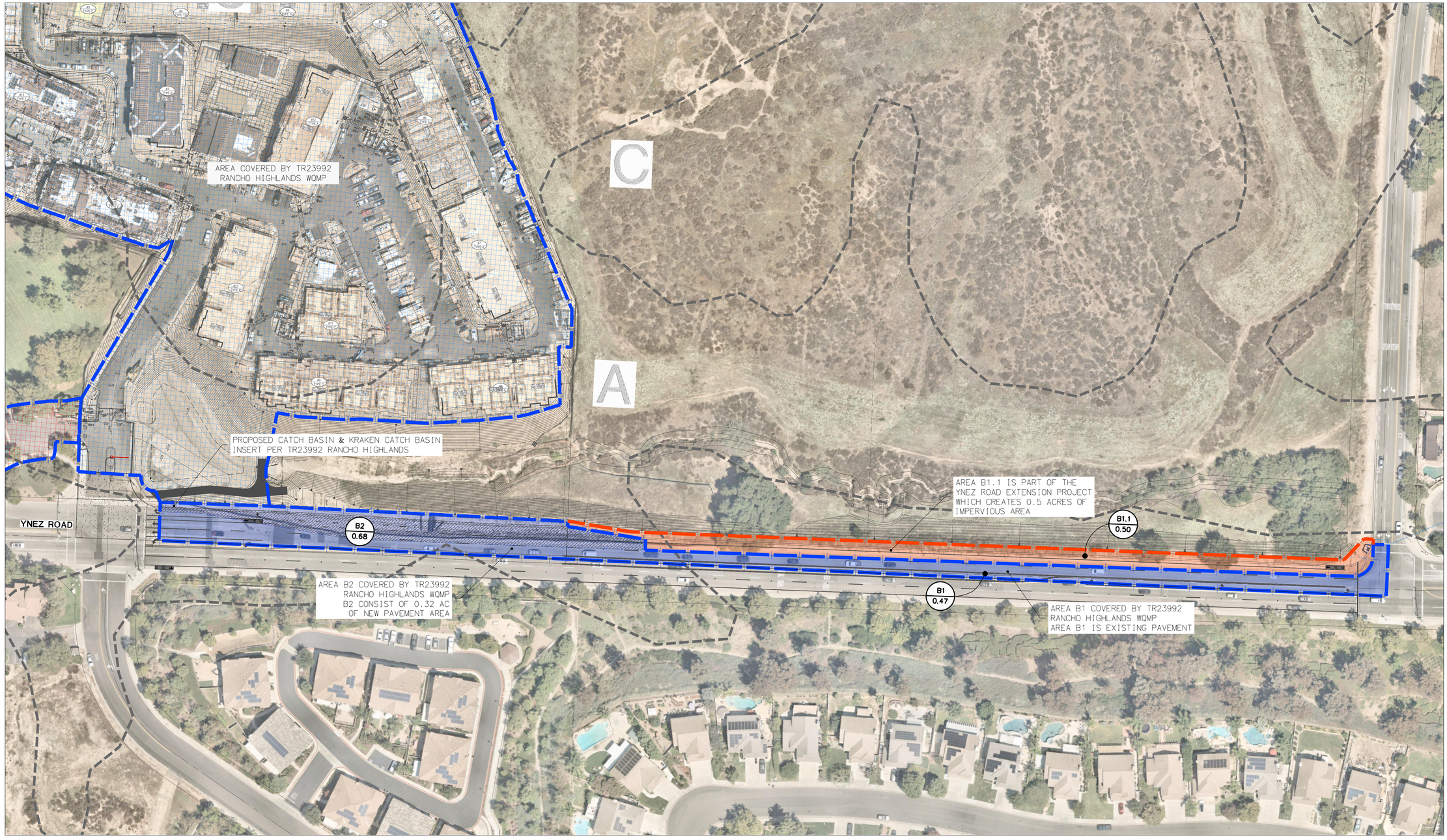

EXHIBIT "A"

YNEZ ROAD EXTENSION

WQMP DMA EXHIBIT

JLC Engineering & Consulting, Inc.
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MURRIETA, CA 92562
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Drawing Name: D:\271.01.18\Ynez Road Extension\WQMP\Ynez_Road_Extension_Site Plan.dwg
Last Opened: Dec 12, 2023 - 3:54pm by jpe

TABLE 1, TABLE 2, AND TABLE 3

TABLE 1 - BMP EFFICACY AND D_{CV} REDUCTION ANALYSES FOR YNEZ ROAD NEW PAVEMENT IMPROVEMENTS DMA B2 AND ONSITE DMA C1 THAT COMINGLE WITH OFFSITE IMPERVOUS AREAS USING KRAKEN CATCH BASIN FILTERS

DMA ID	DMA AREA	IMPERVIOUS RATIO	PERVIOUS RATIO	RUNOFF FACTOR "C"	WATER QUALITY TREATMENT VOLUME (D_{CV})	WATER QUALITY TREATMENT FLOW RATE Q_{WQ}	KRAKEN BMP FLOW RATE CAPACITY	BMP FLOW RATE DESIGN INTENSITY
B2	0.32	1	0	0.90	1045	0.058	0.071	0.24
B1.1	0.5	1	0	0.90	1634	0.090	0.071	0.16

TABLE 2 - BMP EFFICACY AND D_{CV} REDUCTION ANALYSES FOR YNEZ ROAD NEW PAVEMENT IMPROVEMENTS DMA B1 & B2 AND ONSITE DMA C1 & C2 THAT COMINGLE WITH OFFSITE IMPERVOUS AREAS USING KRAKEN CATCH BASIN FILTERS

DMA ID	DMA AREA	IMPERVIOUS RATIO	PERVIOUS RATIO	RUNOFF FACTOR "C"	WATER QUALITY TREATMENT VOLUME (D_{CV})	WATER QUALITY TREATMENT FLOW RATE Q_{WQ}	KRAKEN BMP FLOW RATE CAPACITY	BMP FLOW RATE DESIGN INTENSITY	FLOW THRU BMP DESIGN CAPTURE C_1	POLLUNTANT REMOVAL EFFICIENCY	BMP EFFICACY FACTOR	D_{CV} Reduction
B1, B1.1 & B2	1.65	1	0	0.90	5391	0.297	0.071	0.05	0.40	0.52	0.21	1132.1
											Total DCV Reduction	1132.1

TABLE 3 -DCV VOLUME PER DMA AREA & RESULTING UNTREATED DCV

DMA	DCV
B1.1	1045
B2	1634
TOTAL DCV TO BE TREATED	2679
DCV REDUCTION	1132.1
CREDITS REQURIED FOR YNEZ RD EXTENSION	1546.9

WORKSHEET B1.1

Automated Worksheet B.1-1: Calculation of Design Capture Volume (V1.3)

Category	#	Description	*i*	*ii*	*iii*	*iv*	*v*	*vi*	*vii*	*viii*	*ix*	*x*	Units
Standard Drainage Basin Inputs	0	Drainage Basin ID or Name	B1.1	B2	B1, B1.1, B2								unitless
	1	Basin Drains to the Following BMP Type	Flow-Thru	Flow-Thru	Flow-Thru								unitless
	2	85th Percentile 24-hr Storm Depth	1.00	1.00	1.00								inches
	3	Design Infiltration Rate Recommended by Geotechnical Engineer	0.000	0.000	0.000								in/hr
	4	Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	21,780	13,939	71,874								sq-ft
	5	Semi-Pervious Surfaces Not Serving as Dispersion Area (C=0.30)	0	0									sq-ft
	6	Engineered Pervious Surfaces Not Serving as Dispersion Area (C=0.10)	0	0									sq-ft
	7	Natural Type A Soil Not Serving as Dispersion Area (C=0.10)											sq-ft
	8	Natural Type B Soil Not Serving as Dispersion Area (C=0.14)											sq-ft
	9	Natural Type C Soil Not Serving as Dispersion Area (C=0.23)											sq-ft
	10	Natural Type D Soil Not Serving as Dispersion Area (C=0.30)											sq-ft
Dispersion Area, Tree Well & Rain Barrel Inputs (Optional)	11	Does Tributary Incorporate Dispersion, Tree Wells, and/or Rain Barrels?	No	No									yes/no
	12	Impervious Surfaces **Directed to Dispersion Area** per SD-B (Ci=0.90)											sq-ft
	13	Semi-Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.30)											sq-ft
	14	Engineered Pervious Surfaces **Serving as Dispersion Area** per SD-B (Ci=0.10)											sq-ft
	15	Natural Type A Soil **Serving as Dispersion Area** per SD-B (Ci=0.10)											sq-ft
	16	Natural Type B Soil **Serving as Dispersion Area** per SD-B (Ci=0.14)											sq-ft
	17	Natural Type C Soil **Serving as Dispersion Area** per SD-B (Ci=0.23)											sq-ft
	18	Natural Type D Soil **Serving as Dispersion Area** per SD-B (Ci=0.30)											sq-ft
	19	Number of Tree Wells Proposed per SD-A											#
	20	Average Mature Tree Canopy Diameter											ft
	21	Number of Rain Barrels Proposed per SD-E											#
	22	Average Rain Barrel Size											gal
Treatment Train Inputs & Calculations	23	Does BMP Overflow to Stormwater Features in Downstream Drainage?	No	No									unitless
	24	Identify Downstream Drainage Basin Providing Treatment in Series											unitless
	25	Percent of Upstream Flows Directed to Downstream Dispersion Areas											percent
	26	Upstream Impervious Surfaces Directed to Dispersion Area (Ci=0.90)	0	0	0	0	0	0	0	0	0	0	cubic-feet
	27	Upstream Impervious Surfaces Not Directed to Dispersion Area (C=0.90)	0	0	0	0	0	0	0	0	0	0	cubic-feet
Initial Runoff Factor Calculation	28	Total Tributary Area	21,780	13,939	71,874	0	0	0	0	0	0	0	sq-ft
	29	Initial Runoff Factor for Standard Drainage Areas	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	30	Initial Runoff Factor for Dispersed & Dispersion Areas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	31	Initial Weighted Runoff Factor	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	32	Initial Design Capture Volume	1,634	1,045	5,391	0	0	0	0	0	0	0	cubic-feet
Dispersion Area Adjustments	33	Total Impervious Area Dispersed to Pervious Surface	0	0	0	0	0	0	0	0	0	0	sq-ft
	34	Total Pervious Dispersion Area	0	0	0	0	0	0	0	0	0	0	sq-ft
	35	Ratio of Dispersed Impervious Area to Pervious Dispersion Area	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	ratio
	36	Adjustment Factor for Dispersed & Dispersion Areas	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	ratio
	37	Runoff Factor After Dispersion Techniques	0.90	0.90	0.90	n/a	n/a	n/a	n/a	n/a	n/a	n/a	unitless
	38	Design Capture Volume After Dispersion Techniques	1,634	1,045	5,391	0	0	0	0	0	0	0	cubic-feet
Tree & Barrel Adjustments	39	Total Tree Well Volume Reduction	0	0	0	0	0	0	0	0	0	0	cubic-feet
	40	Total Rain Barrel Volume Reduction	0	0	0	0	0	0	0	0	0	0	cubic-feet
Results	41	Final Adjusted Runoff Factor	0.90	0.90	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	unitless
	42	Final Effective Tributary Area	19,602	12,545	64,687	0	0	0	0	0	0	0	sq-ft
	43	Initial Design Capture Volume Retained by Site Design Elements	0	0	0	0	0	0	0	0	0	0	cubic-feet
	44	Final Design Capture Volume Tributary to BMP	1,634	1,045	5,391	0	0	0	0	0	0	0	cubic-feet

Worksheet B.1-1 General Notes:

A. Applicants may use this worksheet to calculate design capture volumes for up to 10 drainage areas User input must be provided for yellow shaded cells, values for all other cells will be automatically generated, errors/notifications will be highlighted in red and summarized below. Upon completion of this worksheet, proceed to the appropriate BMP Sizing worksheet(s).

WORKSHEET A.4

WORKSHEET A.4
DMA B1, B1.1 AND B2 EFFICACY FACTOR
FOR RANCHO HIGHLANDS PROPOSED KRAKEN

Automated Spreadsheet Calculation for Worksheet A.4: Treatment Train BMP Efficacy Factor Determination for WQE (Version 1.0)

Pollutant	BMP_1		BMP_2		BMP_3		BMP Efficacy Factor B
	Pollutant Removal Efficiency E_1	Provided Capture Value C_1	Pollutant Removal Efficiency E_2	Provided Capture Value C_2	Pollutant Removal Efficiency E_3	Provided Capture Value C_3	
TSS	0.850	0.400					**0.34**
FC	0.600	0.400		0.000		0.000	**0.24**
TN	0.000	0.400		0.000		0.000	**0.00**
TP	0.720	0.400		0.000		0.000	**0.29**
Tcu	0.520	0.400		0.000		0.000	**0.21**
TZn	0.580	0.400		0.000		0.000	**0.23**
TPb		0.400		0.000		0.000	**0.00**

Notes:

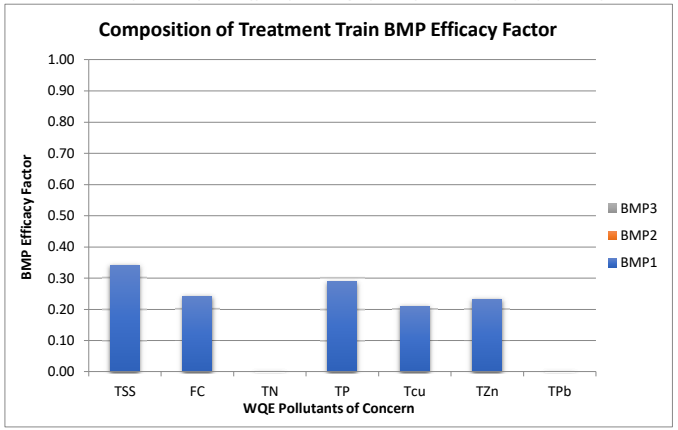
1. Applicants must provide user input for yellow shaded cells. Values for all other cells will be automatically generated.
2. This worksheet is for use in the determination of BMP Efficacy Factors for a single BMP that incorporates multiple treatment elements. All elements identified in this worksheet must accept drainage from the same tributary area with BMP_1 representing the most upstream treatment element, and BMP_3 representing the most downstream treatment element.
3. Provide user input for pollutant removal efficiencies (E) for each of the proposed treatment elements as a decimal percentage. Retention and biofiltration elements provide pollutant removal efficiencies of 1.00 and 0.666 across all pollutants respectively. Flow-thru pollutant removal efficiencies have not been established by this document; if established, such values will vary for each pollutant considered. Refer to **Section 2.3.1.3.1** for additional text on pollutant removal efficiencies.
4. Provide user input for provided capture values (C) for each of the proposed treatment elements as a decimal percentage. Provided Capture values for retention, biofiltration, partial retention, and flow-thru BMPs are determined per **Sections 2.3.1.3.2.1** through **2.3.1.3.2.4** respectively. Treatment trains BMPs implementing a combination of volume-based and flow-based BMPs and/or implementing treatment elements downstream of a retention element require additional considerations to determine appropriate provided Capture values as discussed in **Section 2.3.1.3.2.5.**
5. Calculate the BMP Efficacy Factor for the proposed treatment train BMP per **Equation 2-5**. (Note that the sumation of ExCx products may never be greater than 1.00).

Equation 2-5: BMP Efficacy Factor for Treatment Train BMPs

$$B = E_1C_1 + [(1-E_1C_1) \times E_2C_2] + [(1-E_1C_1-E_2C_2) \times E_3C_3]$$

Where:
B: BMP Efficacy Factor
$E_{1,2,3}$: Pollutant Removal Efficiency (1 being most upstream and 3 being most downstream element)
$C_{1,2,3}$: Provided Capture (1 being most upstream and 3 being most downstream element)

Composition of BMP Efficacy Factor graphic is for illustrative purposes only.



CAPTURE CURVES FOR DESIGN INTENSITY

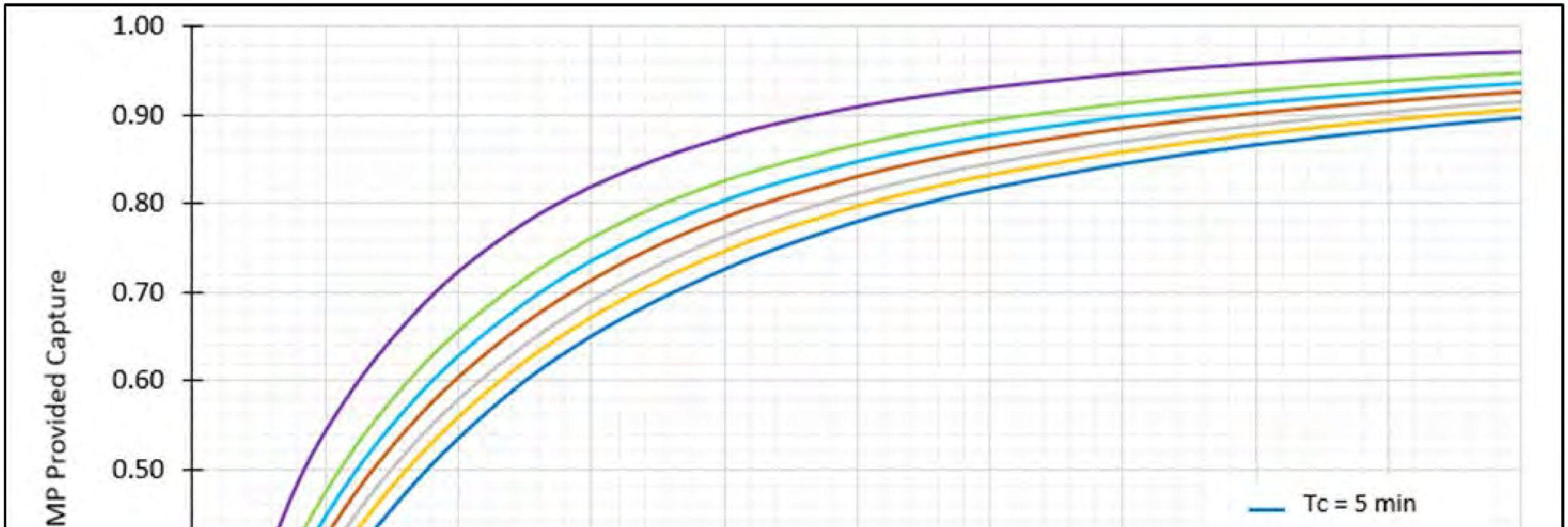


Figure B.4: Flow-Thru Provided Capture Curves

Appendix F

Ynez Road Widening Project – Noise Review Letter – Temecula, CA

MD Acoustics

August 1, 2025

MD ACOUSTICS
Sound Solutions for Planning and Design

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www.mdacoustics.com

August 1, 2025

Mr. Travis McGill
ELMT Consulting, Inc.
2201 N Grand Ave, Ste #10098
Santa Ana, CA 92711

Subject: Ynez Road Widening Project – Noise Review Letter – Temecula, CA

Dear Mr. McGill:

MD Acoustics, LLC (MD) is pleased to submit this letter as part of the noise assessment for the proposed Ynez Road Widening Project in the City of Temecula, CA. The project proposes to widen the easterly side of Ynez Road, from Rancho Vista Road north roughly 1600 feet, to two lanes in each direction and complete missing segments of curb and gutter, sidewalk, and striped medians in coordination with adjacent development between Terra Vista Road and Rancho Vista Road.

1.0 Local Acoustical Requirements

According to the City of Temecula's noise compatibility matrix (Table N-2 of the City's General Plan), an exterior noise level of up to 60 dBA CNEL is normally acceptable for residential uses and an exterior noise level of up to 70 dBA CNEL is conditionally acceptable for residential uses. This study, therefore, compares the traffic noise levels to the City's noise requirements.

According to the City of Temecula's Code of Ordinances in Section 9.20.060(D):
No person shall engage in or conduct construction activity, when the construction site is within one-quarter mile of an occupied residence, between the hours of six-thirty p.m. and seven a.m., Monday through Friday, and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. on Saturday. No construction activity shall be undertaken on Sunday and nationally recognized holidays unless exempted by Section 9.20.070 of the Temecula Municipal Code. Public works projects of any federal, state or local entity or emergency work by public utilities are exempt from the provisions of this subsection. Residents working on their homes or property are exempt from the prohibition of construction activities on Sundays and holidays and shall only engage in or conduct construction activity between the hours of seven a.m. and six-thirty p.m. when working on Sundays and holidays. The city council may, by formal action, exempt projects from the provisions of this chapter.

2.0 Study Method and Procedure

2.1 Existing Noise Conditions

A 24-hour noise measurement was conducted at the project site on July 16, 2025. Noise data in Table 1 indicate that the ambient noise level ranges from 49 to 58 dBA Leq. The noise measurement location is shown in Exhibit A, and additional field notes and photographs are provided in Appendix D.

Table 1: NM1 Long-Term Noise Measurement Data[1]

Date	Start Time	Stop Time	Leq	Lmax	Lmin	L(2)	L(8)	L(25)	L(50)	L(90)
7/16/2025	9:30 AM	10:30 AM	53.1	67.8	39.7	60.7	54.6	52.5	51.7	49.9
7/16/2025	10:30 AM	11:30 AM	52.6	65.7	40.4	56.7	54.5	53.2	52.1	49.7
7/16/2025	11:30 AM	12:30 PM	52.9	64.3	40.9	56.2	54.6	53.3	52.5	50.6
7/16/2025	12:30 PM	1:30 PM	53.4	74.2	41.2	57.2	54.5	53.3	52.6	51
7/16/2025	1:30 PM	2:30 PM	53.1	63.9	44.3	55.5	54.6	53.8	52.9	51.4
7/16/2025	2:30 PM	3:30 PM	54.4	70	44.8	58.2	56.5	54.9	53.9	52.1
7/16/2025	3:30 PM	4:30 PM	57.5	83.7	45.1	60.1	56.4	55.1	54	51.9
7/16/2025	4:30 PM	5:30 PM	56.4	77.6	45.2	62.8	57.1	55.3	54.5	52.4
7/16/2025	5:30 PM	6:30 PM	53.8	68.5	43.9	57.1	55.9	54.6	53.4	51
7/16/2025	6:30 PM	7:30 PM	54.5	74.1	41.3	61.5	56.2	54.3	53.2	50.8
7/16/2025	7:30 PM	8:30 PM	52.8	63.3	40.2	55.6	54.5	53.6	52.5	50.9
7/16/2025	8:30 PM	9:30 PM	53.8	73.5	45.6	57.4	55.4	53.9	52.9	51.2
7/16/2025	9:30 PM	10:30 PM	52.3	74.5	41.6	56.6	53.7	51.9	51.1	50.1
7/16/2025	10:30 PM	11:30 PM	50.3	75	40.5	52.8	51.2	50.2	49.1	47
7/16/2025	11:30 PM	12:30 AM	48.6	68.6	38	54.5	50.5	48.5	47.6	43.7
7/17/2025	12:30 AM	1:30 AM	49.6	68.9	36.5	53.7	50.5	49	47.7	42.5
7/17/2025	1:30 AM	2:30 AM	48.9	69.8	36.8	56.8	51.1	48.1	46.2	39.9
7/17/2025	2:30 AM	3:30 AM	48.6	61.1	38	53.2	52	49.4	48.1	42.2
7/17/2025	3:30 AM	4:30 AM	48.6	63.3	35.7	53.6	51.5	49.4	48	41.8
7/17/2025	4:30 AM	5:30 AM	53.1	66.5	37.9	57	55.7	54.4	52.1	47.9
7/17/2025	5:30 AM	6:30 AM	57	65.8	42.2	59.6	58.8	57.8	56.8	54.6
7/17/2025	6:30 AM	7:30 AM	54	64	40.1	56.9	56.2	55	53.4	51.2
7/17/2025	7:30 AM	8:30 AM	53.2	70.8	39.6	56.7	55	53.5	52.7	50.7
7/17/2025	8:30 AM	9:30 AM	52	65.1	39.4	55.4	54	52.8	51.5	49.8
CNEL			59.4							

Notes:
[1] Long-term noise monitoring location is illustrated in Exhibit A.

2.2 FHWA Traffic Noise Calculator

Traffic noise from vehicular traffic was projected using the FHWA Traffic Noise Prediction Model (FHWA-RD-77-108) standards. The FHWA model arrives at the predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). Roadway volumes and percentages for existing conditions correspond to the City of Temecula traffic counts. The referenced traffic data was applied to the model and is in Appendix B. The following outlines the key adjustments made to the REMEL for the roadway inputs:

- Roadway classification – (e.g., freeway, major arterial, arterial, secondary, collector, etc.),
- Roadway Active Width – (distance between the center of the outermost travel lanes on each side of the roadway)

- Average Daily Traffic Volumes (ADT), Travel Speeds, Percentages of automobiles, medium trucks, and heavy trucks
- Roadway grade and angle of view
- Site Conditions (e.g., soft vs. hard)
- Percentage of total ADT which flows each hour throughout a 24-hour period

Table 2 provides the traffic noise model assumptions along Ynez Road.

Table 2: Roadway Parameters and Vehicle Distribution

Roadway	Segment	Existing ADT[1]		Speed (MPH)	Site Conditions
Ynez Rd	Tierra Vista to Rancho Vista	29,800		45	Soft
Vehicle Distribution and Mix[1]					
Motor-Vehicle Type		**Daytime % (7AM to 7 PM)**	**Evening % (7 PM to 10 PM)**	**Night % (10 PM to 7 AM)**	**Total % of Traffic Flow**
Automobiles		77.5	12.9	9.6	97.4
Medium Trucks		84.8	4.9	10.3	1.8
Heavy Trucks		86.5	2.7	10.8	0.7

Notes:
[1] ADTs and Vehicle Distribution from City of Temecula traffic counts.

2.3 Construction Noise Modeling

Construction noise associated with the proposed Project was calculated utilizing methodology presented in the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment Manual (2018) and the FHWA Roadway Construction Noise Model (2018), together with several key construction parameters, including distance to each sensitive receiver, equipment usage, percent usage factor, and baseline parameters for the project site.

The Project CalEEMod was utilized to determine the construction equipment. Construction noise levels were calculated for various construction phases based on CalEEMod Air Quality Model assumptions. Three or four of the loudest pieces of equipment were used as a worst case scenario as all equipment could not be adjacent to a single sensitive receptor at the same time. All equipment was assumed to be situated at the center of the project site. Construction equipment typically moves back and forth across the site, and it is an industry standard to use the acoustical center of the site to model average construction noise levels. construction worksheets are provided in Appendix C.

3.0 Findings and Recommendations

3.1 Traffic Noise Impact

The potential off-site noise impacts caused by the proposed roadway expansion were calculated at distances of 80 feet on the south side, and distances of 105 feet on the north side, which are the closest residential properties to the roadway. The Project proposes widening Ynez Rd from three travel lanes to four travel lanes. The noise levels were calculated for the Existing and Future traffic conditions along the study roadway segments with and without the proposed Project. Table 3 compares the traffic noise levels

from Existing traffic conditions with the existing lane configuration (Existing without Project) to the noise levels from Existing traffic conditions with the proposed lane configuration (Existing plus Project).

Table 3: Existing/Existing + Project Scenario – Noise Levels (dBA CNEL)

Roadway	Segment	Receptor Location	CNEL (dBA)		Change in Noise Level
			Existing (Without Project)	Existing Plus Project	
Ynez Rd	Tierra Vista to Rancho Vista	Southern Residential P/L	64.6	64.7	0.1
		Northern Residential Facade	65.4	66.9	1.5

As shown in Table 3, the width increase of Ynez Road will increase the existing traffic noise levels by 0.1 to 1.5 dB. It takes a change of 3 dB or more to hear an audible difference, which would occur with a doubling of traffic. Therefore, the traffic noise impact is less than significant. Traffic calculations are provided in Appendix B.

3.2 Construction Noise Impact

The degree of construction noise may vary for different areas of the project site and also vary depending on the construction activities. Project construction is anticipated to occur in four phases, as shown in Table 4.

Noise levels at the nearest sensitive receptor (residencies to the south) are shown in Table 4. The construction model assumes equipment operating as close as 75 feet and an average of 200 feet away from the southern residencies. Many sensitive receptors are further than these distances and have walls and will therefore have lower levels than those presented in the table. The construction noise calculation output worksheet is located in Appendix C.

Table 4: Construction Noise Level by Phase (dBA)

Phase	Leq at Nearest Residences
Linear, Grubbing, & Land Clearing	71
Linear, Grading, & Excavation	78
Linear, Drainage, Utilities, & Sub-Grade	73
Linear, Paving	76

Construction noise is considered a short-term impact and would be considered significant if construction activities are taken outside the allowable times as described in the City of Temecula's Municipal Code. Construction is anticipated to occur during the permissible hours according to the Municipal Code. As shown in Table 4, project construction noise will be up to 78 dBA Leq(h) near sensitive receptors. These reflect the worst-case noise levels at Temecula residences closest to the construction work. In addition, residents with walls will have a reduction in sound level. The impact is therefore less than significant.

Construction operations shall follow the City's Municipal Code, which states that construction work performed must occur within the permissible hours. To ensure that construction activities do not disrupt the adjacent land uses, the following measures shall be taken:

1. Construction shall occur during the permissible hours as defined in the City of Temecula's Municipal Code.
2. During construction, the contractor shall ensure all construction equipment is equipped with appropriate noise attenuating devices.
3. The contractor shall locate equipment staging areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.
4. Idling equipment shall be turned off when not in use.
5. Equipment shall be maintained so that vehicles and their loads are secured from rattling and banging.

3.3 Construction Vibration

Construction activities can produce vibration that may be felt by adjacent land uses. The construction of the proposed project would not require the use of equipment such as pile drivers, which are known to generate substantial construction vibration levels. The primary vibration source during construction may be from a vibratory roller. A vibratory roller has a vibration impact of 0.210 inches per second peak particle velocity (PPV) at 25 feet which is perceptible but below any risk to architectural damage.

The fundamental equation used to calculate vibration propagation through average soil conditions and distance is as follows:

$$PPV_{equipment} = PPV_{ref} (100/D_{rec})^{n}$$

Where: PPV_{ref} = reference PPV at 100ft.
D_{rec} = distance from equipment to receiver in ft.
n = 1.1 (the value related to the attenuation rate through ground)

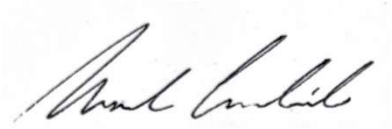
Construction activities are anticipated to occur as close as 130 ft to the nearest buildings. At a distance of 130 feet, a vibratory roller would yield a worst-case 0.034 PPV (in/sec), which is perceptible but below any risk of damage. The impact is less than significant, and no mitigation is required.

4.0 Conclusions

MD has evaluated the traffic noise and construction noise impacts for the proposed Ynez Road Widening Project located in Temecula, CA. The study shows that the traffic noise will fall within the normally acceptable to conditionally acceptable range, per the Noise Compatibility Guidelines of the General Plan. Construction noise is less than significant with the implementation of construction best practices. MD is pleased to provide this noise assessment. If you have any questions regarding this analysis or need further review, please call our office at (805) 426-4477.

Sincerely,
MD Acoustics, LLC

Claire Pincock
Sr. Acoustical Consultant

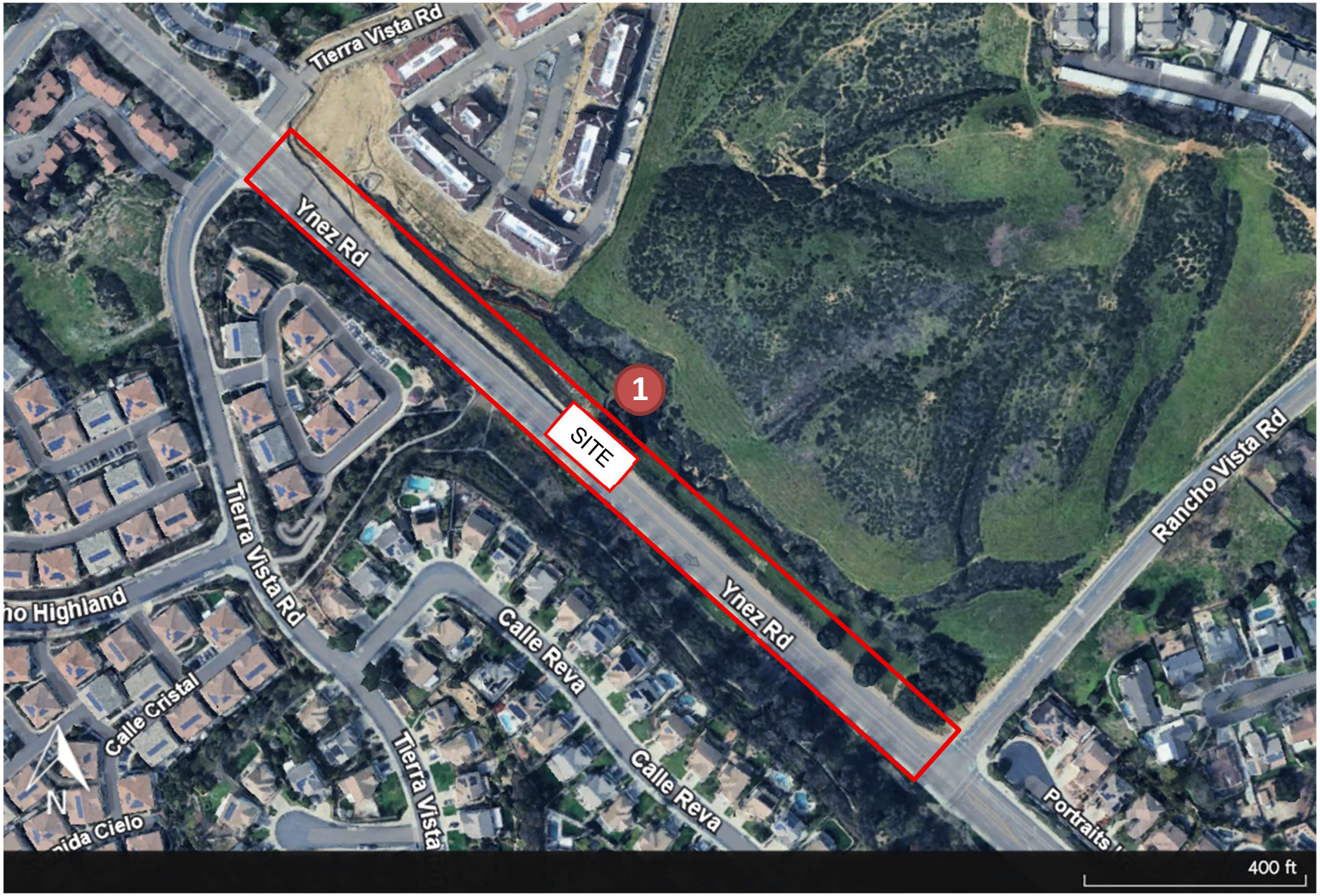


Mark Carlisle
Acoustical Consultant

Bethany Wu
Acoustical Consultant

Exhibit A
Noise Monitoring Location

= Long-Term 24-hour Monitoring Location



Appendix A

Glossary of Acoustical Terms

Glossary of Terms

A-Weighted Sound Level: The sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear. A numerical method of rating human judgment of loudness.

Ambient Noise Level: The composite of noise from all sources, near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24-hour day, obtained after addition of five (5) decibels to sound levels in the evening from 7:00 to 10:00 PM and after addition of ten (10) decibels to sound levels in the night before 7:00 AM and after 10:00 PM.

Decibel (dB): A unit for measuring the amplitude of a sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micro-pascals.

dB(A): A-weighted sound level (see definition above).

Equivalent Sound Level (LEQ): The sound level corresponding to a steady noise level over a given sample period with the same amount of acoustic energy as the actual time varying noise level. The energy average noise level during the sample period.

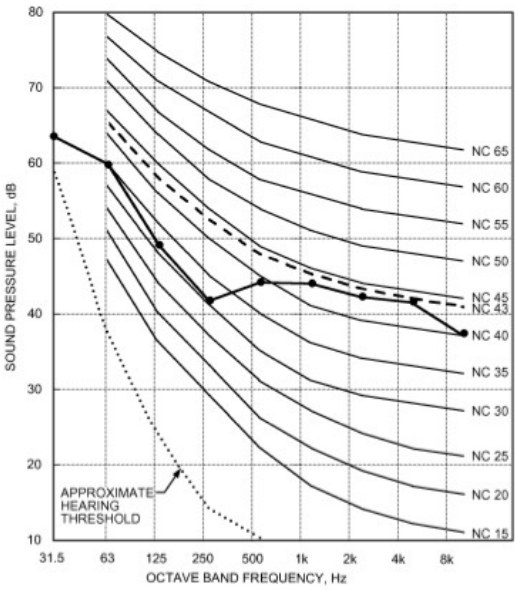
Habitable Room: Any room meeting the requirements of the Uniform Building Code or other applicable regulations which is intended to be used for sleeping, living, cooking or dining purposes, excluding such enclosed spaces as closets, pantries, bath or toilet rooms, service rooms, connecting corridors, laundries, unfinished attics, foyers, storage spaces, cellars, utility rooms and similar spaces.

L(n): The A-weighted sound level exceeded during a certain percentage of the sample time. For example, L10 in the sound level exceeded 10 percent of the sample time. Similarly L50, L90 and L99, etc.

Noise: *A*ny unwanted sound or sound which is undesirable because it interferes with speech and hearing, or is intense enough to damage hearing, or is otherwise annoying. The State Noise Control Act defines noise as "...excessive undesirable sound...".

Noise Criteria (NC) Method: This metric plots octave band sound levels against a family of reference curves, with the number rating equal to the highest tangent line value as demonstrated in Figure 1.

FIGURE 1: Sample NC Curves and Sample Spectrum Levels



Outdoor Living Area: Outdoor spaces that are associated with residential land uses typically used for passive recreational activities or other noise-sensitive uses. Such spaces include patio areas, barbecue areas, jacuzzi areas, etc. associated with residential uses; outdoor patient recovery or resting areas associated with hospitals, convalescent hospitals, or rest homes; outdoor areas associated with places of worship which have a significant role in services or other noise-sensitive activities; and outdoor school facilities routinely used for educational purposes which may be adversely impacted by noise. Outdoor areas usually not included in this definition are: front yard areas, driveways, greenbelts, maintenance areas and storage areas associated with residential land uses; exterior areas at hospitals that are not used for patient activities; outdoor areas associated with places of worship and principally used for short-term social gatherings; and, outdoor areas associated with school facilities that are not typically associated with educational uses prone to adverse noise impacts (for example, school play yard areas).

Percent Noise Levels: See L(n).

Room Criterion (RC) Method: When sound quality in the space is important, the RC metric provides a diagnostic tool to quantify both the speech interference level and spectral imbalance.

Sound Level (Noise Level): The weighted sound pressure level obtained by use of a sound level meter having a standard frequency-filter for attenuating part of the sound spectrum.

Sound Level Meter: An instrument, including a microphone, an amplifier, an output meter, and frequency weighting networks for the measurement and determination of noise and sound levels.

***Sound Transmission Class (STC*)**: To quantify STC, a Transmission Loss (TL) measurement is performed in a laboratory over a range of 16 third-octave bands between 125 – 4,000 Hertz (Hz). The average human voice creates sound within the 125 – 4,000 Hz 1/3rd octave bands.

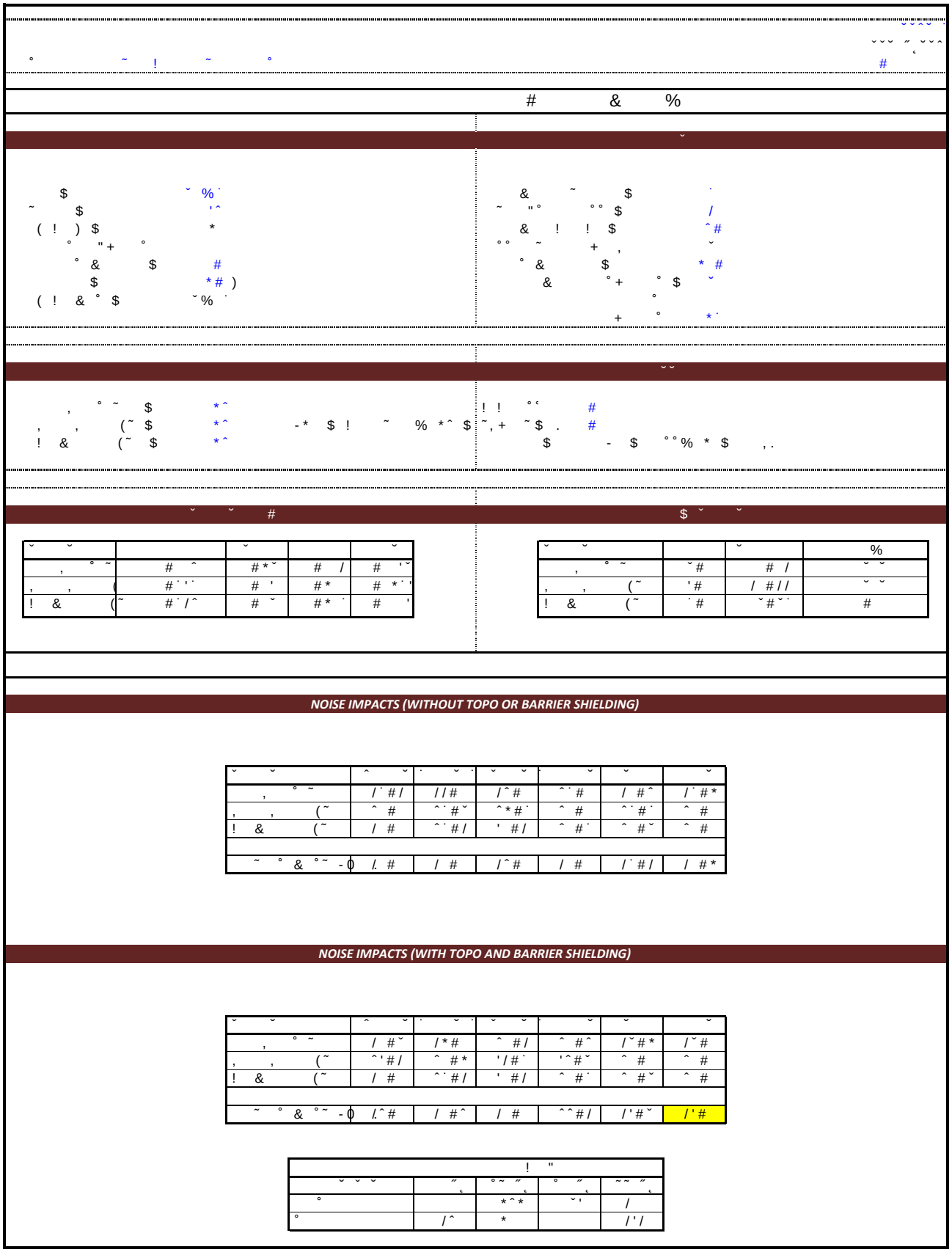
STC is a single-number rating given to a particular material or assembly. The STC rating measures the ability of a material or an assembly to resist airborne sound transfer over the specified frequencies (see ASTM International Classification E413 and E90). In general, a higher STC rating corresponds with a greater reduction of noise transmitting through a partition.

STC is highly dependent on the construction of the partition. The STC of a partition can be increased by: adding mass, increasing or adding air space, adding absorptive materials within the assembly. The STC rating does not assess low frequency sound transfer (e.g. sounds less than 125 Hz). Special consideration must be given to spaces where the noise transfer concern has lower frequencies than speech, such as mechanical equipment and or/or music. The STC rating is a lab test that does not take into consideration weak points, penetrations, or flanking paths.

Even with a high STC rating, any penetration, air-gap, or “flanking path can seriously degrade the isolation quality of a wall. Flanking paths are the means for sound to transfer from one space to another other than through the wall. Sound can flank over, under, or around a wall. Sound can also travel through common ductwork, plumbing or corridors. Noise will travel between spaces at the weakest points. Typically, there is no reason to spend money or effort to improve the walls until all weak points are controlled first.

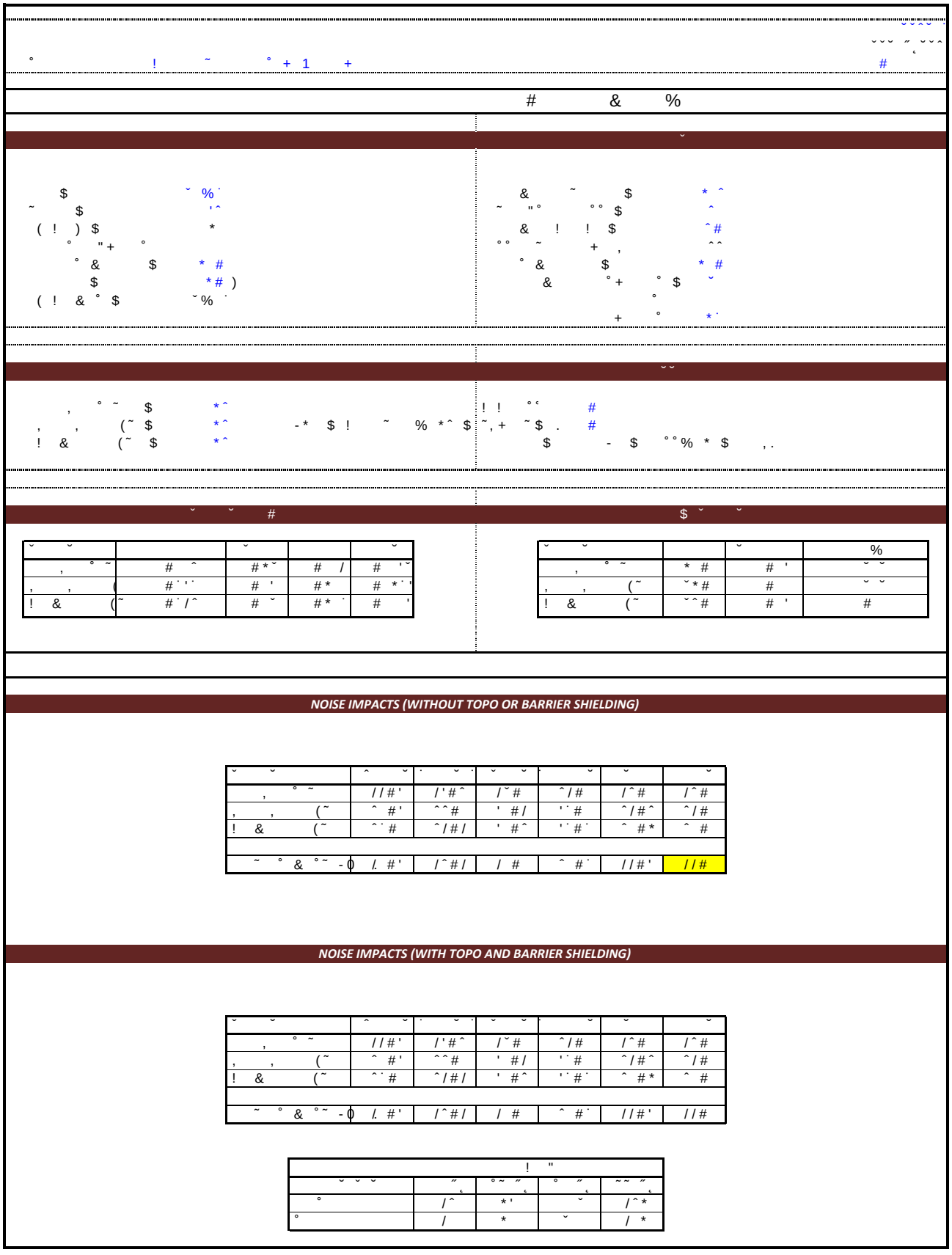
Appendix B

Traffic Noise Modeling Output



NOISE IMPACTS (WITHOUT TOPO OR BARRIER SHIELDING)

NOISE IMPACTS (WITH TOPO AND BARRIER SHIELDING)



Appendix C

Construction Noise Modeling Output

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Linear, Grubbing, & Land Clearing									
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VIBRATION LEVEL IMPACT

DATA INPUT

DATA OUT RESULTS

	0.034	

Appendix D
Field Sheet

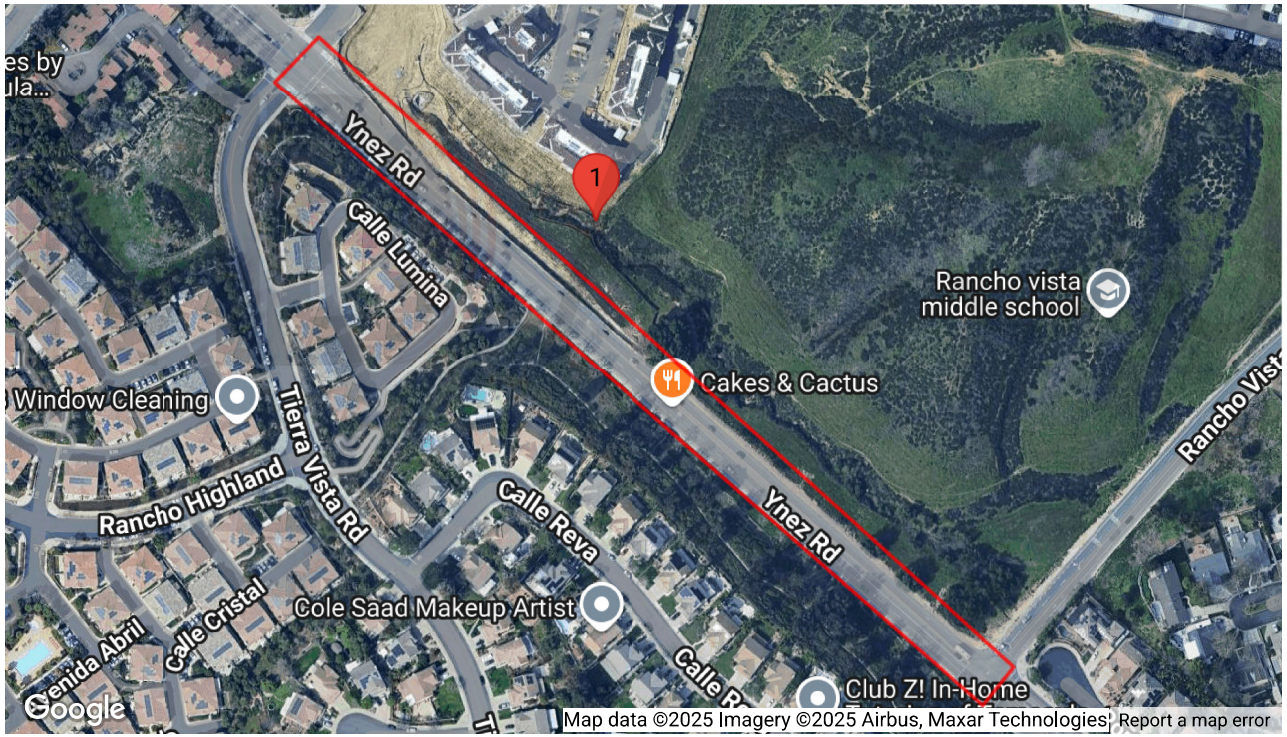
24-Hour Continuous Noise Measurement Datasheet - NM1

Project Name:	Ynez Road Widening Noise
Project: #/Name:	0739-2025-008
Site Address/Location:	
Date:	07/16/2025
Field Tech/Engineer:	Jason Schuyler / Bethany Wu

Site Observations:

74F winds 0-12MPH mostly clear skies. The primary noise sources are traffic and residential noise.

Sound Meter:	Piccolo-II, Soft dB	**SN:**	PO222022803
Settings:	A-weighted, slow, 1-min, 24-hour duration		
Site Id:	NM1		



STICS

MD ACOUSTICS

24-Hour Continuous Noise Measurement Datasheet - Cont. - NM1

Project Name:	Ynez Road Widening Noise	**Calibrator:**	Larson Davis Cal 200
Site Address/Location:		**Cal Check: Pre-test:**	.02 **Post Test:** .01
Site Id:	NM1		

Figure 1: NM1

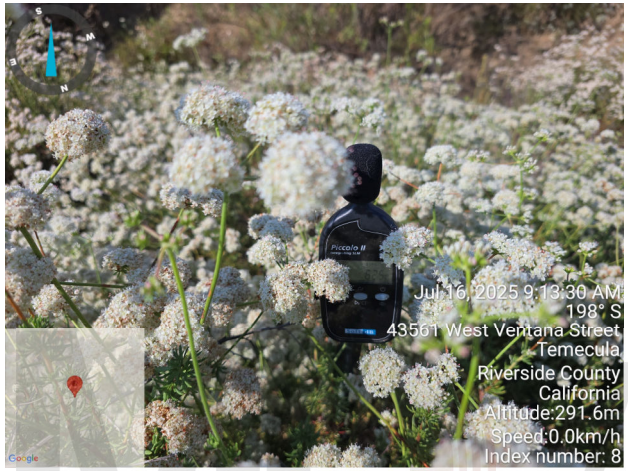


Figure 2: NM1

Figure 3: NM1

MD ACOUSTICS

24-Hour Continuous Noise Measurement Datasheet - Cont. - NM1

Project Name:	Ynez Road Widening Noise	**Site Topo:**	Buildings 1-4 stories	**Day:** 1 of 1	
Site Address/Location:			tall site	**Noise Source(s) w/ Distance:**	
Site Id:	NM1	**Meteorological Cond.:**	74F	road noise and residential noise	
		Ground Type:	Sandy soil and clay		

Table 1: Baseline Noise Measurement Summary

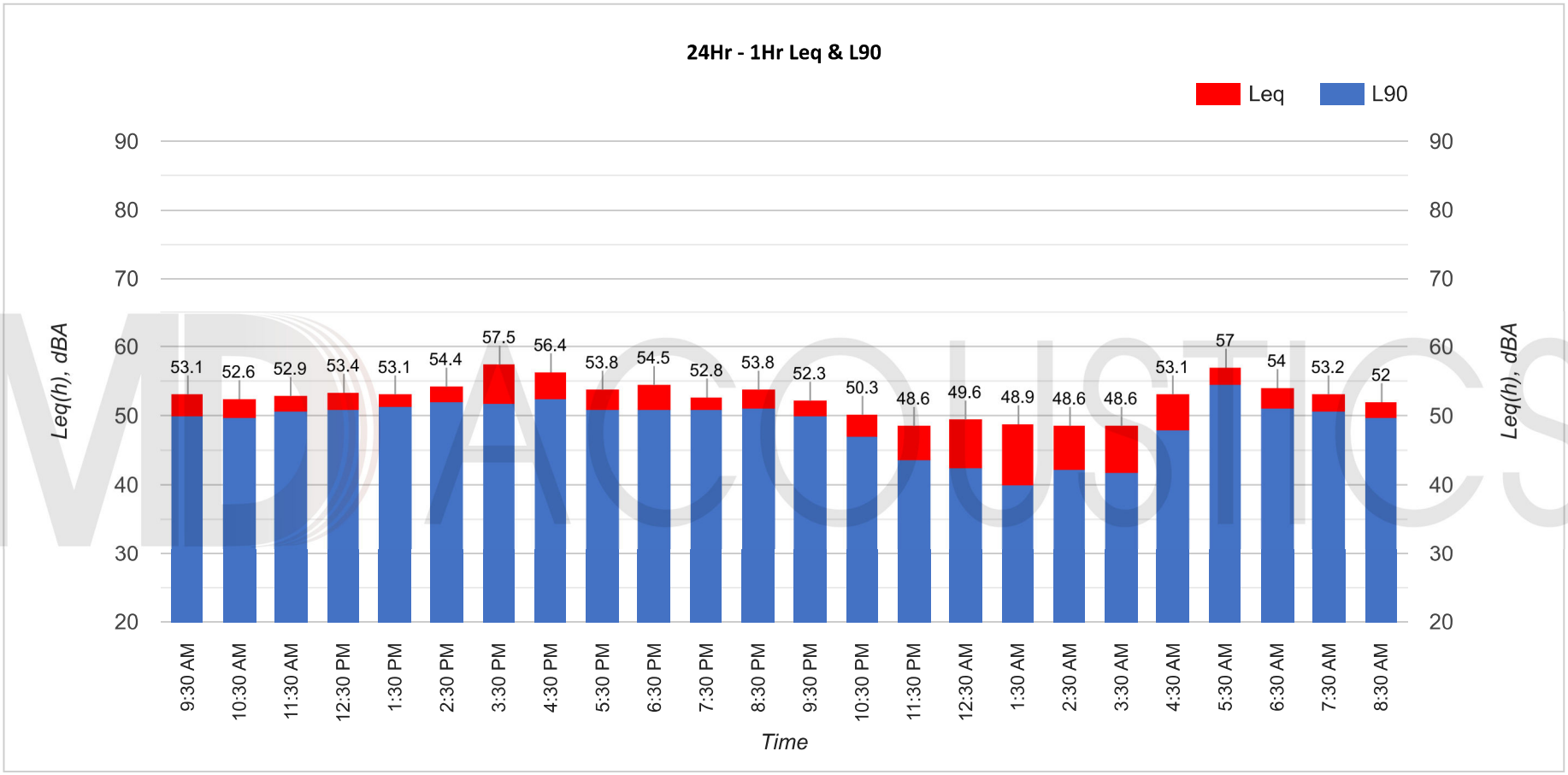
Date	Start	Stop	Leq	Lmax	Lmin	L2	L8	L25	L50	L90
7/16/2025	9:30 AM	10:30 AM	53.1	67.8	39.7	60.7	54.6	52.5	51.7	49.9
7/16/2025	10:30 AM	11:30 AM	52.6	65.7	40.4	56.7	54.5	53.2	52.1	49.7
7/16/2025	11:30 AM	12:30 PM	52.9	64.3	40.9	56.2	54.6	53.3	52.5	50.6
7/16/2025	12:30 PM	1:30 PM	53.4	74.2	41.2	57.2	54.5	53.3	52.6	51
7/16/2025	1:30 PM	2:30 PM	53.1	63.9	44.3	55.5	54.6	53.8	52.9	51.4
7/16/2025	2:30 PM	3:30 PM	54.4	70	44.8	58.2	56.5	54.9	53.9	52.1
7/16/2025	3:30 PM	4:30 PM	57.5	83.7	45.1	60.1	56.4	55.1	54	51.9
7/16/2025	4:30 PM	5:30 PM	56.4	77.6	45.2	62.8	57.1	55.3	54.5	52.4
7/16/2025	5:30 PM	6:30 PM	53.8	68.5	43.9	57.1	55.9	54.6	53.4	51
7/16/2025	6:30 PM	7:30 PM	54.5	74.1	41.3	61.5	56.2	54.3	53.2	50.8
7/16/2025	7:30 PM	8:30 PM	52.8	63.3	40.2	55.6	54.5	53.6	52.5	50.9
7/16/2025	8:30 PM	9:30 PM	53.8	73.5	45.6	57.4	55.4	53.9	52.9	51.2
7/16/2025	9:30 PM	10:30 PM	52.3	74.5	41.6	56.6	53.7	51.9	51.1	50.1
7/16/2025	10:30 PM	11:30 PM	50.3	75	40.5	52.8	51.2	50.2	49.1	47
7/16/2025	11:30 PM	12:30 AM	48.6	68.6	38	54.5	50.5	48.5	47.6	43.7
7/17/2025	12:30 AM	1:30 AM	49.6	68.9	36.5	53.7	50.5	49	47.7	42.5
7/17/2025	1:30 AM	2:30 AM	48.9	69.8	36.8	56.8	51.1	48.1	46.2	39.9
7/17/2025	2:30 AM	3:30 AM	48.6	61.1	38	53.2	52	49.4	48.1	42.2
7/17/2025	3:30 AM	4:30 AM	48.6	63.3	35.7	53.6	51.5	49.4	48	41.8
7/17/2025	4:30 AM	5:30 AM	53.1	66.5	37.9	57	55.7	54.4	52.1	47.9
7/17/2025	5:30 AM	6:30 AM	57	65.8	42.2	59.6	58.8	57.8	56.8	54.6
7/17/2025	6:30 AM	7:30 AM	54	64	40.1	56.9	56.2	55	53.4	51.2
7/17/2025	7:30 AM	8:30 AM	53.2	70.8	39.6	56.7	55	53.5	52.7	50.7
7/17/2025	8:30 AM	9:30 AM	52	65.1	39.4	55.4	54	52.8	51.5	49.8

DNL	59.4	CNEL	59.4	

MD ACOUSTICS

24-Hour Continuous Noise Measurement Datasheet - Cont. - NM1

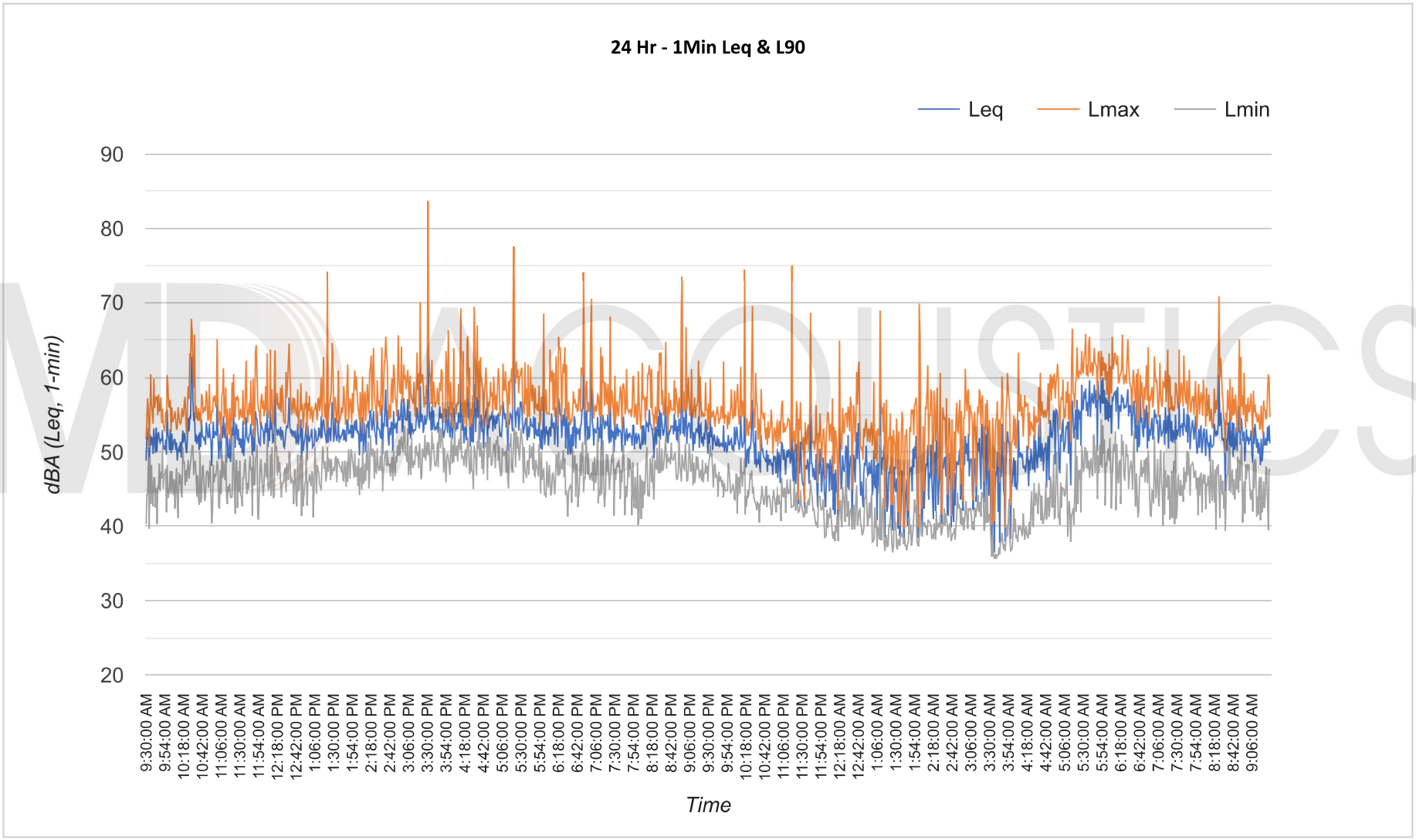
Project Name:	Ynez Road Widening Noise	**Site Topo:**	Buildings 1-4 stories	**Day:** 1 of 1	
Site Address/Location:			tall site	**Noise Source(s) w/ Distance:**	
Site Id:	NM1	**Meteorological Cond.:**	74F	road noise and residential noise	
		Ground Type:	Sandy soil and clay		



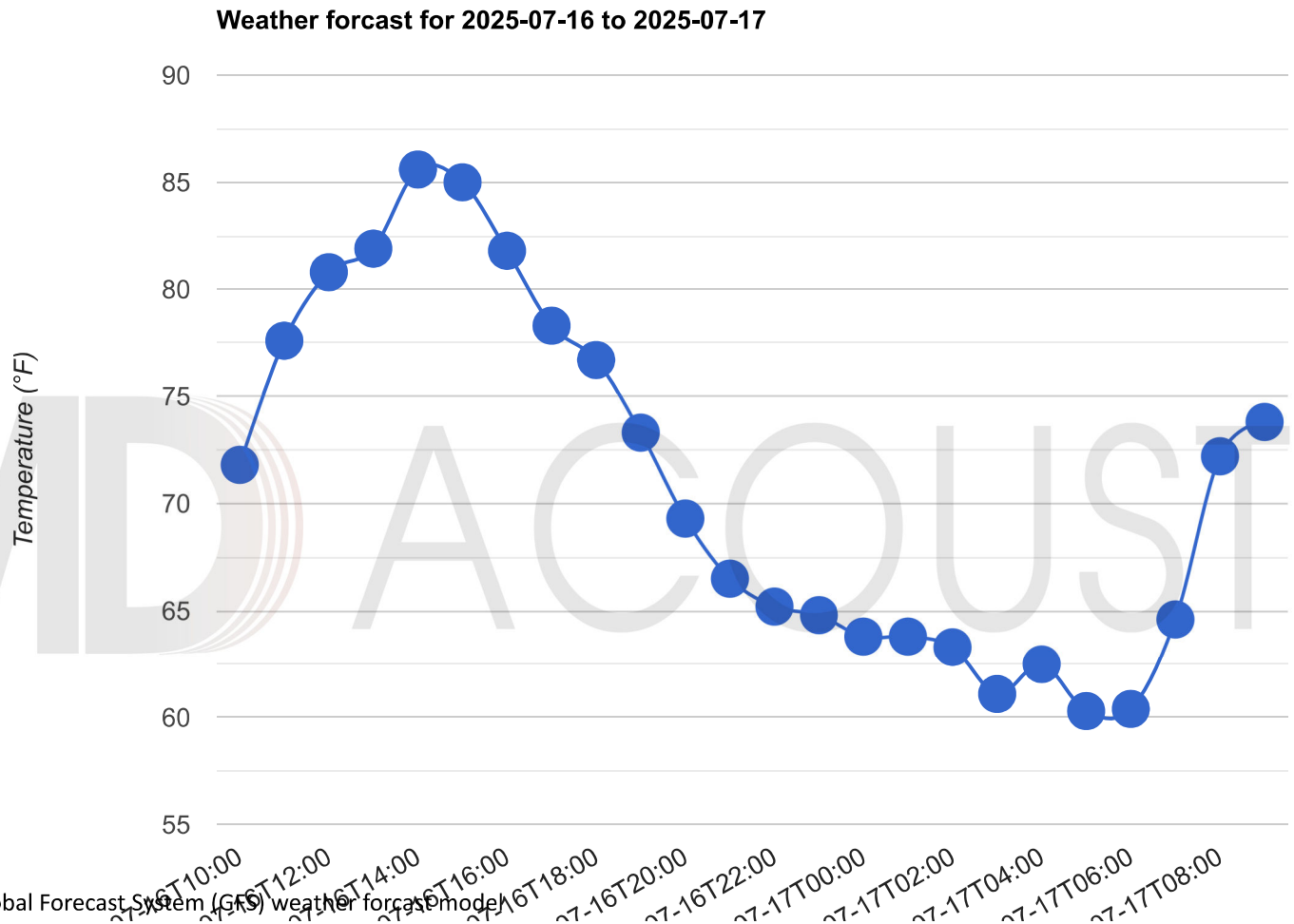
MD ACOUSTICS

24-Hour Continuous Noise Measurement Datasheet - Cont. - NM1

Project Name:	Ynez Road Widening Noise	**Site Topo:**	Buildings 1-4 stories	**Day:** 1 of 1	
Site Address/Location:			tall site	**Noise Source(s) w/ Distance:**	
Site Id:	NM1	**Meteorological Cond.:**	74F	road noise and residential noise	
		Ground Type:	Sandy soil and clay		

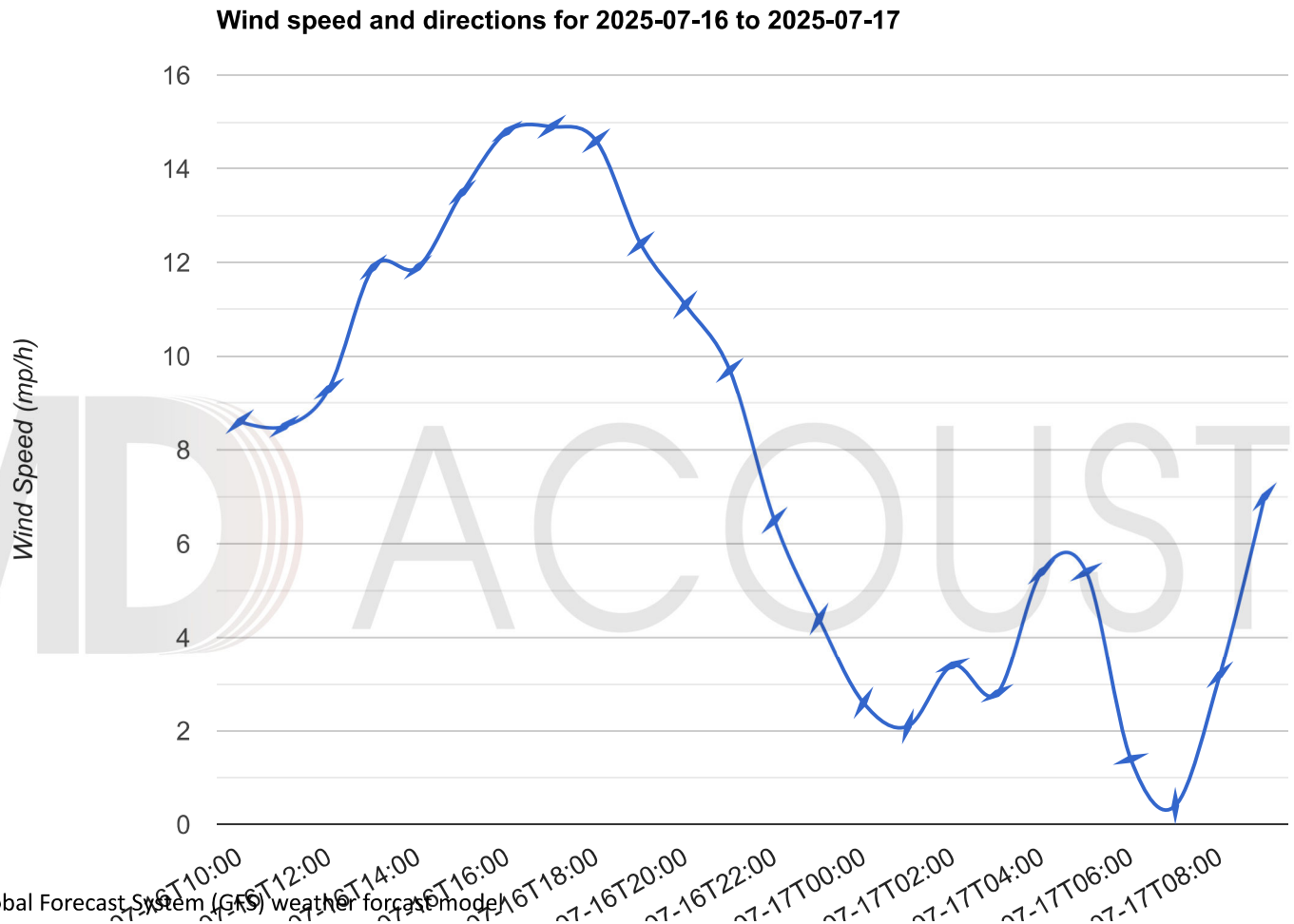


MD ACOUSTICS



Source: Global Forecast System (GFS) weather forcast model

MD ACOUSTICS



Source: Global Forecast System (GFS) weather forcast model

MD ACOUSTICS

Appendix G

Ynez Road Widening Project Transportation Screening Assessment

Ganddini Group, Inc

July 9, 2025

TECHNICAL MEMORANDUM

TO: ELMT CONSULTING, INC.

FROM: Po Leung, Giancarlo Ganddini | GANDDINI GROUP, INC.

DATE: July 9, 2025

SUBJECT: Ynez Road Widening Project Transportation Screening Assessment
GGI Project No. 19839

Ganddini Group, Inc. is pleased to provide this Transportation Screening Assessment for the Ynez Road Widening project in the City of Temecula. The purpose of this memorandum is to determine if the preparation of a traffic impact analysis with vehicle miles traveled (VMT) analysis is necessary based on the traffic impact guidelines and screening criteria established by the City of Temecula. We trust the findings of this analysis will aid you and the City of Temecula in assessing the project.

PROJECT DESCRIPTION

The project site is located on Ynez Road between Tierra Vista Road and Rancho Vista Road in the City of Temecula, California.

The proposed project involves adding a second northbound through lane on the approximately 0.3-mile segment of Ynez Road between Tierra Vista Road and Ranch Vista Road, along with bicycle lane and sidewalk improvements. The proposed improvement plans are shown in Attachment A.

VEHICLE MILES TRAVELED (VMT) SCREENING CRITERIA (CEQA)

The project VMT impact has been assessed in accordance with guidance from the *City of Temecula Traffic Impact Analysis Guidelines* ["TIA Guidelines"]. The City VMT Guidelines provide screening thresholds for certain types of projects that may be presumed to cause a less than significant VMT impact based on recommendations provided in the Office of Planning and Research (OPR) *Technical Advisory on Evaluating Transportation Impacts in CEQA* (State of California, December 2018) and additional substantial evidence documented in the City's VMT guidelines.

Vehicle Miles Traveled (VMT) Screening Criteria (CEQA) for Transportation Projects

Exhibit D of the City's TIA Guidelines contains the following list, based on guidance from the OPR Technical Advisory, for transportation projects that "would not likely lead to a substantial or measurable increase in vehicle travel, and therefore generally should not require an induced travel analysis:"

- Rehabilitation, maintenance, replacement, safety, and repair projects designed to improve the condition of existing transportation assets (e.g., highways; roadways; bridges; culverts; Transportation Management System field elements such as cameras, message signs, detection, or signals; tunnels; transit systems; and assets that serve bicycle and pedestrian facilities) and that do not add additional motor vehicle capacity
- Roadside safety devices or hardware installation such as median barriers and guardrails

- Roadway shoulder enhancements to provide "breakdown space," dedicated space for use only by transit vehicles, to provide bicycle access, or to otherwise improve safety, but which will not be used as automobile vehicle travel lanes
- **Addition of an auxiliary lane of less than one mile in length designed to improve roadway safety**
- Installation, removal, or reconfiguration of traffic lanes that are not for through traffic, such as left, right, and U-turn pockets, two-way left turn lanes, or emergency breakdown lanes that are not utilized as through lanes
- **Addition of roadway capacity on local or collector streets provided the project also substantially improves conditions for pedestrians, cyclists, and, if applicable, transit**
- Conversion of existing general purpose lanes (including ramps) to managed lanes or transit lanes, or changing lane management in a manner that would not substantially increase vehicle travel
- Addition of a new lane that is permanently restricted to use only by transit vehicles
- Reduction in number of through lanes
- Grade separation to separate vehicles from rail, transit, pedestrians or bicycles, or to replace a lane in order to separate preferential vehicles (e.g., HOV, HOT, or trucks) from general vehicles
- Installation, removal, or reconfiguration of traffic control devices, including Transit Signal Priority (TSP) features
- Installation of traffic metering systems, detection systems, cameras, changeable message signs and other electronics designed to optimize vehicle, bicycle, or pedestrian flow
- Timing of signals to optimize vehicle, bicycle, or pedestrian flow
- Installation of roundabouts or traffic circles
- Installation or reconfiguration of traffic calming devices
- Adoption of or increase in tolls
- Addition of tolled lanes, where tolls are sufficient to mitigate VMT increase
- Initiation of new transit service
- Conversion of streets from one-way to two-way operation with no net increase in number of traffic lanes
- Removal or relocation of off-street or on-street parking spaces
- Adoption or modification of on-street parking or loading restrictions (including meters, time limits, accessible spaces, and preferential/reserved parking permit programs)
- Addition of traffic wayfinding signage
- Rehabilitation and maintenance projects that do not add motor vehicle capacity
- Addition of new or enhanced bike or pedestrian facilities on existing streets/highways or within existing public rights-of-way
- Addition of Class I bike paths, trails, multi-use paths, or other off-road facilities that serve non-motorized travel
- Installation of publicly available alternative fuel/charging infrastructure

- Addition of passing lanes, truck climbing lanes, or truck brake-check lanes in rural areas that do not increase overall vehicle capacity along the corridor

Northbound Ynez Road currently provides two lanes south of the project limits (Rancho Vista Road), one lane through the project limits, and two lanes north of the project limits (Tierra Vista Road). There are currently no bicycle facilities or sidewalks provided on Ynez Road within the project limits. The proposed project would complete Ynez Road at its ultimate half-section width in accordance with the City's General Plan circulation element, including construction of a dedicated Class II bicycle lane with green rectangular markings at the intersection approach to Tierra Vista Road for enhanced safety and sidewalk improvements that would improve roadway safety.

Considering the relatively short distance (less than one mile), any potential near-term increase in VMT relating to additional vehicular capacity is expected to be minor and would be offset by the enhanced bike lane and sidewalk improvements. Furthermore, since the proposed project is consistent with the City of Temecula General Plan Circulation Element, the project would not increase VMT beyond long-range forecasts included the Southern California Associations of Government (SCAG) Regional Transportation Plan (Connect SoCal 2024). Thus, the proposed project generally aligns the City-established screening criteria for transportation projects that may be presumed to result in a less than significant VMT impact.

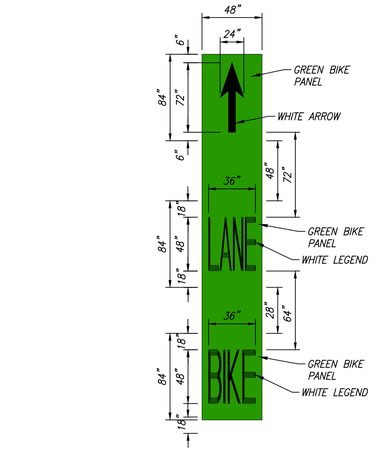
CONCLUSION

The proposed project generally aligns the City-established screening criteria for transportation projects that may be presumed to result in a less than significant VMT impact.

We appreciate the opportunity to assist you on this project. Should you have any questions or if we can be of further assistance, please contact us at (714) 795-3100.

ATTACHMENT A

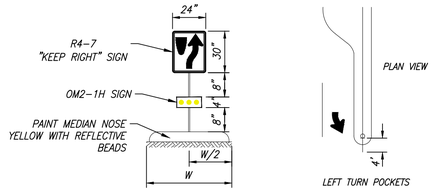
IMPROVEMENT PLANS



NOTE: NSTALL THERMOPLASTIC PAVEMENT MARKINGS WITH GREEN PANEL.

(26) BIKE LANE PAVEMENT MARKING

N.T.S.



(27) R4-7 AND OM2-1H SIGN ON SIGN POST

N.T.S.

CONTRACTORS NOTE:

CONTRACTOR TO REFRESH CROSSWALK STRIPING AS DEEMED NECESSARY BY THE FIELD INSPECTOR AT TIERRA VISTA ROAD AND RANCHO VISTA ROAD INTERSECTIONS

SIGNING AND STRIPING NOTES:

1. STRIPING, SIGNING, OR PAVEMENT LEGENDS SHALL NOT BE INSTALLED PRIOR TO FIELD INSPECTION AND APPROVAL BY THE INSPECTOR.
2. ALL PAVEMENT MARKINGS AND SIGN LOCATIONS MUST BE INSPECTED AND APPROVED BEFORE STRIPING BEGINS. THE INSPECTOR SHALL DETERMINE THE EXACT LIMITS OF THE MATCH STRIPING.
3. ALL REGULATORY SIGNS AND WARNING SIGNS SHALL USE HI-INTENSITY DIAMOND GRADE REFLECTIVE SHEETING AND BE A MINIMUM OF 30"X30".
4. UNLESS OTHERWISE STATED, ALL STRIPING SHALL BEGIN AND TERMINATE AT QUARTER DELTA OF THE CURB RETURN, OR BACK OF THE CROSSWALK OR STOP BAR.
5. ALL R1 SIGNS WILL BE LOCATED 2 FEET BEHIND CURB AT THE B.C.R. OR AS SPECIFIED ON THE PLAN.
6. ALL STOP BARS WILL BE LOCATED AT THE PROLONGATION OF THE CENTER DELTA OF THE CURB RETURN OR BEHIND THE WHEELCHAIR ACCESS RAMPS UNLESS OTHERWISE SPECIFIED ON THE PLAN.
7. THE STOP LEGEND SHALL BE 8 FEET BEHIND THE STOP BAR. IF REQUIRED, DIRECTIONAL ARROWS SHALL ALSO BE 8 FEET BEHIND THE STOP BAR OR 8 FEET BEHIND THE STOP LEGENDS.
8. ALL PAVEMENT MARKERS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST VERSION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND CALTRANS STANDARD PLANS: A20-A THROUGH A24-E.
9. STREET NAME SIGNS SHALL BE INSTALLED AT ALL INTERSECTIONS AND MAY BE INSTALLED ABOVE THE R1 SIGN OR AS SPECIFIED ON THE PLAN.
10. THE POST MATERIAL SHALL BE "TELESPAR QWIK-PUNCH" OR APPROVED EQUAL WITH RECEPTIVE 30-INCH OR 36-INCH ANCHOR ASSEMBLY.
11. ALL PAVEMENT STRIPING AND LEGENDS SHALL BE INSTALLED PER SECTION 84-2 OF THE CALTRANS STANDARD SPECIFICATIONS.
12. ALL CONFLICTING PAVEMENT LEGENDS, STRIPING (INCLUDING RAISED PAVEMENT MARKERS), AND PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING METHOD, PRIOR TO GRIND AND OVERLAY, PER SECTION 84-9 OF THE CALTRANS STANDARD SPECIFICATION.
13. ALL PAINTED STRIPING SHALL BE DOUBLE COATED IN NOT LESS THAN 7 DAYS, BUT NO MORE THAN 14 DAYS FROM DATE OF INITIAL INSTALLATION.
14. ALL PAVEMENT MARKINGS, PAVEMENT LEGENDS, AND LINES 8" OR WIDER SHALL BE THERMOPLASTIC UNLESS OTHERWISE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
15. ALL PAVEMENT STRIPING SHALL HAVE RAISED PAVEMENT MARKINGS (RPM) PER SECTION 81-3 OF THE CALTRANS STANDARD SPECIFICATIONS.
16. A 6" SOLID WHITE LEAD LINE WITH TYPE 'G' RPM'S AT 25' SPACING SHOULD BE USED FOR EACH LANE LINE WHERE IT BREAKS ACROSS AN INTERSECTION. 50' OF LEAD IN LINE ON THE APPROACH SIDE AND 50' ON THE LEAD OUT DEPARTURE SIDE.

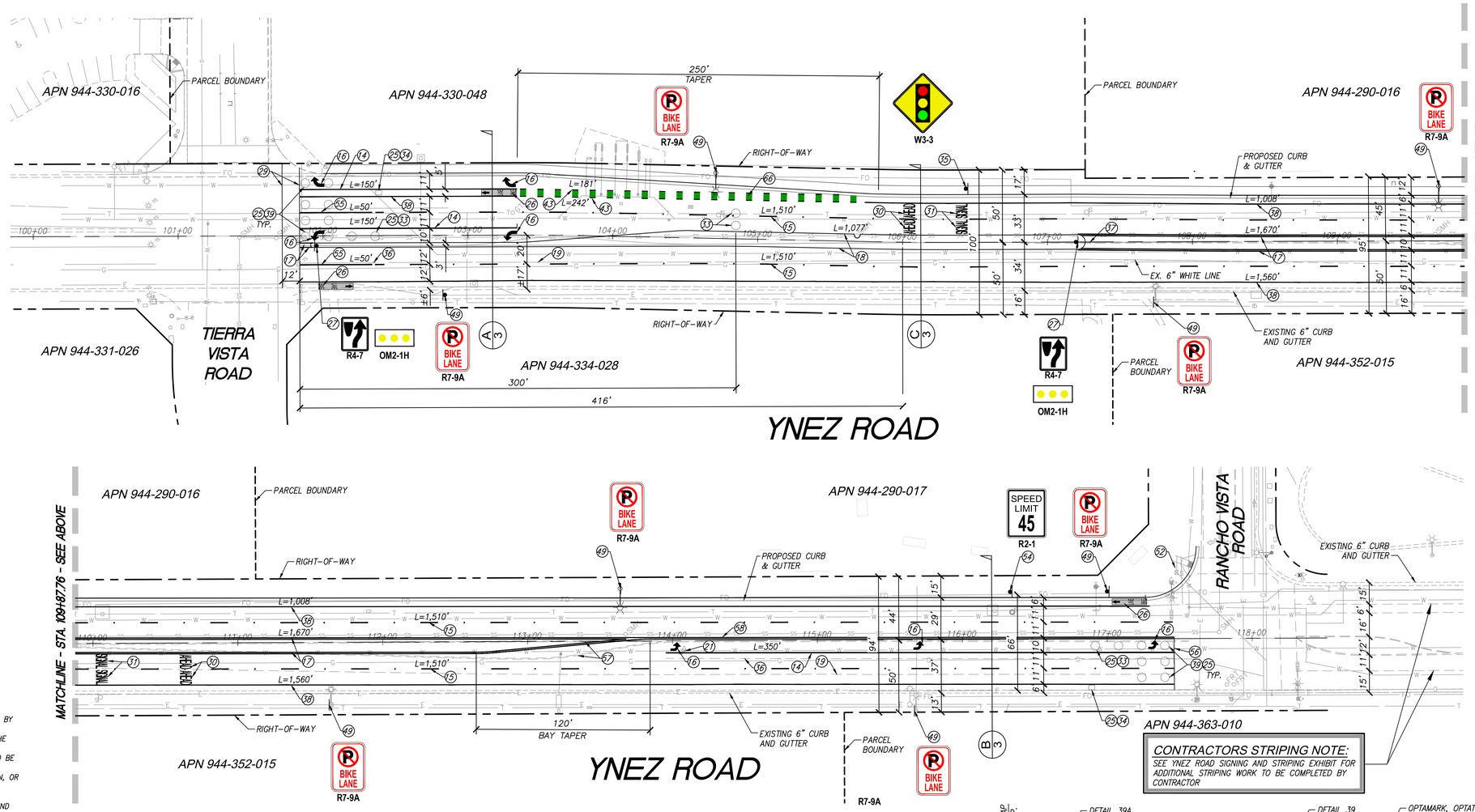
Underground Service Alert

CALL TOLL FREE 1-800-422-4133

TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

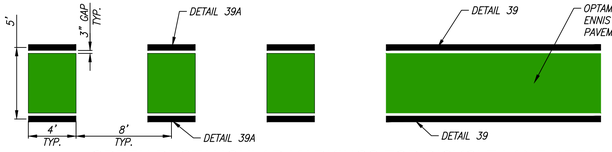


CONTRACTORS STRIPING NOTE:

SEE YNEZ ROAD SIGNING AND STRIPING EXHIBIT FOR ADDITIONAL STRIPING WORK TO BE COMPLETED BY CONTRACTOR

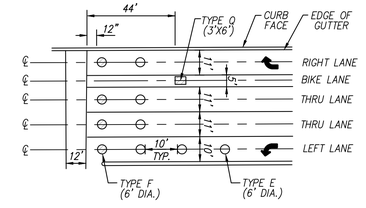
CONSTRUCTION NOTES

(14) INSTALL DETAIL 38, 8" CHANNELIZING LINE PER CALTRANS STANDARD PLAN A20D
(15) INSTALL DETAIL 12, 6" WHITE DASHED LANELINE PER CALTRANS STANDARD PLAN A20A
(16) INSTALL TYPE IV TURN ARROW PER CALTRANS STANDARD PLAN A24A
(17) INSTALL DETAIL 29, DOUBLE YELLOW MEDIAN ISLAND PER CALTRANS STANDARD PLAN A20A
(18) INSTALL DETAIL 25, LEFT EDGELINE PER CALTRANS STANDARD PLAN A20B
(19) REMOVE DETAIL 12, 6" WHITE DASHED LANELINE PER CALTRANS STANDARD PLAN A20A
(21) REMOVE TYPE IV TURN ARROW PER CALTRANS STANDARD PLAN A24A
(25) INSTALL LOOP DETECTORS PER DETAIL ON HEREON
(26) INSTALL BIKE LANE PAVEMENT MARKING PER DETAIL HEREON
(27) INSTALL R4-7 & OM2-1H SIGN ON SIGN POST PER DETAIL ON HEREON
(29) INSTALL 12" WHITE BASIC CROSSWALK 12' WIDE PER CALTRANS STANDARD A24F
(30) INSTALL "AHEAD" PAVEMENT MARKING PER CALTRANS STANDARD A24D
(31) INSTALL "SIGNAL" PAVEMENT MARKING PER CALTRANS STANDARD A24D
(33) INSTALL LOOP DETECTOR TYPE E PER CALTRANS RSP ES-5B
(34) INSTALL SQUARE DETECTOR TYPE Q (3'X6') PER CALTRANS RSP ES-5B
(35) INSTALL W3-3 SIGN ON POST OR ON STREET LIGHT PER CA MUTCD STANDARDS
(36) REMOVE DETAIL 38, 8" CHANNELIZING LINE PER CALTRANS STANDARD PLAN A20D
(37) REMOVE DETAIL 22, DOUBLE YELLOW LINE STRIPING
(38) INSTALL DETAIL 39, BIKE LANE LINE PER CALTRANS RSP A20D
(39) INSTALL LOOP DETECTOR TYPE F PER CALTRANS RSP ES-5B
(43) INSTALL DETAIL 39A, LANE LINE EXTENSIONS PER CALTRANS RSP A20D
(49) INSTALL R7-9A NO PARKING SIGN PER CA MUTCD STANDARDS ON POST OR ON STREET LIGHT PER PLAN
(54) INSTALL R2-1 "SPEED LIMIT" SIGN PER CA MUTCD, SPEED AS NOTED PER PLAN
(55) INSTALL 6" SOLID WHITE LINE WITH TYPE "G" RPM'S AT 25' O.C., 2" OFFSET FROM LINE
(56) APPLY 12" WHITE LIMIT LINE PER CALTRANS STANDARD A24G
(57) REMOVE DETAIL 29, DOUBLE YELLOW MEDIAN ISLAND PER CALTRANS STANDARD PLAN A20A
(58) INSTALL DETAIL 22, DOUBLE YELLOW LINE STRIPING PER CALTRANS STANDARD PLAN A20A
(66) APPLY GREEN RECTANGULAR PAVEMENT MARKING FOR BIKE LANES PER DETAIL HEREON



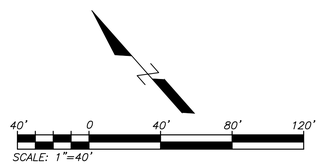
(66) GREEN RECTANGULAR MARKINGS FOR BICYCLE LANE DETAILS

N.T.S.



(25) LOOP INSTALLATION DETAIL

N.T.S.



PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27406 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6' WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED, "T-32-81 R-6-30-05 EL= 1006-84" ELEVATION: 1006.84'

SCALE: HORIZONTAL AS SHOWN; VERTICAL AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFEST No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of

R.C.E. No. 45920 Expires 12/31/26 Date: 02/18/25

RECOMMENDED BY: _____ DATE: _____
AVLIN ODVIAR, PRINCIPAL CIVIL ENGINEER

ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER

R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02

YNEZ ROAD STA 101+99.21 TO STA 117+61.65

SIGNING AND STRIPING PLAN

Drawing No. C-7

SHEET 8 OF 14

Plotted: Feb 18, 2025 - 2:38pm By: dolivv
DWG: N:\01_204.000 Ynez Road Expansion\Drawings\Street Improvements\ST08-Striping Sheet.dwg

Appendix H

Project Plans

CITY OF TEMECULA
STREET IMPROVEMENT PLAN
YNEZ ROAD IMPROVEMENTS-PHASE I, PW23-02

GENERAL NOTES

1. STANDARDS. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE CITY'S IMPROVEMENT STANDARD DRAWINGS FOR PUBLIC WORKS CONSTRUCTION (AND SUBSEQUENT AMENDMENTS), THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL, CITY CODES AND REQUIREMENTS.
2. LICENSE/PERMIT REQUIREMENT.
   a. PRIOR TO START OF ANY WORK, A BUSINESS LICENSE SHALL BE OBTAINED FROM THE CITY.
   b. A GRADING PERMIT SHALL BE OBTAINED, PRIOR TO ANY WORK ON PRIVATE DEVELOPMENT. THE PERMIT AND AN APPROVED SET OF IMPROVEMENT PLANS MUST BE PRESENT AT THE JOBSITE DURING CONSTRUCTION.
3. ERRORS OR OMISSIONS. APPROVAL OF THESE PLANS BY THE CITY DOES NOT RELIEVE THE APPLICANT AND ENGINEER OF RECORD FROM THE RESPONSIBILITY FOR THE CORRECTION OF ERRORS OR OMISSIONS DISCOVERED DURING CONSTRUCTION.
4. WORKING HOURS. CITY ORDINANCE NO. 94-25 STATES THAT NO PERSON SHALL ENGAGE IN OR CONDUCT CONSTRUCTION ACTIVITY, WHEN THE CONSTRUCTION SITE IS WITHIN ONE-QUARTER OF A MILE OF AN OCCUPIED RESIDENCE, BETWEEN THE HOURS OF 6:30 PM AND 6:30 AM, MONDAY THROUGH FRIDAY AND SHALL ONLY ENGAGE IN OR CONDUCT CONSTRUCTION ACTIVITY BETWEEN THE HOURS OF 7:00 AM AND 6:30 PM ON SATURDAY. NO CONSTRUCTION ACTIVITY SHALL BE UNDERTAKEN ON SUNDAY AND NATIONALLY RECOGNIZED HOLIDAYS.
5. REGULATORY AGENCY CLEARANCES. THE ISSUANCE OF A PERMIT BY THE CITY DOES NOT IMPLY OR PROVIDE ANY CLEARANCES FROM STATE OR FEDERAL AGENCIES REGULATING THE PROVISIONS OF STATE OR FEDERAL ENDANGERED SPECIES ACTS OR WATER QUALITY REGULATIONS. THE APPROPRIATE CLEARANCES FROM THESE AGENCIES SHALL BE OBTAINED PRIOR TO ANY SITE DISTURBANCE OR GRADING.
6. CONSTRUCTION CHANGE. ANY CONSTRUCTION CHANGE MUST BE FIRST SUBMITTED TO THE CITY AS A REDLINE REVISION FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTING THE CHANGE IN THE FIELD. REFER TO THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL.
7. PRE-CONSTRUCTION MEETING. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED TWO WORK DAYS PRIOR TO THE START OF CONSTRUCTION. DURING CONSTRUCTION, A DEPENDABLE AND RESPONSIVE CONTRACTOR'S REPRESENTATIVE SHALL BE AT THE JOB SITE AT ALL TIMES.
8. UTILITIES. APPROVAL OF THESE PLANS BY THE CITY DOES NOT CONSTITUTE A REPRESENTATION AS TO THE ACCURACY OR COMPLETENESS OF THE LOCATION, NOR THE EXISTENCE OR NON-EXISTENCE OF ANY UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. ANY UTILITY DAMAGED DURING THE PERFORMANCE OF THE WORK SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE GOVERNING AGENCY BY THE CONTRACTOR, AT HIS EXPENSE.
9. SURVEY. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY THE ENGINEER OF RECORD AND TO INSTALL STREET CENTERLINE MONUMENTS, AS REQUIRED BY RIVERSIDE COUNTY ORDINANCE NO. 461. CENTERLINE TIES SHALL BE PROVIDED TO THE CITY ENGINEER, UPON COMPLETION OF THE PROJECT AND BEFORE ACCEPTANCE IS GRANTED. ALL EXISTING MONUMENTATION (DISTURBED OR DESTROYED DURING CONSTRUCTION) SHALL BE REPLACED TO CITY STANDARDS IN ACCORDANCE WITH THE LAND SURVEYORS ACT AND THE STREETS AND HIGHWAY CODE, AND AS APPROVED BY THE CITY ENGINEER. UPON REQUEST, SURVEY CUTS SHEETS SHALL BE PROVIDED TO THE CITY ENGINEER.
10. DUST CONTROL. DUST SHALL BE CONTROLLED BY WATERING OR OTHER METHODS, AS APPROVED BY THE CITY ENGINEER AND SHALL COMPLY WITH SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT'S (SCAQMD) RULE 403.
11. CONSTRUCTION FENCING. A SIX FOOT CHAIN LINK FENCE IS REQUIRED ON ALL INDUSTRIAL AND COMMERCIAL PROJECTS UNTIL ROOF SYSTEMS ARE COMPLETED OR AS DEEMED NECESSARY BY THE CITY ENGINEER FOR PUBLIC SAFETY. THE MAINTENANCE OF THE FENCE IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
12. INSPECTIONS. ALL WORK PERFORMED WITHOUT PROPER INSPECTION FROM THE CITY MAY BE SUBJECT TO REJECTION.
13. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "GRADING," "EROSION AND SEDIMENT CONTROL," "PAVING" AND "TRAFFIC" REQUIREMENTS, IF APPLICABLE.
14. OTHER PERTINENT INFORMATION. REFER TO THE CITY OF TEMECULA MUNICIPAL CODE, TITLE 18, "CONSTRUCTION, GRADING AND ENCROACHMENTS".

UTILITY CONTACTS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION AND PROTECTION OF ALL UTILITIES. FOR LOCATION OF UNDERGROUND UTILIZES, OR FOR EMERGENCY ASSISTANCE CALL:

TELEPHONE:
FRONTIER COMMUNICATIONS
PH. 800-921-8101

GAS:
SOCAL GAS COMPANY
527 NORTH SAN JACINTO STREET
HEMET, CA 92543
PH. 800-427-2200

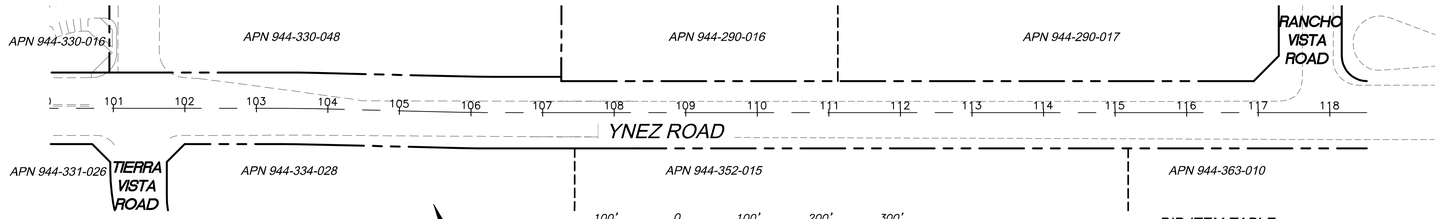
ELECTRICITY:
SOUTHERN CALIFORNIA EDISON
24487 PRIELIPP ROAD
WILDOMAR, CA 92595
PH. 800-684-8123

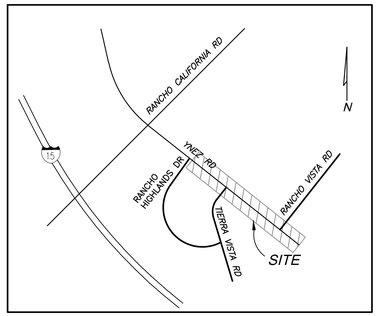
CABLE:
TIME WARNER CABLE
26487 YNEZ ROAD, SUITE G
TEMECULA, CA 92591
PH. 888-892-2253

SEWER:
EASTERN MUNICIPAL WATER DISTRICT
2270 TRUMBLE ROAD
PERRIS, CA 92572
PH. 951-928-3777 EXT 4372

WATER:
RANCHO CALIFORNIA WATER DISTRICT
42135 WINCHESTER ROAD
TEMECULA, CA 92590
PH. 951-296-6900

SOLID WASTE:
CR&R INCORPORATED
1706 GOETZ ROAD
PERRIS, CA 92570
PH. 800-755-8112





VICINITY MAP
N.T.S.

SHEET INDEX

TITLE	SHEET NO.	DRAWING NO.
TITLE SHEET,INDEX MAP & NOTES	1	T1
DEMOLITION PLAN AND NOTES	2	C1
ADDITIVE PLAN	3	C2
TYPICAL SECTIONS AND DETAILS	4	C3
PLAN AND PROFILES	5-6	C4-C5
MEDIAN PLAN AND PROFILE	7	C6
SIGNING AND STRIPING PLAN	8	C7
EROSION CONTROL PLAN	9-10	C8 & C9
STREET LIGHT PLAN	11	C10
SEWER AND CURB RAMP DETAILS	12	C11
RETAINING WALL DETAILS	13-14	S1-S2

LEGEND

RIGHT-OF-WAY, R/W
DAYLIGHT LINE
MANHOLE (MH)
PROP CONTOUR XXXX
EXISTING CONTOUR (XXXX)
CURB & GUTTER
CENTERLINE, CL
MIDWEST GUARDRAIL SYSTEM
TUBULAR STEEL FENCE
USACE JURISDICTIONAL LIMITS
CDFW JURISDICTIONAL LIMITS
CONCRETE
AC PAVING
COLD PLANE
REMOVE EX. AC PAVING
STREET LIGHT
FIRE HYDRANT
EXISTING FIRE HYDRANT
PROPOSED SIGN
EXISTING SIGN
TYPE E DETECTOR LOOP
TYPE F DETECTOR LOOP
TYPE Q DETECTOR LOOP (3'X6')
SECTION REFERENCE
SHEET REFERENCE X / XX
RETAINING WALL

ABBREVIATIONS

PROP.	PROPOSED
EXIST.	EXISTING
CL, C/L	CENTERLINE
TC	TOP OF CURB
FL	FLOW LINE
FS	FINISHED SURFACE
DIA	DIAMETER
EP	EDGE OF PAVEMENT
CB	CATCH BASIN
AC	ASPHALTIC CONCRETE
CAB	CRUSHED AGGREGATE BASE
BCR	BEGIN CURB RETURN
ECR	END CURB RETURN
BVC	BEGIN VERTICAL CURVE
MVC	MIDDLE VERTICAL CURVE
EVC	END VERTICAL CURVE
PRC	POINT OF REVERSE CURVE
PCC	POINT OF COMPOUND CURVE
PRVC	POINT OF REVERSE VERTICAL CURVE
(1329.02)	EXISTING ELEVATION
1479.70	PROPOSED ELEVATION
LT	LEFT
RT	RIGHT
FH	FIRE HYDRANT
ST	STREET
R/W	RIGHT OF WAY
D/W	DRIVEWAY
V.C.	VERTICAL CURVE
PI	POINT OF INTERSECTION
PVI	POINT OF VERTICAL INTERSECTION
PUE	PUBLIC UTILITY EASEMENT
TW	TOP OF WALL
TF	TOP OF FOOTING

DESIGN DATA

YNEZ ROAD
ROADWAY CALSSIFICATION:
DESIGN SPEED: 45 MPH

EARTHWORK VOLUMES

FILL..... 6,020.0 CY
CUT..... 9.7 CY
NET..... 6,010.3 CY FILL
NOTE: VOLUMES ARE UNADJUSTED.

GRADING NOTES

SEE SHEET 2

BID ITEM TABLE

NO.	DESCRIPTION	QUANITY	UNIT
1	MOBILIZATION/DEMOBILIZATION	1	LS
2	CLEARING AND GRUBBING	1	LS
3	ENGINEERING/ CONSTRUCTION SURVEYING	1	LS
4	TRAFFIC CONTROL	1	LS
5	NPDES COMPLAINCE	1	LS
6	EARTHWORK	1	LS
7	CRUSHED AGGREGATE BASE (15-INCH)	2,500	C.Y.
8	ASPHALT CONCRETE PAVEMENT	2,008	TON
9	ASPHALT RUBBER HOT MIX	621	TON
10	REMOVE EXISTING BERM	1,579	L.F.
11	SAWCUT AND REMOVE AC PAVEMENT	31,344	S.F.
12	COLD MILL EXISTING AC PAVEMENT	3,332	S.F.
13	CURB & GUTTER (TYPE A-6)	1,448	L.F.
14	CURB & GUTTER (TYPE A-8)	26	L.F.
15	CONCRETE SIDEWALK	9,701	S.F.
16	REMOVE EXISTING ADA ACCESS CURB RAMP	1	EA
17	ADA ACCESS CURB RAMP WITH TRUNCATED DOMES	1	EA
18	MEDIAN STAMPED CONCRETE	3,769	S.F.
19	MEDIAN CURB (TYPE D-8)	796	L.F.
20	MEDIAN CURB (TYPE D-6)	262	L.F.
21	MEDIAN ACCESS-SEWER MANHOLE	40	L.F.
22	V-DITCH	161	L.F.
23	RETAINING WALL	1,878	S.F.
24	RIPRAP (½ TON)	800	C.Y.
25	CONDUIT, WIRING, PULLBOXES, PULL ROPES, AND METER SERVICES PEDESTAL FOR STREET LIGHT	1	LS
26	STREETLIGHT	3	EA
27	RELOCATE TRAFFIC SIGNAL PULL BOX	5	EA
28	REMOVE AND SALVAGE PEDESTRIAN SIGNAL PEDESTAL	1	EA
29	INSTALL NEW PEDESTRIAN PUSH BOTTOM PEDESTAL	1	EA
30	REMOVE AND REPLACE TRAFFIC SIGNAL LOOP DETECTORS	33	EA
31	REMOVE EXISTING SIGN	1	LS
32	SIGNING AND STRIPING	1	LS
33	TIRE RUBBERIZED MODIFIED SLURRY SEAL (TRMSS) - TYPE II	52,297	S.F.
34	REMOVE AND REPLACE PAVEMENT DELINEATION	1	LS
35	REMOVE TREES PER ARBORIST RECOMMENDATIONS	10	EA
36	TREE PRUNING PER ARBORIST RECOMMENDATIONS	1	EA
37	MIDWEST GUARDRAIL SYSTEM	300	L.F.
38	TUBULAR STEEL FENCE	1,573	L.F.
39	ADJUST EXISTING MANHOLE TO GRADE (FRONTIER)	3	EA
40	ADJUST EXISTING VALVE TO GRADE (RCWD)	4	EA
41	TUBULAR STEEL DUAL SWING GATE	1	EA
42	DECOMPOSED GRANITE ACCESS ROAD	77	C.Y.
43	ADJUST EXISTING MANHOLE TO GRADE (EWMD)	3	EA
44	TREE REPLACEMENT/MITIGATION 6-48 INCH 2-48 INCH	8	EA
45	ADJUST EXISTING MANHOLE TO GRADE (SCE)	1	EA

CONTRACTORS NOTE

CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS ARE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES EXCEPT THOSE SHOWN ON THESE PLANS. THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES SHOWN, AND ANY OTHER LINES OR STRUCTURES NOT SHOWN ON THESE PLANS AND IS RESPONSIBLE FOR THE PROTECTION OF OR ANY DAMAGE TO THESE LINES OR STRUCTURES.

CONTRACTOR SHALL VERIFY ALL CONDITIONS AND DIMENSIONS AND SHALL REPORT ALL DISCREPANCIES TO THE ENGINEER PRIOR TO COMMENCEMENT OF WORK.

DECLARATION OF RESPONSIBLE CHARGE

I, GEORGE LENFESTEY, HEREBY DECLARE THAT I AM THE ENGINEER OF WORK FOR THIS PROJECT, THAT I HAVE EXERCISED RESPONSIBLE CHARGE OVER THE DESIGN OF THE PROJECT AS DEFINED IN SECTION 6703 OF THE BUSINESS AND PROFESSIONS CODE, AND THE DESIGN IS CONSISTENT WITH CURRENT STANDARDS AND CITY OF TEMECULA.

I UNDERSTAND THAT THE CHECK OF PROJECT DRAWINGS AND SPECIFICATIONS BY THE CITY OF TEMECULA IS CONFINED TO A REVIEW ONLY AND DOES NOT RELIEVE ME OF RESPONSIBILITIES FOR PROJECT DESIGN.

SURVEY NOTE

THE BEARINGS SHOWN HEREON ARE BASED ON THE BEARING OF NORTH 48° 15' 11" WEST PER TRACT NO. 23992, MB 231/9-12, ON FILE IN THE OFFICE OF THE RIVERSIDE COUNTY RECORDER.

CONSTRUCTION COORDINATION TABLE

AGENCY	IMPROVEMENT	DWG STD.	ESTIMATED DURATION	STATION	REMARKS
CHARTER	RELOCATE 2 VAULTS	-	2 WEEKS	107+65 & 111+90	CHARTER NEEDS 2 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER ULTIMATE PARKWAY IS GRADED. CHARTER TO COMPLETE WORK AND COVER CONSTRUCTION COST.
EMWD	CONSTRUCT 1 MEDIAN ROLLED CURB ACCESS MANHOLE CUT OUT	SB-53 , SB-61, SB-183	-	101+75 - 117+75	CONTRACTOR TO PERFORM WORK
FRONTIER	ADJUST 3 EXISTING MANHOLES TO GRADE	-	2 DAYS	110+07 & 116+23	CONTRACTOR TO PERFORM WORK. FRONTIER NEEDS 2 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER A.C. 1st LIFT.
RCWD	RELOCATE 1 EXISTING FIRE HYDRANT, EXTEND LATERAL AND REPLACE BLOW OFF WITH HYDRANT	RW-8, RW-30	2 DAYS	108+55	RCWD NEEDS 4 WEEK NOTICE PRIOR TO START OF WORK AND TO BEGIN AFTER ULTIMATE PARKWAY IS GRADED. CONSTRUCTION COST IS COVERED BY RCWD.
RCWD	ADJUST 4 VALVES TO GRADE	-	-	-	CONTRACTOR TO PERFORM WORK
SCE	ADJUST 1 EXISTNIG MANHOLE TO GRADE	-	-	103+05	-

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

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BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

"AS BUILT"

_____ DATE _____

RCE _____ EXP. _____

REVIEWED BY:

_____ DATE _____

INSPECTOR

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor_____					
Inspector_____					
Date Completed_____					

BENCHMARK

RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK, FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL
AS SHOWN
VERTICAL
AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFESTEY No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of

_____ Date: 11/26/25

R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
NINO ABAD, PRINCIPAL CIVIL ENGINEER

ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER

R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
TITLE SHEET, INDEX MAP AND NOTES

Drawing No.
T-1
SHEET 1 OF 14

DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Street Improvements\ST01-Title Sheet.dwg
Plotted: Nov 26, 2025 - 7:18pm By: GilbertA

GRADING NOTES

1. STANDARDS. ALL CONSTRUCTION AND GRADING RELATED ACTIVITIES (I.E., STOCKPILING, LAND CLEARING, EROSION & SEDIMENT CONTROL, ETC) SHALL BE PERFORMED IN ACCORDANCE WITH CHAPTER 18 OF THE CITY OF TEMECULA MUNICIPAL CODE, THE ENGINEERING AND CONSTRUCTION MANUAL, ALL APPLICABLE STANDARDS, THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE (APPENDIX J) AND, IT'S APPLICABLE, THE STATE WATER RESOURCES CONTROL BOARD (SWRCB) NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT FOR CONSTRUCTION ACTIVITIES.
2. PERMIT REQUIREMENTS. A GRADING PERMIT SHALL BE OBTAINED PRIOR TO COMMENCEMENT OF ANY WORK ON THE SITE.
3. NOTIFICATIONS. PUBLIC WORKS SHALL BE NOTIFIED VIA EMAIL AT LEAST TWO (2) DAYS IN ADVANCE OF BEGINNING ANY CONSTRUCTION/GRADING OPERATIONS.
4. SOILS. ALL CONSTRUCTION/GRADING ACTIVITIES SHALL BE DONE IN CONFORMANCE WITH RECOMMENDATIONS OF THE PRELIMINARY SOILS INVESTIGATION BY LGC VALLEY, INC GEOTECHNICAL CONSULTING DATED 10/17/24. SAID REPORT SHALL BE CONSIDERED A PART OF THIS GRADING PLAN.
5. CUT/FILL.
   A. MAXIMUM CUT AND FILL SLOPES SHALL BE 2:1; UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER; AND SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOILS REPORT. FILL SLOPES SHALL NOT HAVE LESS THAN 90% RELATIVE COMPACTION OUT TO THE FINISH SURFACE.
   B. FILL MATERIAL SHALL NOT BE PLACED ON EXISTING GROUND UNTIL THE GROUND HAS BEEN CLEARED OF WEEDS, DEBRIS, TOPSOIL, VEGETATION AND OTHER DELETERIOUS MATERIAL. IF THE SLOPE RATIO EXCEEDS 5:1 AND IS GREATER THAN FIVE FEET, THE TERRAIN MUST BE KEYED AND BENCHED INTO EITHER BEDROCK OR NATIVE SOIL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
   C. STABILITY CALCULATIONS WITH A FACTOR-OF-SAFETY OF AT LEAST ONE AND FIVE TENTHS (1.5) SHALL BE SUBMITTED TO PUBLIC WORKS A REGISTERED CIVIL ENGINEER, SOILS ENGINEER OR GEOLOGIST FOR CUT AND FILL SLOPES OVER THIRTY FEET (30') IN VERTICAL HEIGHT.
   D. ALL GRADING SHALL BE DONE UNDER THE SUPERVISION OF A REGISTERED CIVIL ENGINEER, SOILS ENGINEER OR GEOLOGIST, WHO SHALL SUBMIT TWO SETS OF WRITTEN CERTIFICATION THAT ALL FILLS OVER ONE FOOT (1') IN DEPTH HAVE BEEN PROPERLY PLACED.
6. DRAINAGE.
   A. AS APPLICABLE, PROVIDE CONCRETE BROW DITCHES TO CONVEY 100-YEAR STORM FLOWS OR PROVIDE GRADED BERMS ALONG THE TOP OF ALL GRADED SLOPES OVER THREE FEET IN VERTICAL HEIGHT OR THAT ARE ADJACENT TO GRADED AREAS, TO DIRECT SURFACE RUNOFF AWAY FROM THE TOP OF SLOPES. ALL DRAINAGE DEVICES SHALL BE CONSTRUCTED PER THE APPROVED PLANS.
   B. EXISTING DRAINAGE COURSES SHALL CONTINUE TO FUNCTION AT ALL TIMES. NO OBSTRUCTION OF FLOOD PLAINS OR NATURAL WATER COURSES SHALL BE PERMITTED.
   C. TEMPORARY DRAINAGE SHALL BE PROVIDED UNTIL PERMANENT DRAINAGE STRUCTURES ARE INSTALLED. PROTECTIVE MEASURES SHALL BE IMPLEMENTED TO PROTECT ADJOINING AND DOWNSTREAM PROPERTIES FROM SILT DEPOSITION AND PONDING WATER DURING CONSTRUCTION/GRADING OPERATIONS.
   D. APPROVED PROTECTIVE MEASURES AND TEMPORARY DRAINAGE PROVISIONS MUST BE USED TO PROTECT ADJOINING PROPERTIES DURING THE GRADING PROJECT.
   E. DRAINAGE EASEMENTS SHALL BE KEPT CLEAR OF ALL OBSTRUCTIONS; NO BUILDING OR WALLS SHALL BE PLACED WITHIN THE LIMITS OF EASEMENTS.
   F. THE MINIMUM GRADE FOR CONCRETE SURFACE DRAINAGE FACILITIES SHALL BE A ONE-HALF PERCENT (0.5%).
7. PROTECT CORNERS. ALL PROPERTY CORNERS SHALL BE CLEARLY DELINEATED IN THE FIELD PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION/GRADING ACTIVITY, AS DIRECTED BY THE CITY ENGINEER.
8. ROUGH GRADING INSPECTIONS PRIOR TO BUILDING PERMIT. INSPECTIONS SHALL BE REQUESTED VIA EMAIL TO THE PUBLIC WORKS AT LEAST TWO (2) BUSINESS DAYS IN ADVANCE (PLEASE INDLUDE YOUR PERMIT # IN THE SUBJECT LINE).
   SUBMIT THE FOLLOWING:
   A. ONE (1) PAD ELEVATION CERTIFICATION (I.E., ROUGH GRADE) TO INCLUDE A STATEMENT THAT THE PAD ELEVATION COMPLIES WITH THE APPROVED GRADING PLAN. CERTIFICATION SHALL BE TO LINE, GRADE, ELEVATION AND LOCATION OF CUT/FILL SLOPES.
   B. ONE (1) PAD COMPACTION CERTIFICATION (I.E., FINAL GEOTECHNICAL/SOILS REPORT) TO INCLUDE A STATEMENT THAT THE GRADING COMPLIES WITH RECOMMENDATIONS OF THE PRELIMINARY SOILS REPORT.
9. FINAL INSPECTION PRIOR TO OCCUPANCY. REFER TO THE CITY'S ENGINEERING AND CONSTRUCTION MANUAL.
10. POST GRADING ACTIVITIES. POST GRADING ACTIVITIES SHALL INCLUDE, BUT NOT BE LIMITED TO, INSTALLING WHERE APPLICABLE: GROUNDCOVER, TREES, SHRUBS OR A COMBINATION THEREOF IN ACCORDANCE WITH THE TEMECULA MUNICIPAL CODE PRIOR TO FINAL INSPECTION. SLOPES OVER FOUR FEET (4') IN VERTICAL HEIGHT SHALL HAVE PERMANENT IRRIGATION SYSTEMS WITH BACKFLOW PREVENTION DEVICES. BACKFLOW PREVENTION DEVICES MUST COMPLY WITH THE UNIFORM PLUMBING CODE (U.P.C).
11. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "PAVING," "GENERAL" AND "EROSION AND SEDIMENT CONTROL" REQUIREMENTS.

TRIBAL CULTURAL RESOURCES GRADING NOTES

TCR-8 THE FOLLOWING SHALL BE INCLUDED ON THE NOTES FOR THE GRADING PLAN:

NOTE 1: ARCHAEOLOGICAL MONITORING GRADING NOTE: A QUALIFIED ARCHAEOLOGICAL MONITOR WILL BE PRESENT AND WILL HAVE THE AUTHORITY TO STOP AND REDIRECT GRADING ACTIVITIES, IN CONSULTATION WITH THE PECHANGA BAND OF INDIANS AND THEIR DESIGNATED MONITORS, TO EVALUATE THE SIGNIFICANCE OF ANY ARCHAEOLOGICAL RESOURCES DISCOVERED ON THE PROPERTY AS REQUIRED BY NOTE 1.

TCR-9 THE FOLLOWING SHALL BE INCLUDED ON THE NOTES FOR THE GRADING PLAN:

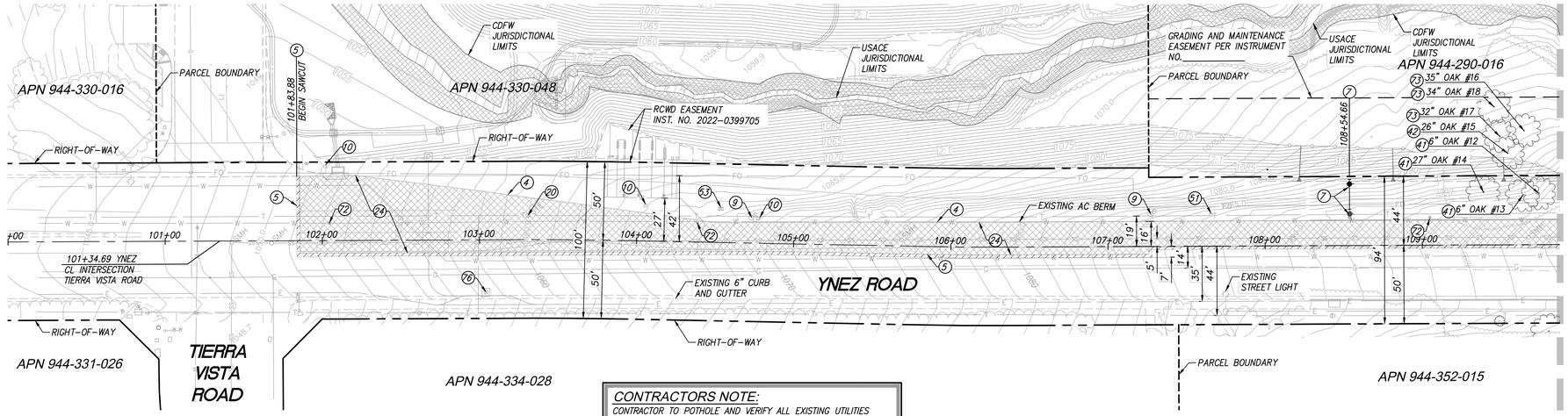
NOTE 2: DISCOVERY OF CULTURAL RESOURCES GRADING NOTE: IF AT ANY TIME DURING EXCAVATION/CONSTRUCTION OF THE SITE, ARCHAEOLOGICAL/CULTURAL RESOURCES, OR ANY ARTIFACTS OR OTHER OBJECTS WHICH REASONABLY APPEARS TO BE EVIDENCE OF CULTURAL OR ARCHAEOLOGICAL RESOURCE ARE DISCOVERED BY THE TRIBAL OR ARCHAEOLOGICAL MONITOR, ALL WORK IN THE AREA OF THE FIND SHALL CEASE, AND THE DISCOVERY OF CULTURAL RESOURCES MITIGATION MEASURE SHALL BE FOLLOWED. UPON DETERMINING THAT THE DISCOVERY IS A CULTURAL/TRIBAL CULTURAL RESOURCE, NO FURTHER EXCAVATION OR DEVELOPMENT MAY TAKE PLACE UNTIL A MITIGATION PLAN OR OTHER CORRECTIVE MEASURES HAVE BEEN APPROVED BY THE PLANNING DIRECTOR.

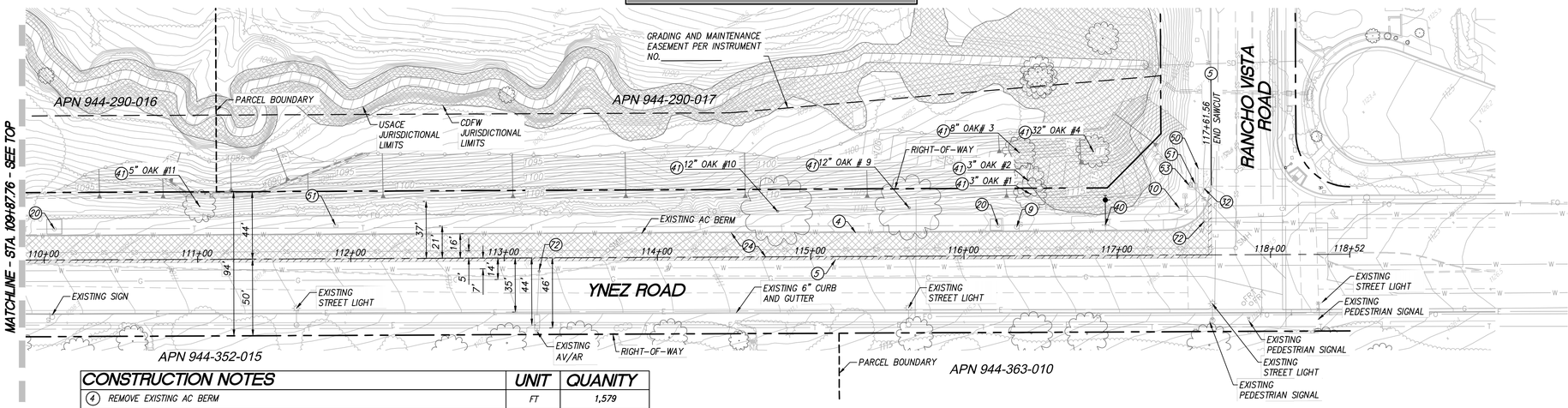
TCR-10 THE FOLLOWING SHALL BE INCLUDED ON THE NOTES FOR THE GRADING PLAN:

NOTE 3: RELINQUISHMENT OF CULTURAL RESOURCES GRADING NOTE: THE LANDOWNER AGREES TO RELINQUISH OWNERSHIP OF ALL CULTURAL RESOURCES, INCLUDING ALL ARCHAEOLOGICAL ARTIFACTS THAT ARE FOUND ON THE PROJECT AREA, TO THE PECHANGA TRIBE FOR PROPER TREATMENT AND DISPOSITION AS REQUIRED BY NOTE 1.

TCR-11 THE FOLLOWING SHALL BE INCLUDED ON THE NOTES FOR THE GRADING PLAN:

NOTE 4: HUMAN REMAINS GRADING NOTE: IF HUMAN REMAINS ARE ENCOUNTERED ALL WORK IS TO CEASE WITHIN 50 FT OF THE DISCOVERY IN ACCORDANCE WITH NOTE 1 AND HEALTH AND SAFETY CODE SECTION 7050.5, AND CALIFORNIA PUBLIC RESOURCES CODE SECTION 5097.98(B) ARE TO BE FOLLOWED.





CONTRACTORS NOTE:

CONTRACTOR TO POTHOLE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.

CONSTRUCTION NOTES

		UNIT	QUANITY
(4)	REMOVE EXISTING AC BERM	FT	1,579
(5)	SAWCUT AND REMOVE 1' WIDE (MIN.) OF EXISTING AC PAVEMENT AND COLD PLANE (2' MIN.) PER DETAIL ON SHEET 4	S.F.	3,332
(7)	RCWD TO EXTEND LATERAL AND RELOCATE FIRE HYDRANT. PROPOSED LOCATION TO BE STAKED BY CONTRACTOR	EA.	1
(9)	REMOVE EXISTING STREET SIGN	EA.	3
(10)	EXISTING TRAFFIC SIGNAL PULL BOX TO BE RELOCATED	EA.	4
(20)	EXISTING FRONTIER MANHOLE TO BE ADJUSTED TO GRADE BY CONTRACTOR	EA.	3
(24)	REMOVE AC PAVEMENT	S.F.	31,344
(32)	EXISTING PEDESTRIAN SIGNAL PEDESTAL TO BE REMOVED AND SALVAGED	EA.	1
(40)	RCWD TO EXTEND LATERAL AND REPLACE BLOW OFF WITH HYDRANT. PROPOSED LOCATION TO BE STAKED BY CONTRACTOR.	EA.	1
(41)	REMOVE TREE PER ARBORIST REPORT	EA.	10
(42)	TREE PRUNING AND PROTECT IN PLACE PER TREE PROTECTION DETAIL ON SHEET 4 AND REFER TO ARBORIST REPORT FOR PROTECTION SPECIFICATIONS	EA.	1
(50)	REMOVE EXISTING RAMP	EA.	1
(51)	EXISTING ABOVE GROUND TELECOMMUNICATIONS BOX TO BE RELOCATED BY CHARTER	EA.	3
(53)	EXISTING CATV PULL BOX TO BE RELOCATED BY CHARTER	EA.	2
(72)	ADJUST RCWD VALVES TO GRADE BY CONTRACTOR	EA.	5
(73)	PROTECT EXISTING TREE IN PLACE PER TREE PROTECTION DETAIL ON SHEET 4 AND REFER TO ARBORIST REPORT FOR PROTECTION SPECIFICATIONS	EA.	7
(76)	ADJUST SCE MH TO GRADE	EA.	1

LEGEND

COLD PLANE – EXISTING SCE TRANSFORMER –
REMOVE EX. AC PAVING – CATV PULL BOX –
EXISTING STREET LIGHT – EXISTING TELECOMMUNICATIONS – T
EXISTING TRAFFIC SIGNAL PULL BOX – EXISTING FRONTIER FIBER OPTIC – FO
EXISTING EMWD SEWER MANHOLE – SMH EXISTING GAS – G
EXISTING RCWD F.H. – EXISTING EMWD SEWER – SS
EXISTING RCWD AV/AR – EXISTING RCWD WATER – W
EXISTING SIGN – EXISTING SCE CONDUIT – E
EXISTING FRONTIER MANHOLE – FRT PROPOSED RCWD FIRE HYDRANT –
EXISTING FRONTIER VAULT – EXISTING TREE –

40' 0 40' 80' 120'
SCALE: 1"=40'

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BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor_____					
Inspector_____					
Date Completed_____					

BENCHMARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84" ELEVATION: 1006.84'

SCALE: HORIZONTAL AS SHOWN; VERTICAL AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENTSETT No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

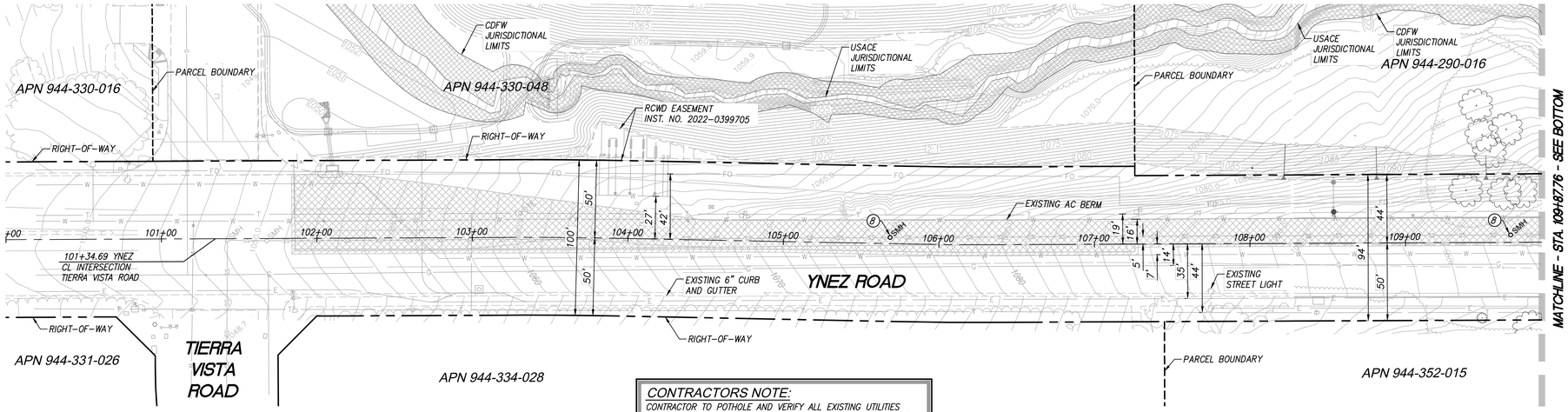
RECOMMENDED BY:_____ DATE:_____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY:_____ DATE:_____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

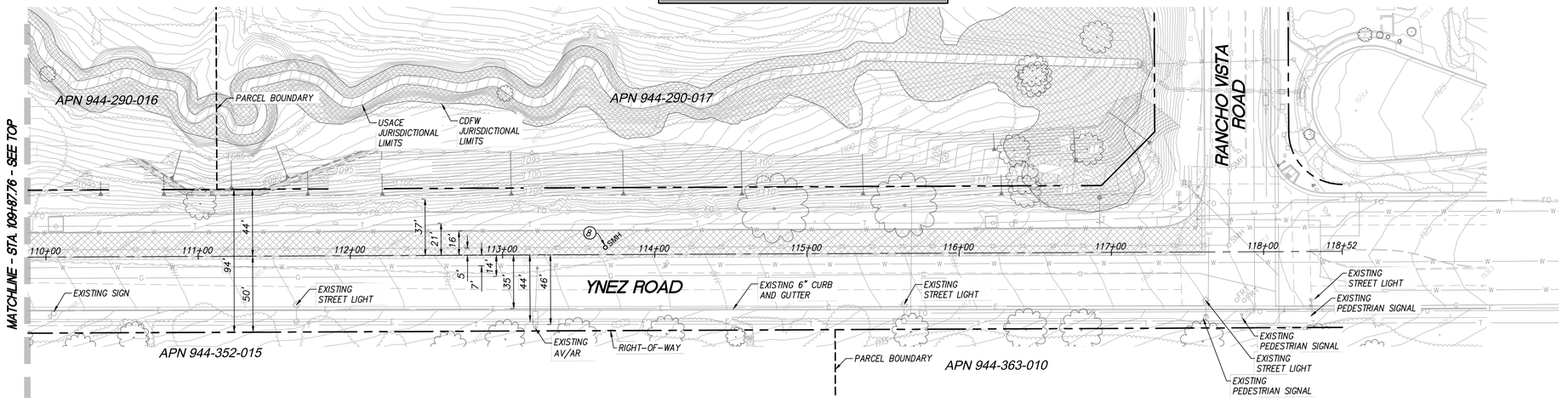
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
DEMOLITION PLAN AND NOTES

Drawing No. C-1
SHEET 2 OF 14

Plotted: Nov 26, 2025 - 8:53pm By: GilbertA
DWG: N:\01-204.000 Ynez Road Expansion\Drawings\Street Improvements\ST02-Demolition Plan.dwg





CONTRACTORS NOTE:
CONTRACTOR TO POTHOLE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.

LEGEND

- COLD PLANE
- REMOVE EX. AC PAVING
- EXISTING STREET LIGHT
- EXISTING TRAFFIC SIGNAL PULL BOX
- EXISTING EMWD SEWER MANHOLE (SMH)
- EXISTING RCWD F.H.
- EXISTING RCWD AV/AR
- EXISTING SIGN
- EXISTING FRONTIER MANHOLE (FRT)
- EXISTING FRONTIER VAULT
- EXISTING SCE TRANSFORMER
- CATV PULL BOX
- EXISTING TELECOMMUNICATIONS (T)
- EXISTING FRONTIER FIBER OPTIC (FO)
- EXISTING GAS (G)
- EXISTING EMWD SEWER (SS)
- EXISTING RCWD WATER (W)
- EXISTING SCE CONDUIT (E)
- PROPOSED RCWD FIRE HYDRANT
- EXISTING TREE

SCALE: 1"=40'

CONSTRUCTION NOTES

	UNIT	QUANITY
(8) ADJUST MH TO GRADE PER EMWD STD DETAIL SB-53 & SB-61 INCORPORATE FALSE BOTTOM	EA.	3

CONSTRUCTION COORDINATION TABLE

AGENCY	IMPROVEMENT	DWG STD.	ESTIMATED DURATION	STATION	REMARKS
EMWD	ADJUST 3 EXISTING MANHOLES TO GRADE	SB-53 , SB-61	–	101+75 – 117+75	CONTRACTOR TO COMPLETE WORK. WORK TO BEGIN AFTER A.C. 1st LIFT. WORK TO BE INSPECTED BY EMWD.

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL: AS SHOWN
VERTICAL: AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER, GEORGE ALAN LENTSETZ, No. 45920, CIVIL, STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

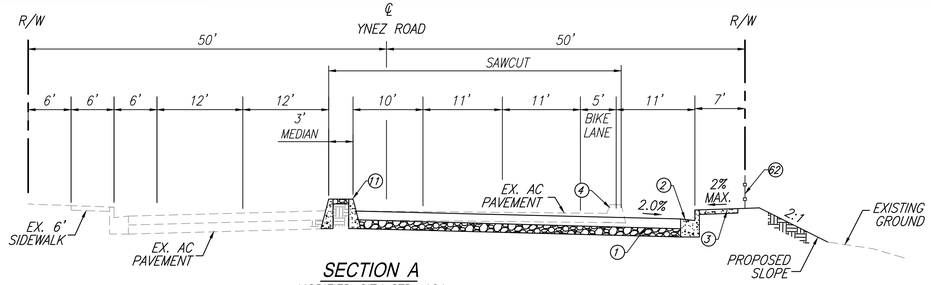
PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS–PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
EMWD MANHOLE RELOCATIONS

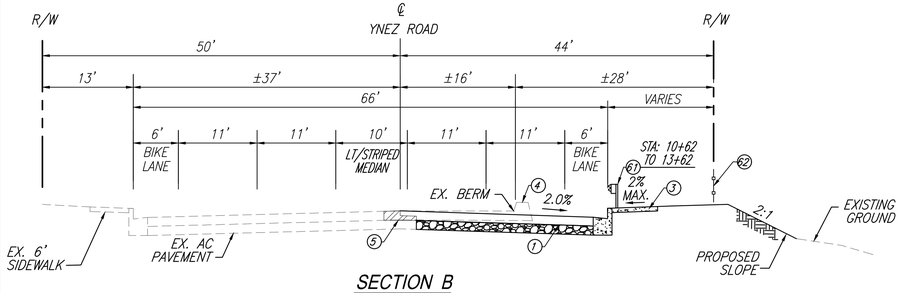
Drawing No. C-2
SHEET 3 OF 14

Plotted: Nov 26, 2025 - 7:55pm By: GilbertA
DWG: N:\01-204.000 Ynez Road Expansion\Drawings\Street Improvements\ST03-Additive Plan.dwg



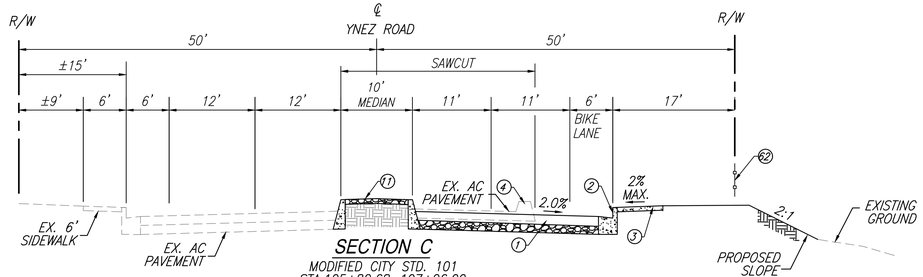
SECTION A

MODIFIED CITY STD. 101
STA:101+91.84–103+33.89
N.T.S.



SECTION B

STA:107+26.00–117+26.47
N.T.S.

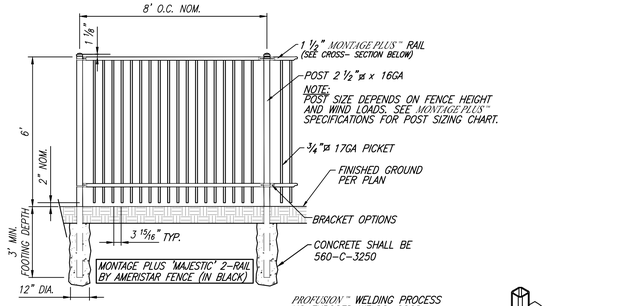


SECTION C

MODIFIED CITY STD. 101
STA:105+82.68–107+26.00
N.T.S.

CONSTRUCTION NOTES:

1. REMOVE AND REPLACE EXISTING ROADWAY SECTION 6" A.C. OVER 15" C.A.B. MIN.
2. CONSTRUCT TYPE A-6 CURB AND GUTTER PER CITY OF TEMECULA STD. 200
3. CONSTRUCT 6' WIDE 4" SIDEWALK PER CITY OF TEMECULA STD. 401
4. REMOVE EXISTING AC BERM
5. SAWCUT AND REMOVE 1' WIDE (MIN.) OF EXISTING AC PAVEMENT AND COLD PLANE (2" MIN.) PER DETAIL ON SHEET 4
11. CONSTRUCT RAISED CONCRETE MEDIAN PER CITY OF TEMECULA STD. 112, MODIFIED PER DETAIL ON SHEET 4.
52. CONSTRUCT RETAINING WALL PER DETAILS ON SHEET 13 AND 14
60. INSTALL STEEL POST AND BLOCK MIDWEST GUARDRAIL SYSTEM PER CALTRANS STD A77L2 (1' FROM FACE OF CURB TO FACE OF POST PER DETAIL ON SHEET 6)
61. INSTALL 31" MIDWEST GUARDRAIL SYSTEM TERMINAL MSKT-SP-MGS8 BY ROAD SYSTEMS INC. OR APPROVED EQUAL
62. INSTALL 6' TUBULAR STEEL FENCE PER DETAIL ON SHEET 4
64. INSTALL 1/2 TON RIPRAP
65. CONSTRUCT 24" V-DITCH PER DETAIL ON SHEET 4



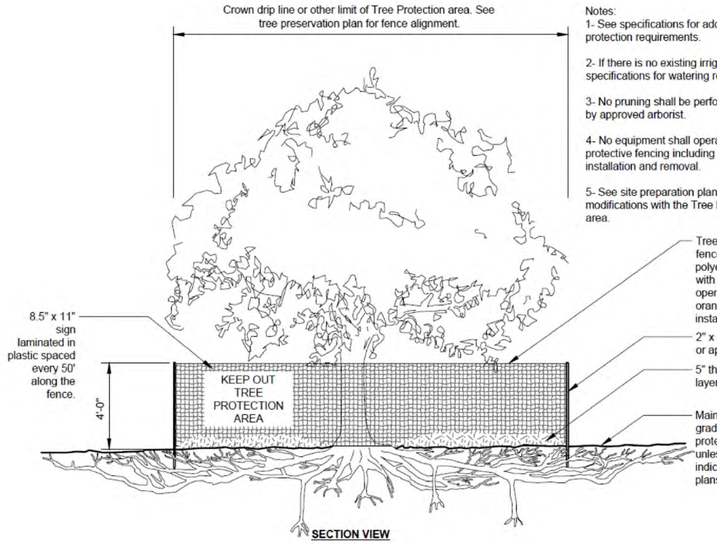
NOTE:

1. WHEN USING SWIVEL BRACKETS ON EITHER OR BOTH ENDS OF A PANEL INSTALLATION, CARE MUST BE TAKEN TO ENSURE THE SPACING BETWEEN POST AND ADJOINING PICKETS MEETS APPLICABLE CODES. THIS MAY REQUIRE TRIMMING ONE OR BOTH ENDS OF THE PANEL AS NEEDED.

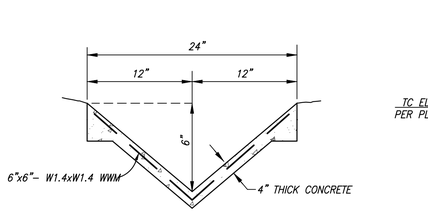
2. IN LOCATIONS SUBJECT TO FREEZING, WHERE POSTS ARE GROUTED INTO CORE-DRILLED HOLES, A ¼" DIAMETER HOLE SHOULD BE DRILLED IN THE POST APPROXIMATELY ½" ABOVE ELEVATION TO ALLOW FOR DRAINAGE OF BUILT-UP GROUND WATER. THE DRILLED HOLE MUST BE WIPED CLEAN AND DRY AND SPRAYED WITH AMERISTAR ZINC RICH PRIMER AND AMERISTAR COLOR MATCH FINISH.

PANEL RACKING: DRAWING SHOWS FENCE PANEL AT LEVEL GROUND ELEVATION: FOR INSTALLATIONS THAT MUST BE RACKED TO FOLLOW SLOPING GRADES, THE POST SPACING DIMENSION SHOWN MUST BE MEASURED ALONG THE GRADE.

62 TUBULAR STEEL FENCE DETAILS

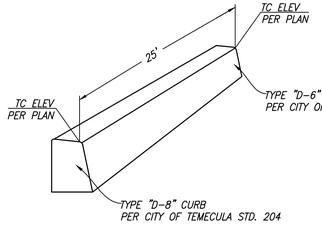


73 TREE PROTECTION DETAIL



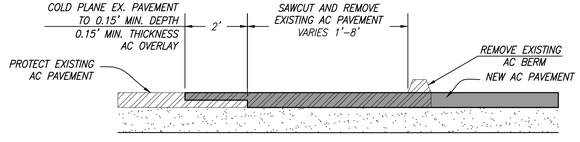
65 CONCRETE "V" DITCH

N.T.S.



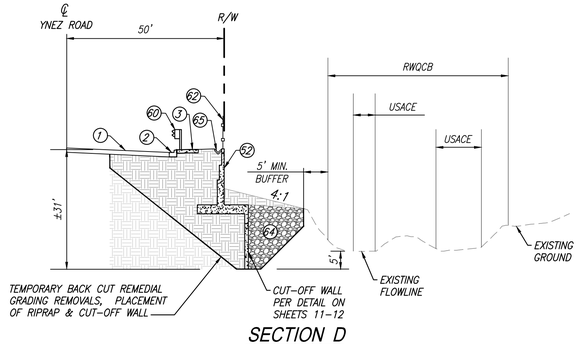
22 CURB TRANSITION DETAIL

6" CURB TO 8" CURB
STA:104+00.00–104+25.00
N.T.S.



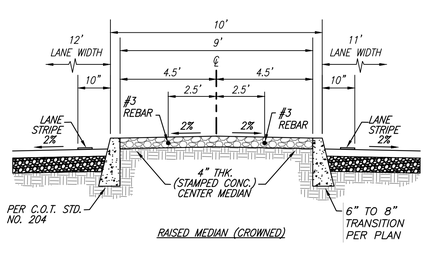
5 PAVING OVERLAY / JOIN DETAIL

N.T.S.



SECTION D

RETAINING WALL TYPICAL SECTION
STA:110+62.73–112+08.25
N.T.S.



RAISED MEDIAN (CROWNED)

11 RAISED CONCRETE MEDIAN - MODIFIED

MODIFIED CITY STD. 112

NOTES:

1. STAMPED CONCRETE TO BE BOMANITE PATTERN "RIVER ROCK" OR APPROVED EQUAL. CURE WITH LITHOCHROME COLOR HARDENER A-33 (NATURAL GREY).
2. FOR MEDIAN, USE 4" THICK STAMPED PATTERN CONCRETE WITH (2) #3 BARS CONTINUOUS.

Underground Service Alert
CALL TOLL FREE
1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "P405A, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27406 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK: RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6' WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84" ELEVATION: 1006.84'

SCALE: HORIZONTAL AS SHOWN; VERTICAL AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFEST No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

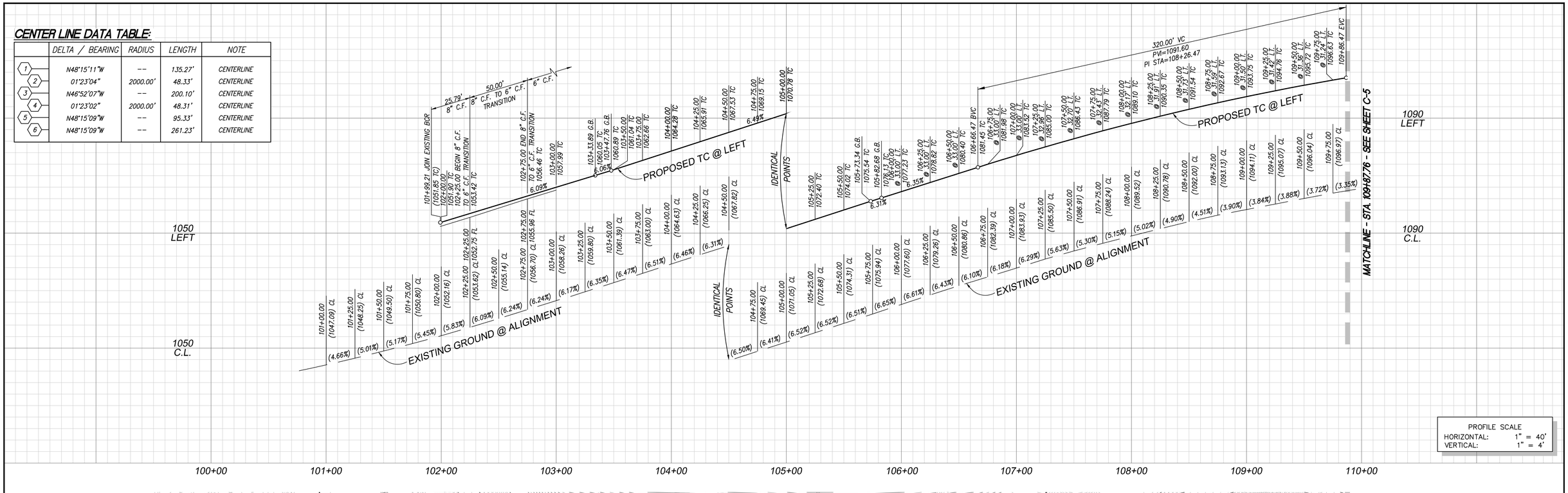
YNEZ ROAD IMPROVEMENTS–PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.65
TYPICAL SECTIONS AND DETAILS

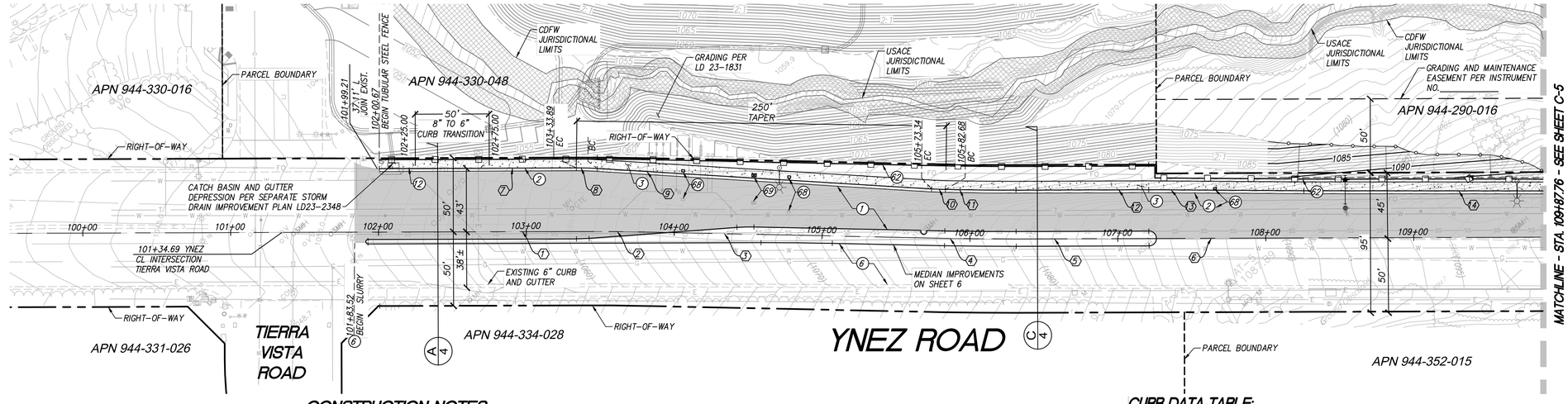
Drawing No. C-3
SHEET 4 OF 14

Plotted: Nov 26, 2025 - 7:18pm By: GilbertA
DWG: N:\01.204.000 Ynez Road Expansion\Drawing\Street Improvements\ST04-Typical Sections.dwg

CENTER LINE DATA TABLE:

	DELTA / BEARING	RADIUS	LENGTH	NOTE
1	N48°15'11"W	--	135.27'	CENTERLINE
2	01°23'04"	2000.00'	48.33'	CENTERLINE
3	N46°52'07"W	--	200.10'	CENTERLINE
4	01°23'02"	2000.00'	48.31'	CENTERLINE
5	N48°15'09"W	--	95.33'	CENTERLINE
6	N48°15'09"W	--	261.23'	CENTERLINE





CONSTRUCTION NOTES

1. REMOVE AND REPLACE EXISTING ROADWAY SECTION 6" A.C. OVER 15" C.A.B. MIN.
2. CONSTRUCT TYPE A-6 CURB AND GUTTER PER CITY OF TEMECULA STD. 200
3. CONSTRUCT 6' WIDE 4" SIDEWALK PER CITY OF TEMECULA STD. 401
6. RUBBER POLYMER MODIFIED SLURRY SEAL (RPMS) - TYPE II
12. CONSTRUCT TYPE A-8 CURB AND GUTTER PER CITY OF TEMECULA STD. 201
62. INSTALL 6' TUBULAR STEEL FENCE PER DETAIL ON SHEET 4
68. TRAFFIC SIGNAL PULL BOX RELOCATION
69. CATV PULL BOX RELOCATION BY CHARTER

CONTRACTORS NOTE:
CONTRACTOR TO POTHOLE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.

CURB DATA TABLE:

	DELTA / BEARING	RADIUS	LENGTH	NOTE
7	N48°15'12"W	--	133.22'	6" & 8" CURB & GUTTER
8	03°41'13"	220.00'	14.16'	6" CURB & GUTTER
9	N44°33'59"W	--	226.51'	6" CURB & GUTTER
10	02°26'01"	220.00'	9.34'	6" CURB & GUTTER
11	01°23'27"	220.00'	47.74'	6" CURB & GUTTER
12	N48°15'09"W	--	89.76'	6" CURB & GUTTER
13	N47°39'01"W	--	104.93'	6" CURB & GUTTER
14	N48°02'24"W	--	161.99'	6" CURB & GUTTER

LEGEND
AC PAVING

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

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PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL: AS SHOWN
VERTICAL: AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LEMEITER No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

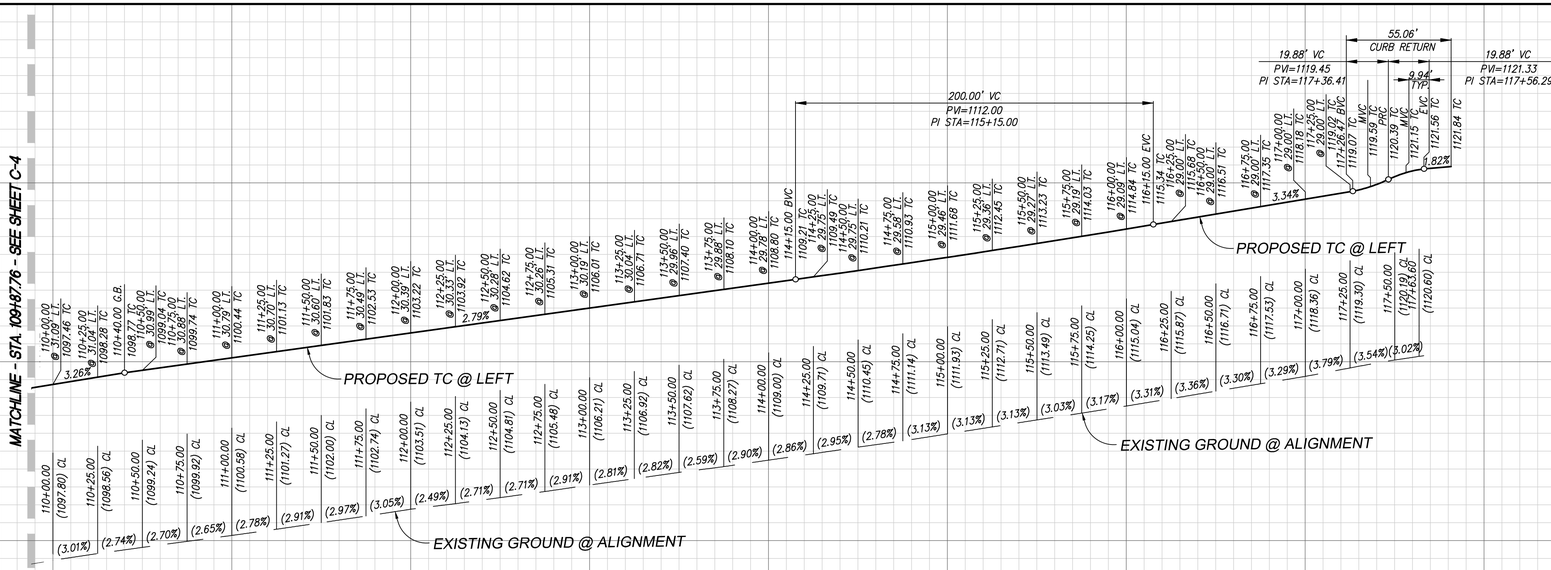
RECOMMENDED BY: _____ DATE: _____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 109+87.76
PLAN AND PROFILES

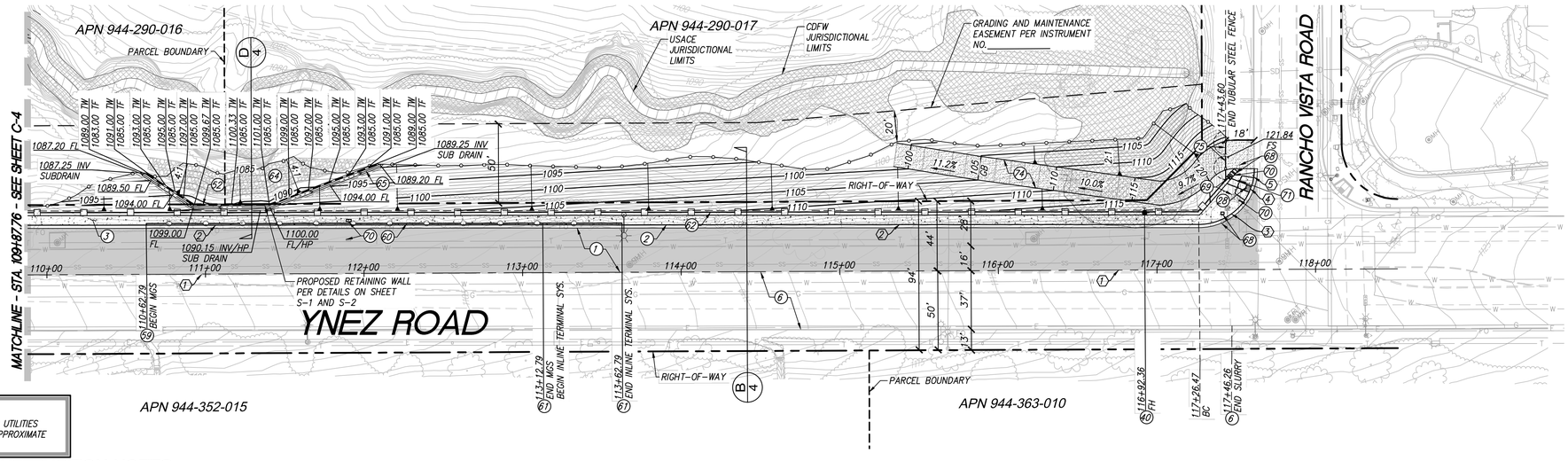
Drawing No. C-4
SHEET 5 OF 14

DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Street Improvements\ST05-P&P Sheet 1.dwg
Plotted: Nov 26, 2025 - 8:38pm By: GilbertA



PROFILE SCALE
HORIZONTAL: 1" = 40'
VERTICAL: 1" = 4'

109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00 117+00 118+00

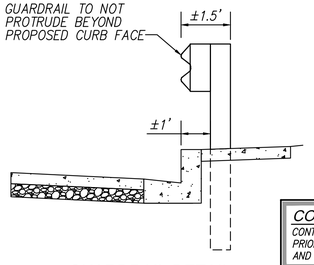


CENTER LINE DATA TABLE:

	DELTA / BEARING	RADIUS	LENGTH	NOTE
1	N48°15'09"W	--	863.95'	CENTERLINE

CURB DATA TABLE:

	DELTA / BEARING	RADIUS	LENGTH	NOTE
2	N48°02'24"W	--	738.58'	6" CURB & GUTTER
3	65°08'53"	35.00	39.80'	6" CURB & GUTTER/CURB RAMP
4	N63°32'10"E	--	4.00'	CURB RAMP
5	18°26'10"	35.00	11.26'	6" CURB & GUTTER/CURB RAMP



60 GUARDRAIL DETAIL
N.T.S.

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CONSTRUCTION NOTES

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3. CONSTRUCT 6' WIDE 4" SIDEWALK PER CITY OF TEMECULA STD. 401
6. RUBBER POLYMER MODIFIED SLURRY SEAL (RPMS) – TYPE II
28. CONSTRUCT ADA ACCESS RAMPS PER CITY OF TEMECULA STD. 402. SEE DETAIL ON SHEET 12
40. RCWD TO EXTEND LATERAL AND REPLACE BLOW OFF WITH HYDRANT. PROPOSED LOCATION TO BE STAKED BY CONTRACTOR.
52. CONSTRUCT RETAINING WALL PER DETAILS ON SHEET 13 AND 14
59. INSTALL MIDWEST GUARDRAIL SYSTEM END ANCHOR TYPE SFT PER CALTRANS STD A77S1
60. INSTALL STEEL POST AND BLOCK MIDWEST GUARDRAIL SYSTEM PER CALTRANS STD A77L2 (1' FROM FACE OF CURB TO FACE OF POST PER DETAIL HEREON)
61. INSTALL 31' MIDWEST GUARDRAIL SYSTEM TERMINAL MSKT-SP-MGSB BY ROAD SYSTEMS INC. OR APPROVED EQUAL
62. INSTALL 6' TUBULAR STEEL FENCE PER DETAIL ON SHEET 4
64. INSTALL 1/2 TON RIPRAP PER SECTION D ON SHEET 4
65. CONSTRUCT 24" V-DITCH PER DETAIL ON SHEET 4
68. TRAFFIC SIGNAL PULL BOX RELOCATION
69. CATV PULL BOX RELOCATION BY CHARTER
70. TELECOMMUNICATIONS BOX RELOCATION BY CHARTER
71. INSTALL NEW PEDESTRIAN PUSH BUTTON PEDESTAL PER CITY OF TEMECULA TRAFFIC SIGNAL STANDARDS
74. INSTALL 4" STABILIZED DECOMPOSED GRANITE (DG) ACCESS ROAD OVER 3" C.A.B. ON A SUBGRADE COMPACTED TO 95% RELATIVE COMPACTION
75. INSTALL MONTAGE PLUS GENESIS 2/3-RAIL 16' DOUBLE GATE OPENING OR APPROVED EQUAL

40' 0 40' 80' 120'
SCALE: 1"=40'

LEGEND
AC PAVING

Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG

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PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor_____					
Inspector_____					
Date Completed_____					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

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VERTICAL: AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFEST No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY:_____ DATE:_____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY:_____ DATE:_____
RON MORENO
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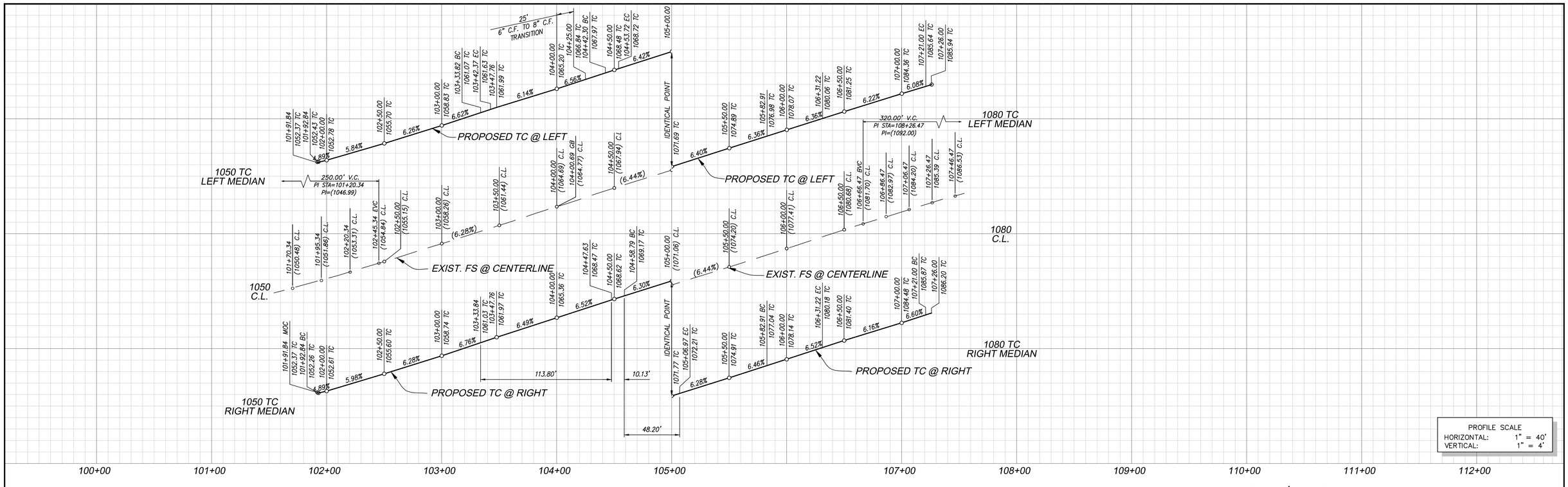
R.C.E. No. 69156

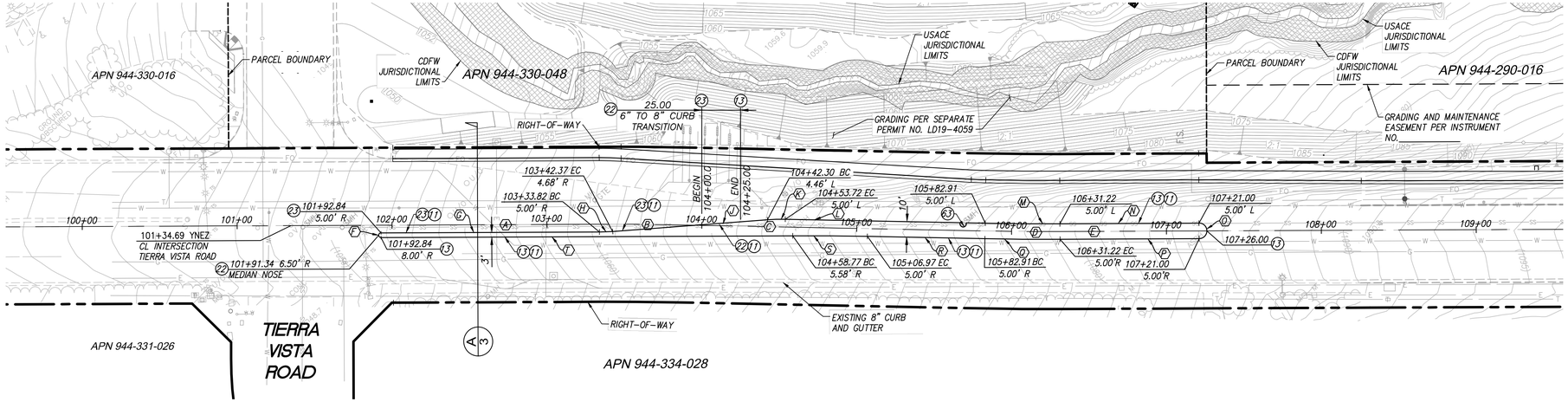
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS–PHASE I PROJECT, PW23-02
YNEZ ROAD STA 109+87.76 TO STA 117+61.56
PLAN AND PROFILES

Drawing No. C-5
SHEET 6 OF 14

DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Street Improvements\ST06-P&P Sheet 2.dwg
Plotted: Nov 26, 2025 - 8:44pm By: GilbertA





PROFILE SCALE	
HORIZONTAL:	1" = 40'
VERTICAL:	1" = 4'

CURVE / LINE DATA TABLE:

	DELTA / BEARING	RADIUS	LENGTH	NOTE
A	N48°15'11"W	--	199.79'	CENTERLINE
B	01°23'04"	2000.00'	48.33'	CENTERLINE
C	N46°52'07"E	--	200.10'	CENTERLINE
D	01°23'02	2000.00'	48.31'	CENTERLINE
E	N48°15'09"W	--	284.86'	CENTERLINE
F	179°58'44"	1.50'	4.71'	MEDIAN
G	N48°15'11"W	--	140.98'	MEDIAN
H	04°04'35"	120.00'	11.44	MEDIAN
I	--	--	--	--
J	N52°19'46"W	--	100.29'	MEDIAN
K	05°27'39"	120.00	11.44'	MEDIAN
L	N46°52'07"W	--	129.19'	MEDIAN
M	01°23'02"	1995.00'	48.19'	MEDIAN
N	N48°15'09"W	--	89.78'	MEDIAN
O	180°00'00"	1.00'	15.71'	MEDIAN
P	N48°15'09"W	--	89.78'	MEDIAN
Q	01°23'02"	2005.00'	48.43'	MEDIAN
R	N46°52'07"W	--	75.94'	MEDIAN
S	01°23'04"	1995.00'	48.21'	MEDIAN
T	N48°15'11"W	--	265.77'	MEDIAN

CONSTRUCTION NOTES

(11) CONSTRUCT RAISED CONCRETE MEDIAN PER CITY OF TEMECULA STD. 112, MODIFIED PER DETAIL ON SHEET 4.

(13) CONSTRUCT TYPE D-8 CURB PER CITY OF TEMECULA STD. 204

(22) CONSTRUCT 6" TO 8" CURB TRANSITION PER DETAIL ON SHEET 4

(23) CONSTRUCT TYPE D-6 CURB PER CITY OF TEMECULA STD. 204A

(63) CONSTRUCT EXISTING SEWER MANHOLE MEDIAN INSTALLATION PER SHEET 12 MODIFIED EMWD STD. SB-183 CASE III, COT STD. NO. 202, 204 & 213

Underground Service Alert
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BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

CONTRACTORS NOTE:
CONTRACTOR TO POTHOLE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.

40' 0 40' 80' 120'
SCALE: 1"=40'

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor_____					
Inspector_____					
Date Completed_____					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84" ELEVATION: 1006.84'

SCALE	
HORIZONTAL	AS SHOWN
VERTICAL	AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER — GEORGE ALAN LENTZ — No. 45920 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
_____ Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

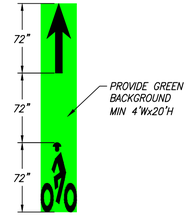
RECOMMENDED BY:_____ DATE:_____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY:_____ DATE:_____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+91.84 TO STA 107+26.00
MEDIAN PLAN AND PROFILE

Drawing No. **C-6**
SHEET 7 OF 14

DWG: N:\01-204.000 Ynez Road Expansion\Drawings\Street Improvements\ST07-Median.dwg
Plotted: Nov 26, 2025 - 8:42pm By: GilbertA



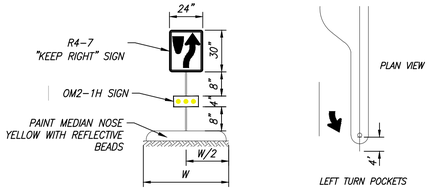
NOTE:
1. INSTALL "PRE-MARK" OR "OPTAMARK" THERMOPLASTIC PAVEMENT MARKINGS (WHITE SYSMBOLS WITH GREEN BACKGROUND)
2. LEGEND SPACING PER CAMUTCD FIGURE 9C-3.

DETAIL "A"

BICYCLIST AND ARROW BIKE LANE MARKING

(26) BIKE LANE PAVEMENT MARKING

N.T.S.



(27) R4-7 AND OM2-1H SIGN ON SIGN POST

N.T.S.

CONTRACTORS NOTE:

CONTRACTOR TO REFRESH CROSSWALK STRIPING AS DEEMED NECESSARY BY THE FIELD INSPECTOR AT TIERRA VISTA ROAD AND RANCHO VISTA ROAD INTERSECTIONS

SIGNING AND STRIPING NOTES:

1. STRIPING, SIGNING, OR PAVEMENT LEGENDS SHALL NOT BE INSTALLED PRIOR TO FIELD INSPECTION AND APPROVAL BY THE INSPECTOR.
2. ALL PAVEMENT MARKINGS AND SIGN LOCATIONS MUST BE INSPECTED AND APPROVED BEFORE STRIPING BEGINS. THE INSPECTOR SHALL DETERMINE THE EXACT LIMITS OF THE MATCH STRIPING.
3. ALL REGULATORY SIGNS AND WARNING SIGNS SHALL USE HI-INTENSITY DIAMOND GRADE REFLECTIVE SHEETING AND BE A MINIMUM OF 30"X30".
4. UNLESS OTHERWISE STATED, ALL STRIPING SHALL BEGIN AND TERMINATE AT QUARTER DELTA OF THE CURB RETURN, OR BACK OF THE CROSSWALK OR STOP BAR.
5. ALL R1 SIGNS WILL BE LOCATED 2 FEET BEHIND CURB AT THE B.C.R. OR AS SPECIFIED ON THE PLAN.
6. ALL STOP BARS WILL BE LOCATED AT THE PROLONGATION OF THE CENTER DELTA OF THE CURB RETURN OR BEHIND THE WHEELCHAIR ACCESS RAMPS UNLESS OTHERWISE SPECIFIED ON THE PLAN.
7. THE STOP LEGEND SHALL BE 8 FEET BEHIND THE STOP BAR. IF REQUIRED, DIRECTIONAL ARROWS SHALL ALSO BE 8 FEET BEHIND THE STOP BAR OR 8 FEET BEHIND THE STOP LEGENDS.
8. ALL PAVEMENT MARKERS, STRIPING, AND PAVEMENT MARKINGS SHALL CONFORM TO THE LATEST VERSION OF THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), AND CALTRANS STANDARD PLANS: A20-A THROUGH A24-E.
9. STREET NAME SIGNS SHALL BE INSTALLED AT ALL INTERSECTIONS AND MAY BE INSTALLED ABOVE THE R1 SIGN OR AS SPECIFIED ON THE PLAN.
10. THE POST MATERIAL SHALL BE "TELESPAR QWIK-PUNCH" OR APPROVED EQUAL WITH RECEPTIVE 30-INCH OR 36-INCH ANCHOR ASSEMBLY.
11. ALL PAVEMENT STRIPING AND LEGENDS SHALL BE INSTALLED PER SECTION 84-2 OF THE CALTRANS STANDARD SPECIFICATIONS.
12. ALL CONFLICTING PAVEMENT LEGENDS, STRIPING (INCLUDING RAISED PAVEMENT MARKERS), AND PAVEMENT MARKINGS SHALL BE REMOVED BY GRINDING METHOD, PRIOR TO GRIND AND OVERLAY, PER SECTION 84-9 OF THE CALTRANS STANDARD SPECIFICATION.
13. ALL PAINTED STRIPING SHALL BE DOUBLE COATED IN NOT LESS THAN 7 DAYS, BUT NO MORE THAN 14 DAYS FROM DATE OF INITIAL INSTALLATION.
14. ALL PAVEMENT MARKINGS, PAVEMENT LEGENDS, AND LINES 8" OR WIDER SHALL BE THERMOPLASTIC UNLESS OTHERWISE APPROVED BY THE DEPARTMENT OF PUBLIC WORKS.
15. ALL PAVEMENT STRIPING SHALL HAVE RAISED PAVEMENT MARKINGS (RPM) PER SECTION 81-3 OF THE CALTRANS STANDARD SPECIFICATIONS.
16. A 6" SOLID WHITE LEAD LINE WITH TYPE "G" RPM'S AT 25' SPACING SHOULD BE USED FOR EACH LANE LINE WHERE IT BREAKS ACROSS AN INTERSECTION. 50' OF LEAD IN LINE ON THE APPROACH SIDE AND 50' ON THE LEAD OUT DEPARTURE SIDE.

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TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

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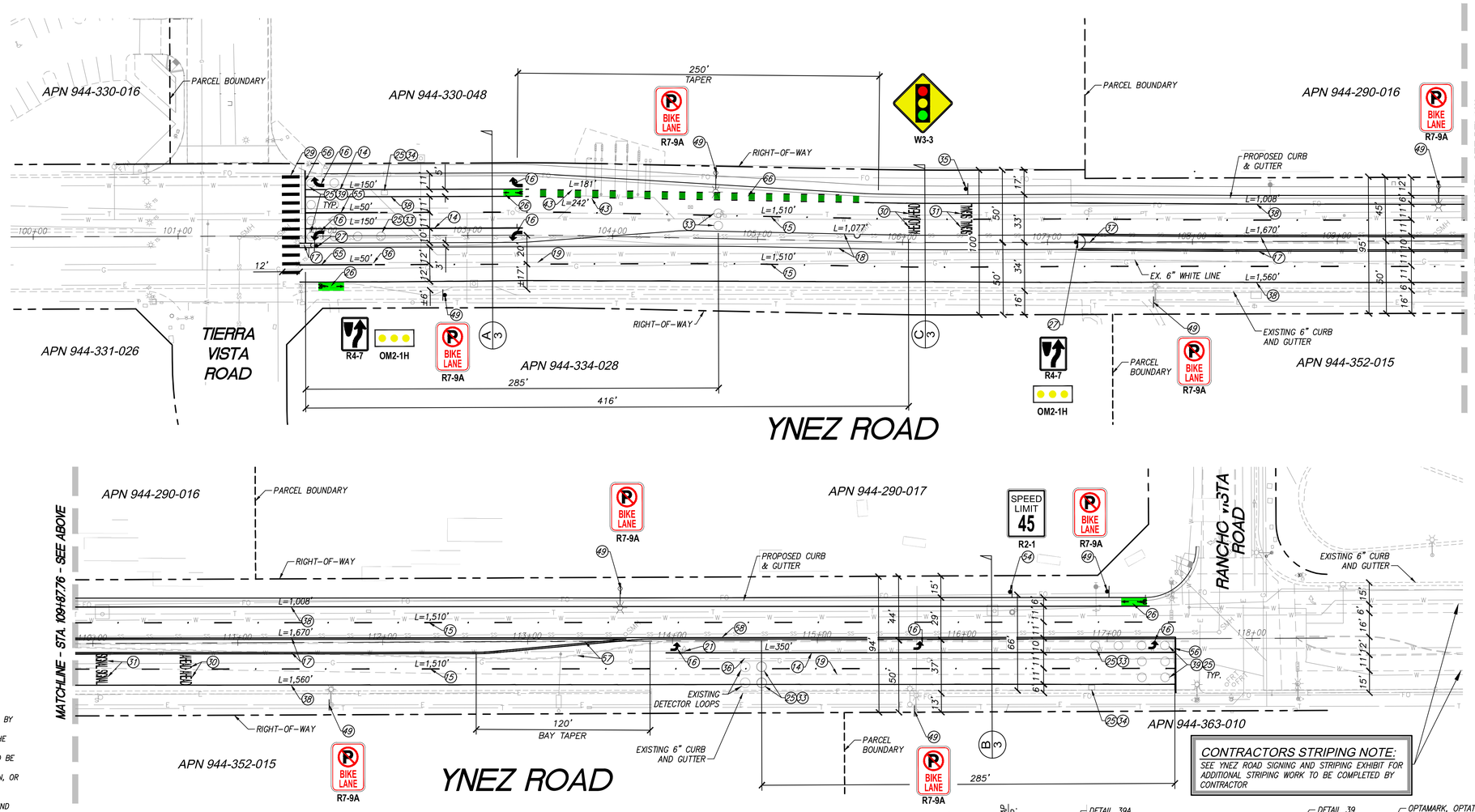
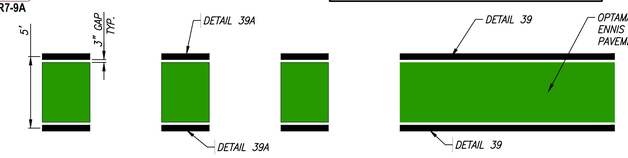


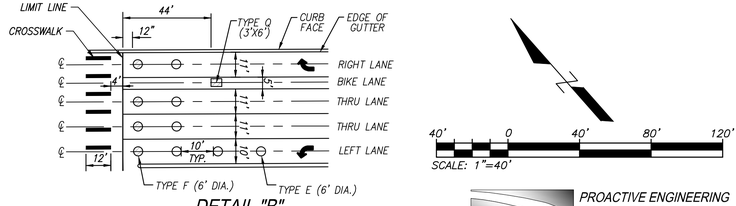
CONTRACTORS STRIPING NOTE:

SEE YNEZ ROAD SIGNING AND STRIPING EXHIBIT FOR ADDITIONAL STRIPING WORK TO BE COMPLETED BY CONTRACTOR



(66) GREEN RECTANGULAR MARKINGS FOR BICYCLE LANE DETAILS

N.T.S.



CONSTRUCTION NOTES

(14) INSTALL DETAIL 38, 8" CHANNELIZING LINE PER CALTRANS STANDARD PLAN A20D
(15) INSTALL DETAIL 12, 6" WHITE DASHED LANELINE PER CALTRANS STANDARD PLAN A20A
(16) INSTALL TYPE IV TURN ARROW PER CALTRANS STANDARD PLAN A24A
(17) INSTALL DETAIL 29, DOUBLE YELLOW MEDIAN ISLAND PER CALTRANS STANDARD PLAN A20A
(18) INSTALL DETAIL 25, LEFT EDGELINE PER CALTRANS STANDARD PLAN A20B
(19) REMOVE DETAIL 12, 6" WHITE DASHED LANELINE PER CALTRANS STANDARD PLAN A20A
(21) REMOVE TYPE IV TURN ARROW PER CALTRANS STANDARD PLAN A24A
(25) INSTALL LOOP DETECTORS PER DETAIL ON HEREON
(26) INSTALL BIKE LANE PAVEMENT MARKING PER DETAIL HEREON
(27) INSTALL R4-7 & OM2-1H SIGN ON SIGN POST PER DETAIL ON HEREON
(29) INSTALL 12" WIDE, WHITE CROSSWALK (THERMOPLASTIC) PER CALTRANS STANDARD A24F - CONTINENTAL STYLE (2' BAR, 3' GAP)
(30) INSTALL "AHEAD" PAVEMENT MARKING PER CALTRANS STANDARD A24D
(31) INSTALL "SIGNAL" PAVEMENT MARKING PER CALTRANS STANDARD A24D
(33) INSTALL LOOP DETECTOR TYPE E PER CALTRANS RSP ES-5B
(34) INSTALL SQUARE DETECTOR TYPE Q (3'X6') PER CALTRANS RSP ES-5B
(35) INSTALL W3-3 SIGN ON POST OR ON STREET LIGHT PER CA MUTCD STANDARDS
(36) REMOVE DETAIL 38, 8" CHANNELIZING LINE PER CALTRANS STANDARD PLAN A20D
(37) REMOVE DETAIL 22, DOUBLE YELLOW LINE STRIPING
(38) INSTALL DETAIL 39, BIKE LANE LINE PER CALTRANS RSP A20D
(39) INSTALL LOOP DETECTOR TYPE F PER CALTRANS RSP ES-5B
(43) INSTALL DETAIL 39A, LANE LINE EXTENSIONS PER CALTRANS RSP A20D
(49) INSTALL R7-9A NO PARKING SIGN PER CA MUTCD STANDARDS ON POST OR ON STREET LIGHT PER PLAN
(54) INSTALL R2-1 "SPEED LIMIT" SIGN PER CA MUTCD, SPEED AS NOTED PER PLAN
(55) INSTALL 6" SOLID WHITE LINE WITH TYPE "G" RPM'S AT 25' O.C., 2" OFFSET FROM LINE
(56) APPLY 12" WHITE LIMIT LINE PER CALTRANS STANDARD A24G
(57) REMOVE DETAIL 29, DOUBLE YELLOW MEDIAN ISLAND PER CALTRANS STANDARD PLAN A20A
(58) INSTALL DETAIL 22, DOUBLE YELLOW LINE STRIPING PER CALTRANS STANDARD PLAN A20A
(66) APPLY GREEN RECTANGULAR PAVEMENT MARKING FOR BIKE LANES PER DETAIL HEREON

DETAIL "B"

(25) LIMIT LINE AND LOOP INSTALLATION DETAIL

N.T.S.

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27406 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6' WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL
AS SHOWN
VERTICAL
AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFEST No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY: _____ DATE: _____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

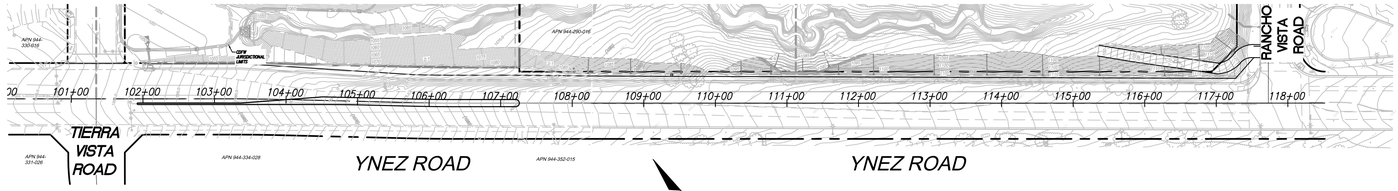
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.65
SIGNING AND STRIPING PLAN

Drawing No. C-7
SHEET 8 OF 14

Plotted: Nov 26, 2025 - 7:20pm By: GilbertA
DWG: N:\01_204.000 Ynez Road Expansion\Drawing\Street Improvements\ST08-Striping Sheet.dwg

CITY OF TEMECULA
EROSION CONTROL PLAN
YNEZ ROAD IMPROVEMENTS PHASE I



EROSION CONTROL NOTES:

1. FILTERED RUNOFF. ALL RUNOFF SHALL BE FILTERED PRIOR TO DISCHARGING FROM A SITE OR TO ANY TYPE OF PRIVATE OR PUBLIC STORM WATER CONVEYANCE SYSTEM (NATURAL WATERCOURSES, STREETS, GUTTERS, CONCRETE-LINED V-DITCHES, STORM DRAINS, FLOW-LINES, INLETS, OUTLETS, ETC.). ALL NON-PERMITTED DISCHARGES ARE PROHIBITED FROM ENTERING ANY STORM WATER CONVEYANCE SYSTEM YEAR-ROUND.

2. BEST MANAGEMENT PRACTICES (BMP'S). YEAR-ROUND, POLLUTION PREVENTION MEASURES, ALSO KNOWN AS BEST MANAGEMENT PRACTICES (BMP'S), MUST BE INSTALLED PRIOR TO ANY FIELD ACTIVITIES. BMP HANDBOOKS CAN BE DOWNLOADED AT HTTP://WWW.DOT.CA.GOV/HQ/CONSTRUC/STORMWATER/MANUALS.HTM. ADDITIONAL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE INSTALLED AND MAINTAINED PRIOR TO AND THROUGHOUT EACH RAINY SEASON. THE DEVELOPER/CONTRACTOR IS RESPONSIBLE FOR ESC MEASURES THROUGHOUT THE DURATION OF THE PROJECT FOR ALL CLEARING, DISKING, GRADING, EXCAVATING AND STOCKPILING ACTIVITIES, AND ON ALL EXPOSED SLOPES AND INACTIVE PADS THROUGHOUT THE ENTIRE SITE. THE DEVELOPER/CONTRACTOR IS ALSO RESPONSIBLE FOR ANY DISCHARGES FROM SUBCONTRACTORS.
   a. STOCKPILING OF BMPS. ADDITIONAL ESC MATERIALS SHALL BE STOCKPILED AT VARIOUS LOCATIONS THROUGHOUT THE SITE FOR IMMEDIATE USE WITHIN SEVEN DAYS PRIOR TO ANY FORECAST RAIN. ON EMERGENCY SITUATIONS, THE DEVELOPER/CONTRACTOR SHALL IMMEDIATELY MAKE EQUIPMENT AND WORKERS AVAILABLE TO PROTECT THE SITE.

3. EROSION AND SEDIMENT CONTROLS. ALL ESC MEASURES SHALL BE INSPECTED, RESTORED, REPAIRED OR MODIFIED YEAR-ROUND THROUGHOUT THE SITE TO PROTECT PERIMETERS, ADJACENT PROPERTIES,. ENVIRONMENTALLY SENSITIVE AREAS AND ALL PRIVATE/PUBLIC STORM WATER CONVEYANCE SYSTEMS. IF ANY EROSION OR SEDIMENT CONTROLS FAIL DURING ANY RAIN EVENT, MORE EFFECTIVE ONES WILL BE REQUIRED IN THEIR PLACE.
   a. EROSION CONTROL. EROSION CONTROLS SHALL INCLUDE, BUT ARE NOT LIMITED TO APPLYING AND ESTABLISHING: VEGETATIVE COVE, WOOD MULCH, STAPLED OR PINNED BLANKETS (STRAW, COCONUT OR OTHER), PLASTIC SHEETING (MINIMUM 10-MIL), POLYPROPYLENE MATS, SPRAY-ON CONTROLS TO ALL DISTURBED AREAS OR OTHER MEASURES APPROVED BY THE CITY ENGINEER. JUTE NETTING SHALL NOT BE USED AS A STAND-ALONE EROSION CONTROL. FOR SLOPES GREATER THAN 4:1, PROVIDE FIBER ROLLS AND EITHER A BONDED FIBER MATRIX PRODUCT APPLIED TO A RATE OF 3500 LB/ACRE OR A STABILIZED FIBER MATRIX PRODUCT APPLIED TO A RATE OF 10 GAL/ACRE. THE CITY ENGINEER MAY APPROVE DIFFERENT APPLICATION RATES FOR SLOPES LESS THAN 4:1.
   b. SEDIMENT CONTROLS. SEDIMENT CONTROLS SHALL INCLUDE, BUT ARE NOT LIMITED TO: DESILTING BASINS, GRADED BERMS, FIBER ROLLS, SILT FENCES, GRAVEL BAG CHEVRONS (FILLED WITH MINIMUM ¾" GRAVEL), CHECK DAMS, DRAINAGE INLET PROTECTION, ETC. FIBER ROLLS SHALL BE INSTALLED IN 15-FOOT INCREMENTS MEASURED ALONG THE FACE OF THE SLOPE. SILT FENCE SHALL BE INSTALLED ALONG INTERIOR STREETS AND COMBINED WITH GRAVEL-BAG OR SILT FENCE CHEVRONS INSIDE THE SIDEWALK RIGHT-OF-WAY OR BACK OF CURBS.

4. STATE CONSTRUCTION GENERAL PERMIT. IF THE PROJECT DISTURBS, EXPOSES OR STOCKPILES ONE ACRE OR MORE OF SOIL, THE SITE MUST MUST BE COVERED UNDER THE STATE CONSTRUCTION GENERAL PERMIT. A WASTE DISCHARGE IDENTIFICATION (WDID) NUMBER, A RISK LEVEL DETERMINATION NUMBER AND A QUALIFIED "STORM WATER POLLUTION PLAN" (SWPPP) DEVELOPER (QSD) SHALL BE PROVIDED TO THE CITY PRIOR TO ISSUANCE OF A GRADING PERMIT. A SWPPP SHALL BE IMPLEMENTED THROUGHOUT THE DURATION OF THE PROJECT AND SHALL BE READILY AVAILABLE TO CITY AND STATE INSPECTORS AND UPDATED TO REFLECT CURRENT SITE CONDITIONS DURING CONSTRUCTION. THE CONSTRUCTION PERMIT CAN BE DOWNLOADED AT:
   WWW.WATERBOARDS.CA.GOV/WATER_ISSUES/PROGRAMS/STORMWATER/CONSTRUCTION.

5. PERIMETER PROTECTION. PERIMETER PROTECTION MUST BE INSTALLED PRIOR TO ANY CLEARING ACTIVITIES. CLEARING SHALL BE LIMITED TO AREAS THAT WILL BE IMMEDIATELY GRADED OR DISTURBED. A COMBINATION OF ESC MEASURES SHALL BE IMPLEMENTED IN AREAS THAT HAVE BEEN CLEARED. AIL DISTURBED AREAS OF AN INACTIVE SITE, AS DESCRIBED IN THE ENGINEERING AND CONSTRUCTION MANUAL, SHALL ALSO BE PROTECTED.

6. CONSTRUCTION ACCESS POINTS. CONSTRUCTION ACCESS POINTS SHALL BE STABILIZED WITH A COMBINATION OF ROCK AND SHAKER PLATES YEAR-ROUND TO PREVENT TRACK-OUT. INTERIOR ACCESS POINTS (ALL PROPOSED DRIVEWAYS, MATERIAL STORAGE AND STAGING AREA ENTRANCES/EXITS, ETC.) SHALL ALSO BE PROTECTED WITH ROCK TO PREVENT TRACK-OUT ONTO INTERIOR STREETS. ROUTINE STREET SWEEPING SHALL BE PREFORMED ON ALL PAVED STREETS WHERE TRACKING IS OBSERVED. VACUUM SWEEPERS SHALL BE USED WHEN STREET SWEEPING BECOMES INEFFECTIVE. CONTROLLED STREET WASHING SHALL ONLY BE ALLOWED PRIOR TO THE APPLICATION OF ASPHALT SEAL COATS, AND ONLY WHEN ALL PERTINENT DRAINAGE INLETS ARE PROTECTED.

7. DESILTING BASINS. DESILTING BASINS SHALL BE DESIGNED ACCORDING TO THE GUIDANCE PROVIDED IN CASQA'S CONSTRUCTION BMP HANDBOOK. IMPOUNDED WATER SHALL BE SECURED FROM THE PUBLIC. SIGNAGE INDICATING "PONDED WATER-DO NOT ENTER", OR AN EQUIVALENT WARNING NOTICE, SHALL BE POSTED.

8. MATERIAL STORAGE. MATERIAL STORAGE AND STAGING AREAS SHALL BE ESTABLISHED. FUEL TANKS, PORTABLE TOILETS, LIQUIDS, GELS, POWDERS, LANDSCAPE MATERIALS AND STOCKPILES OF SOIL SHALL BE STORED AWAY FROM ALL PRIVATE/PUBLIC STORM WATER CONVEYANCE SYSTEMS, SIDEWALKS, RIGHT-OF-WAYS AND FLOW-LINES AND SHALL HAVE SECONDARY CONTAINMENT. INACTIVE STOCKPILES OF SOIL SHALL BE COVERED AT ALL TIMES. ACTIVE STOCKPILES SHALL BE COVERED PRIOR TO A FORECAST RAIN.

9. CONSTRUCTION WASTE. CONSTRUCTION WASTE AND MISCELLANEOUS DEBRIS SHALL BE PLACED IN WATER-TIGHT BINS. WIRE MESH RECEPTACLES SHALL NOT BE ALLOWED. WASH-OUT STATIONS SHALL BE PROVIDED FOR CONCRETE, PAINTS, STUCCO AND OTHER LIQUID WASTE, AND SHALL BE LINED WITH PLASTIC AND LOCATED AWAY FROM PUBLIC RIGHT-OF-WAYS, FLOW LINES, ETC. PRIOR TO ANY FORECAST RAIN, BINS AND WASH-OUTS SHALL BE COVERED WITH LIDS OR PLASTIC TARPS.

10. SLOPE PROTECTION. STORM WATER RUNOFF SHALL NOT BE DIRECTED OVER SLOPES WITHOUT PERMANENT DOWN DRAINS INSTALLED. ESC MEASURES ARE REQUIRED ON ALL EXPOSED SLOPES UNTIL SUFFICIENT/PERMANENT LANDSCAPE IS ESTABLISHED. THERE SHALL BE 100% SLOPE PROTECTION IN PLACE PRIOR TO ISSUANCE OF CERTIFICATE OF OCCUPANCY.

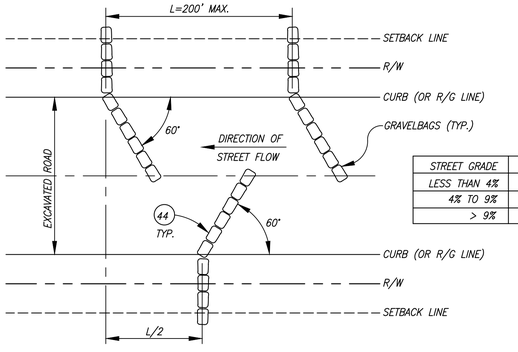
11. PORTABLE MIXERS. ALL PORTABLE MIXERS SHALL HAVE PLASTIC LINERS UNDERNEATH THEM WITH GRAVEL-BAGS PLACED ON THE DOWN-HILL SIDE OF TIE LINERS TO CONTAIN DISCHARGES.

12. MAINTENANCE. ALL ONSITE AND OFFSITE FLOW LINES (I.E., V- AND BROW-DITCHES, TERRACE DRAINS, RIBBON GUTTERS, CURB GUTTERS, ETC.), STORM WATER CONVEYANCE SYSTEMS, CHECK DAMS, CHEVRONS, SILT FENCES AND DESILTING BASINS SHALL BE FREE OF SEDIMENT, CONSTRUCTION MATERIALS, WASTE, MISCELLANEOUS DEBRIS AND DETERIORATED ESC MEASURES YEAR-ROUND.

13. OBSTRUCTIONS. NO OBSTRUCTIONS, OTHER THAN BMP'S, SHALL BE ALLOWED WITHIN ANY STORM WATER CONVEYANCE SYSTEM, UNLESS ALTERNATIVE DRAINAGE FACILITIES HAVE BEEN APPROVED BY THE CITY ENGINEER.

14. OTHER CONSTRUCTION NOTES. REFER TO SEPARATE NOTES FOR "GENERAL," "GRADING" AND "PAVING" REQUIREMENTS.

15. OTHER PERTINENT INFORMATION. REFER TO THE CITY OF TEMECULA MUNICIPAL CODE, TITLE 18, CHAPTER 18.18 "EROSION AND SEDIMENT CONTROL"

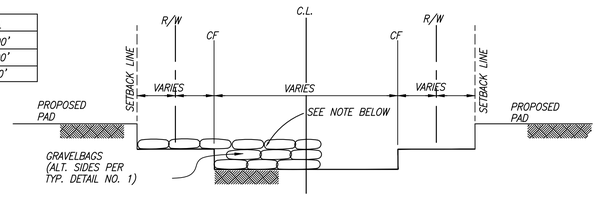


STREET GRADE	L
LESS THAN 4%	200'
4% TO 9%	100'
> 9%	50'

(44) GRAVEL BAG VELOCITY REDUCER IN CHANNEL
N.T.S.

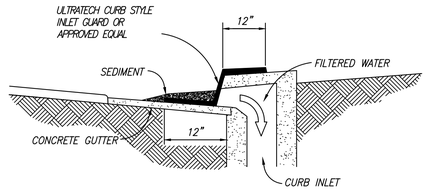
CONSTRUCTION NOTES:

(44) INSTALL GRAVEL BAG VELOCITY REDUCER PER DETAIL ON SHEET 9
(45) CONSTRUCT SILT FENCE PER DETAIL ON SHEET 9 AND CASQA BMP SE-5
(46) INSTALL FIBER ROLLS PER DETAIL ON SHEET 9
(47) INSTALL GRAVEL AND WIRE MESH FILTER FOR CURB INLET PER DETAIL ON SHEET 9
(48) PROVIDE HYDRAULIC MULCH PER CASQA BMP EC-3 AND HYDROSEEDING PER CASQA BMP EC-4



NOTE: PROVIDE 3" SPACING BETWEEN TOP ROW OF GRAVEL BAGS

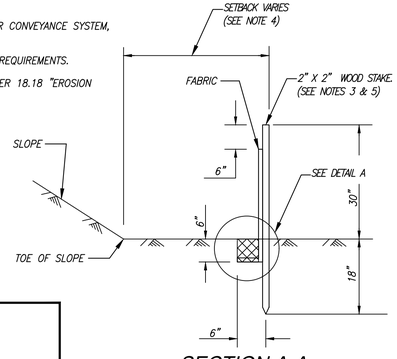
(44) TYPICAL GRAVEL BAG DETAIL
N.T.S.



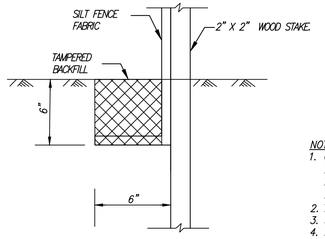
(47) INLET PROTECTION DETAIL
N.T.S.

LEGEND:

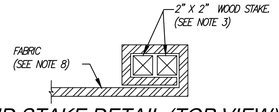
(4) – CONSTRUCTION NOTE
H.P. – HIGH POINT
1190 – CONTOUR ELEVATION
– RETAINING WALL
– RIGHT OF WAY
– SLOPE (2:1 UNLESS OTHERWISE NOTED)
– SILT FENCE
– FIBER ROLL
– GRAVEL BAG VELOCITY REDUCER
– TRIBUTARY AREA
– FLOW ARROWS
(48) – HYDROSEEDING ONLY PER CASQA BMP EC-4 (SLOPES FROM 3 TO 10 VERTICAL FEET)
(48) – HYDRAULIC MULCH PER CASQA BMP EC-3 AND HYDROSEEDING PER CASQA BMP EC-4 (SLOPES GREATER THAN 10 VERTICAL FEET)
(47) – INLET PROTECTION



SECTION A-A
NOTE: FOR MORE INFORMATION SEE CASQA BMP SE-1



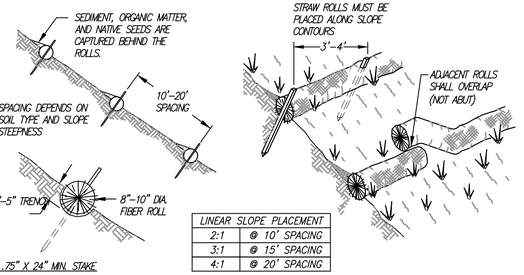
DETAIL A



END STAKE DETAIL (TOP VIEW)

(45) SILT FENCE DETAIL
N.T.S.

NOTES:
1. CONSTRUCT THE LENGTH OF EACH REACH SO THAT THE CHANGE IN BASE ELEVATION ALONG THE REACH DOES NOT EXCEED 1/3 THE HEIGHT OF THE LINEAR BARRIER, IN NO CASE SHALL THE REACH LENGTH EXCEED 500'.
2. THE LAST 8'-0" OF FENCE SHALL BE TURNED UP SLOPE.
3. STAKE DIMENSIONS ARE NOMINAL.
4. DIMENSION MAY VARY TO FIT FIELD CONDITION.
5. STAKES SHALL BE PLACED AT 8'-0" MAXIMUM AND SHALL BE POSITIONED ON DOWNSTREAM SIDE OF FENCE.
6. STAKES TO OVERLAP AND FENCE FABRIC TO FOLD AROUND EACH STAKE ONE FULL TURN. SECURE FABRIC TO STAKE WITH 4 STAPLES.
7. STAKES SHALL BE DRIVEN TIGHTLY TOGETHER TO PREVENT POTENTIAL FLOW-THROUGH OF SEDIMENT AT JOINT. THE TOPS OF THE STAKE SHALL BE SECURED WITH WIRE.
8. FOR END STAKE, FENCE FABRIC SHALL BE FOLDED AROUND TWO STAKES ONE FULL TURN AND SECURED WITH FOUR STAPLES.
9. MINIMUM FOUR STAPLES PER STAKE. DIMENSIONS SHOWN ARE TYPICAL.
10. CROSS BARRIERS SHALL BE A MINIMUM OF 1/3 AND A MAXIMUM OF 1/2 THE HEIGHT OF THE LINEAR BARRIER.
11. MAINTENANCE OPENINGS SHALL BE CONSTRUCTED IN A MANNER TO ENSURE SEDIMENT REMAINS BEHIND SILT FENCE.
12. JOINING SECTIONS SHALL NOT BE PLACED AT SUMP LOCATIONS
13. SANDBAG ROWS AND LAYERS SHALL BE OFFSET TO ELIMINATE GAPS.



LINEAR SLOPE PLACEMENT	
2:1	@ 10' SPACING
3:1	@ 15' SPACING
4:1	@ 20' SPACING

NOTES:
1. ROUGHEN ALL SLOPES 3:1 OR STEEPER PER CASQA EC-15 (SHEEPS CLAW, TRACKING OR EQUIVALENT)
2. PLACEMENT AND SECURE STAKING OF THE ROLL IN A TRENCH, 3"-5" DEEP, DUG ON CONTOUR. RUNOFF MUST NOT BE ALLOWED TO RUN UNDER OR AROUND ROLL
3. START PLACEMENT OF FIBER ROLLS AT BOTTOM OF SLOPE AND CONTINUE TO WORK UPWARDS
4. STAKE FIBER ROLLS AT EACH END AND 4' SPACING THROUGOUT
5. HYDROSEEDING IS NOT REQUIRED WHERE EXPOSED BANK STABILIZATION RIPRAP HAS BEEN CONSTRUCTED
6. FOR REMOVAL OF FIBER ROLLS, SEE CASQA REMOVAL REQUIREMENTS (PERMANENT PLACEMENT REQUIREMENTS OF BIODEGRADABLE ENCASEMENT)

(46) FIBER ROLL (CASQA: SE-5)
N.T.S.

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

PROACTIVE ENGINEERING CONSULTANTS WEST,INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL AS SHOWN
VERTICAL AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFEST No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

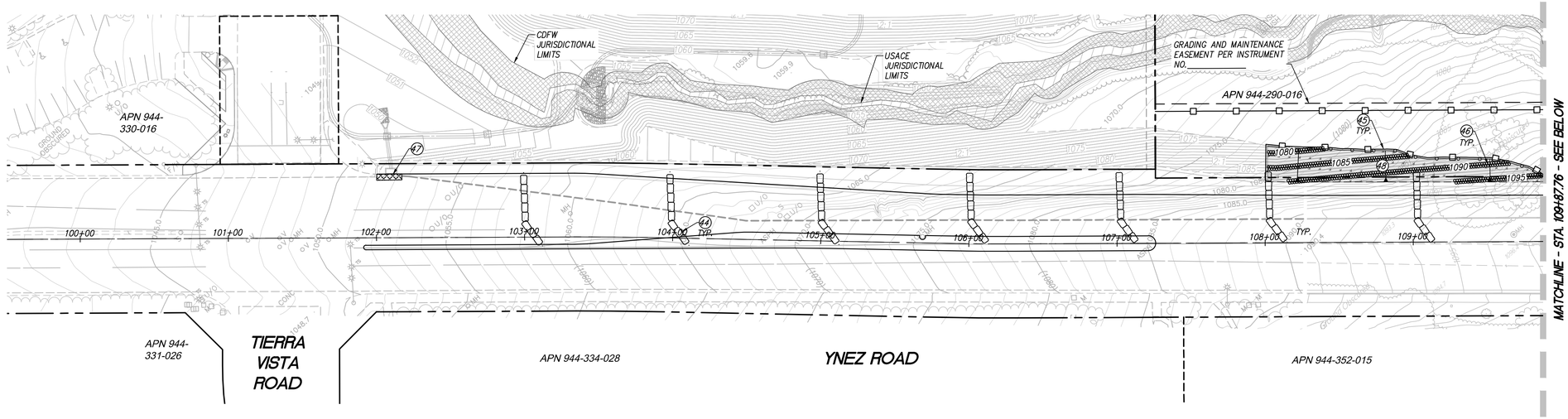
RECOMMENDED BY: _____ DATE: _____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

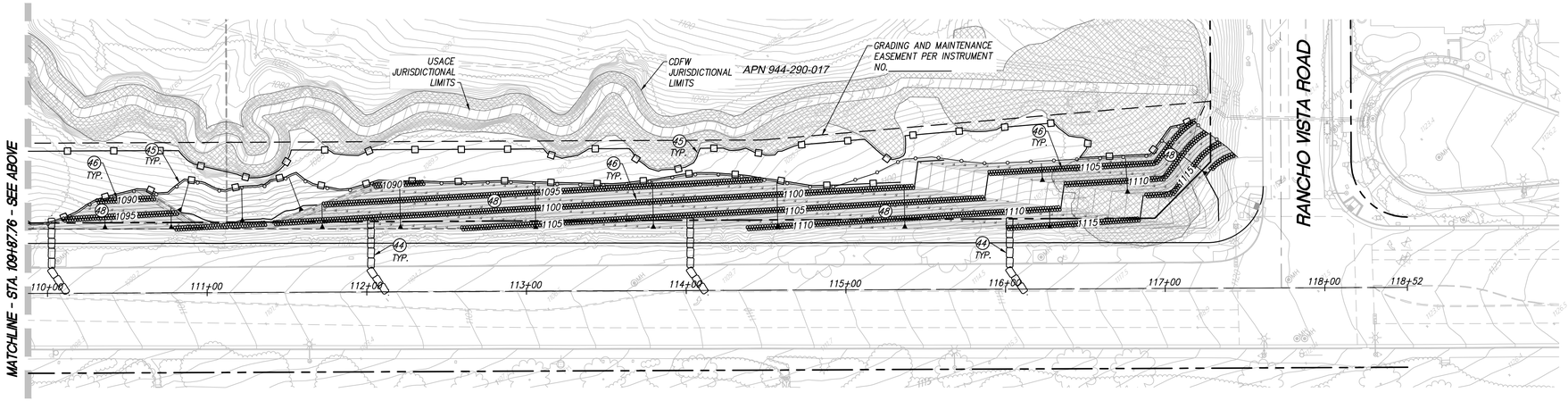
CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
TITLE SHEET, INDEX MAP AND NOTES
EROSION CONTROL PLAN

Drawing No. C-8
SHEET 9 OF 14

Plotted: Nov 26, 2025 - 8:15pm By: GilbertA
DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Street Improvements\ST09-Erosion Control Title Sheet.dwg





CONSTRUCTION NOTES:

(44) INSTALL GRAVEL BAG VELOCITY REDUCER PER DETAIL ON SHEET 9

(45) CONSTRUCT SILT FENCE PER DETAIL ON SHEET 9 AND CASQA BMP SE-5

(46) INSTALL FIBER ROLLS PER DETAIL ON SHEET 9

(47) INSTALL GRAVEL AND WIRE MESH FILTER FOR CURB INLET PER DETAIL ON SHEET 9

(48) PROVIDE HYDRAULIC MULCH PER CASQA BMP EC-3 AND HYDROSEEDING PER CASQA BMP EC-4

40' 0 40' 80' 120'

SCALE: 1"=40'

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

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CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor_____					
Inspector_____					
Date Completed_____					

BENCHMARK

RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84" ELEVATION: 1006.84'

SCALE
HORIZONTAL
AS SHOWN
VERTICAL
AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LESTER No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of

_____ Date: 11/26/25

R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY:_____ DATE:_____
NINO ABAD, PRINCIPAL CIVIL ENGINEER

ACCEPTED BY:_____ DATE:_____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER

R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02

YNEZ ROAD STA 101+99.21 TO STA 117+61.56

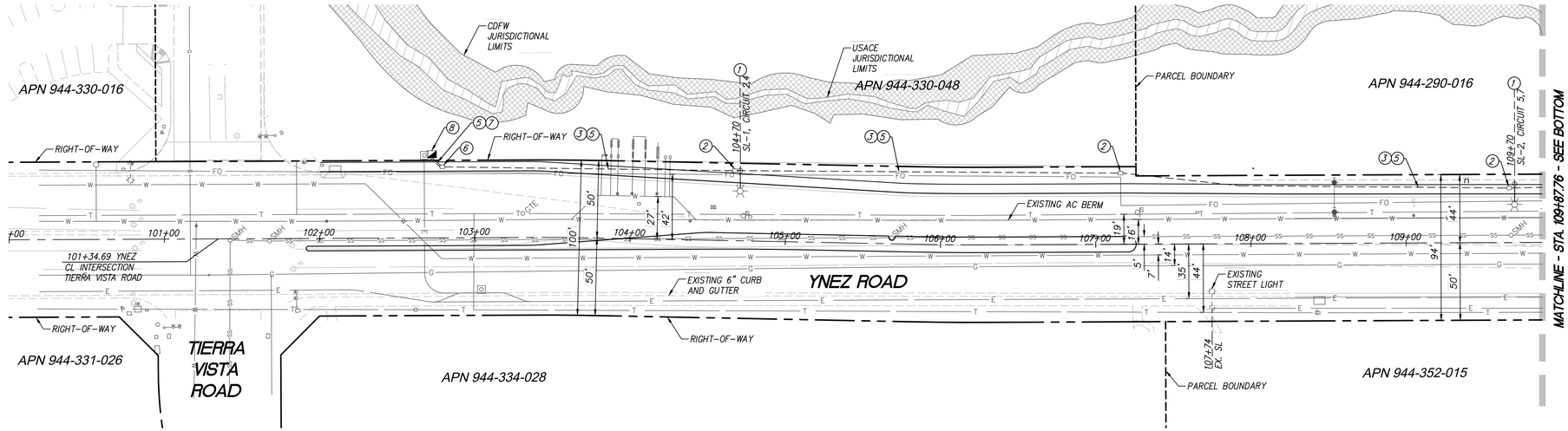
EROSION CONTROL PLAN

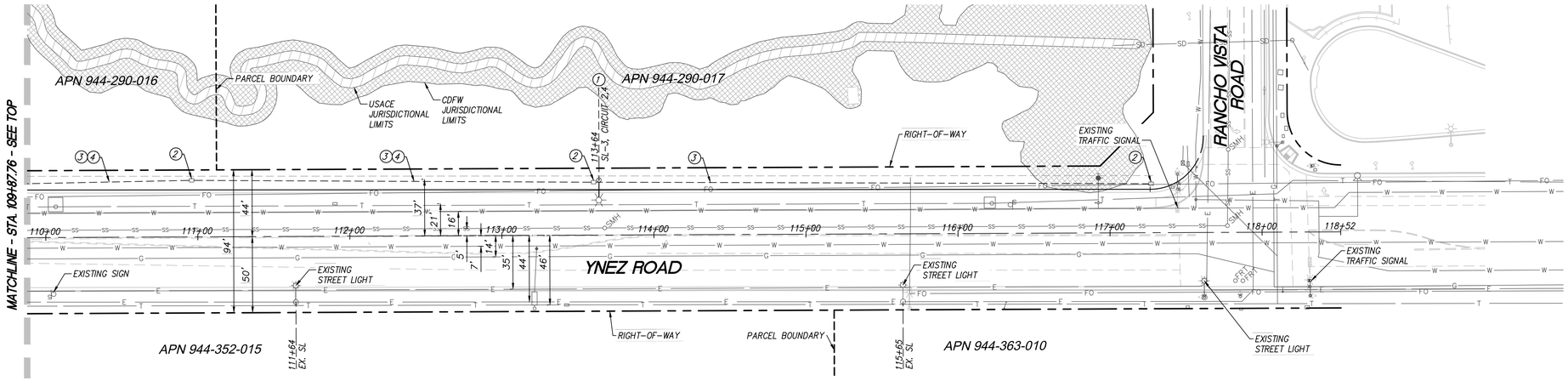
Drawing No. C-9

SHEET 10 OF 14

Plotted: Nov 26, 2025 - 8:17pm By: GilbertA

DWG: N:\01-204.000 Ynez Road Expansion\Drawings\Street Improvements\ST10-Erosion Control Plan Sheet.dwg





STREET LIGHT CONSTRUCTION NOTES

1. FURNISH AND INSTALL STREET LIGHT, FIXTURE, AND GE LIGHTGRID NODE PER CITY OF TEMECULA STANDARD DRAWING NO. 800, 801, AND CITY OF TEMECULA STREET AND SAFETY LIGHTING GUIDELINES.
2. FURNISH AND INSTALL #3 1/2 PULL BOX PER CALTRANS STANDARD PLANS ES-8.
3. FURNISH AND INSTALL 2" PVC CONDUIT (SCHEDULE 80) WITH PULL ROPE PER CITY OF TEMECULA STREET AND SAFETY LIGHTING GUIDELINES.
4. INSTALL 2-XHHW-2#8 AND 1-#10 (G) CONDUCTORS.
5. INSTALL 4-XHHW-2#8 AND 2-#10 (G) CONDUCTORS.
6. FURNISH AND INSTALL #5E PULL BOX PER CALTRANS STANDARD PLAN ES-8.
7. FURNISH AND INSTALL 2-2" PVC CONDUIT (SCHEDULE 80) WITH PULL ROPE PER CITY OF TEMECULA STREET AND SAFETY LIGHTING GUIDELINES.
8. FURNISH AND INSTALL METER SERVICE PEDESTAL. PROVIDE 100A, 120/240V, 1 PHASE, 3W PANEL PER UTILITY SERVICE ORDER. FOR CIRCUIT PANEL, MAIN BREAKER SHALL BE ON CIRCUIT 1,3. LIGHTING SHALL BE ON CIRCUITS 2,4 AND 5,6. PHOTOELECTRIC CONTROL SHALL BE ON CIRCUIT BREAKER 12. STREETLIGHTS TO BE CONTROLLED BY MASTER PHOTO CELL/CONTACTOR AT SERVICE ABD BY-PASS SWITCH INSIDE METER PEDESTAL.

CONTRACTORS NOTE:
CONTRACTOR TO POTHOLE AND VERIFY ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.

40' 0 40' 80' 120'
SCALE: 1"=40'

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor					
Inspector					
Date Completed					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84"
ELEVATION: 1006.84'

SCALE
HORIZONTAL AS SHOWN
VERTICAL AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LESTER No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

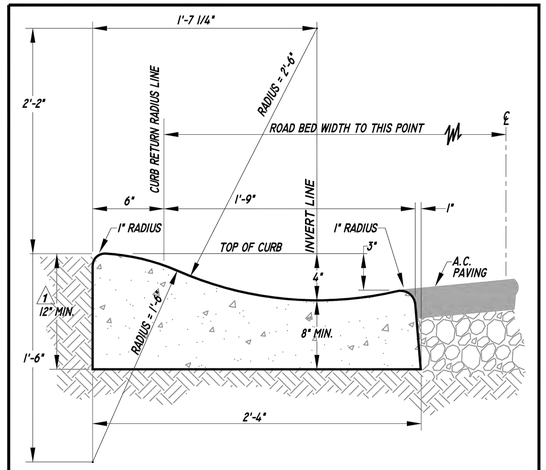
RECOMMENDED BY: _____ DATE: _____
NINO ABAD, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY: _____ DATE: _____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
YNEZ ROAD STA 101+99.21 TO STA 117+61.56
STREET LIGHT PLAN

Drawing No. C-10
SHEET 11 OF 14

Plotted: Nov 26, 2025 - 8:18pm By: GilbertA
DWG: N:\01-204.000 Ynez Road Expansion\Drawings\Street Improvements\ST11-Street Light Plan.dwg



NOTES:

1. CONCRETE SHALL BE CLASS 560-C-3250
2. TRANSITION TO TYPE A-6 CURB AND GUTTER AT ALL CURB RETURNS, EXCEPT WHERE SIDEWALK RAMPS ARE PROVIDED AND AT ALL CUL-DE-SACS WITH DRAINAGE STRUCTURES.
3. MINIMUM PERMISSIBLE GRADE SHALL BE 0.5%, UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS PRIOR TO DESIGN.
4. SEE STANDARD NO. 206 FOR EXPANSION JOINT DETAILS.
5. UPPER 12" OF NATIVE MATERIAL BELOW CURB & GUTTER SHALL BE COMPACTED TO 95% COMPACTION.

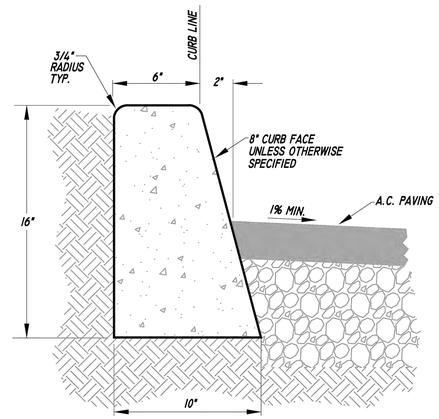
APPROVED BY: PATRICK THOMAS, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER R.C.E. NO. 44223 — DATE: MARCH 30, 2020

CITY OF TEMECULA
DEPARTMENT OF PUBLIC WORKS

TYPE "C" CURB

STANDARD NO. 202

REVISIONS	REV.	BY:	APPR'D	DATE	REV.	BY:	APPR'D	DATE
10/98, 12/06, 03/20	1	D.B.	P.T.	03/20	4			
	2				5			
	3				6			



NOTES:

1. CONCRETE SHALL BE CLASS 560-C-3250 /1
2. MINIMUM PERMISSIBLE GRADE SHALL BE 1.0%, UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF PUBLIC WORKS.
3. SEE STD. NO. 206 FOR EXPANSION JOINT DETAILS.
4. UPPER 12" OF NATIVE MATERIAL BELOW CURB & GUTTER SHALL BE COMPACTED TO 95% COMPACTION.

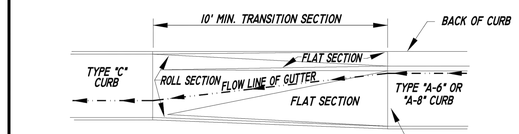
APPROVED BY: PATRICK THOMAS, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER R.C.E. NO. 44223 — DATE: MARCH 30,2020

CITY OF TEMECULA
DEPARTMENT OF PUBLIC WORKS

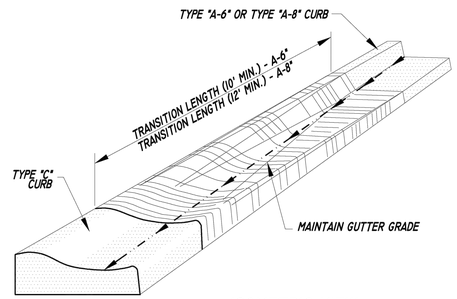
TYPE "D - 8" CURB

STANDARD NO. 204

REVISIONS	REV.	BY:	APPR'D	DATE	REV.	BY:	APPR'D	DATE
10/98, 12/06, 03/20	1	D.B.	P.T.	03/20	4			
	2				5			
	3				6			



PLAN



ISOMETRIC VIEW

NOTE:
ALL TRANSITIONS TO TYPE "C" CURB SHALL BE CLASS 560-C-3250 PER C.O.T. STD. 202. /1

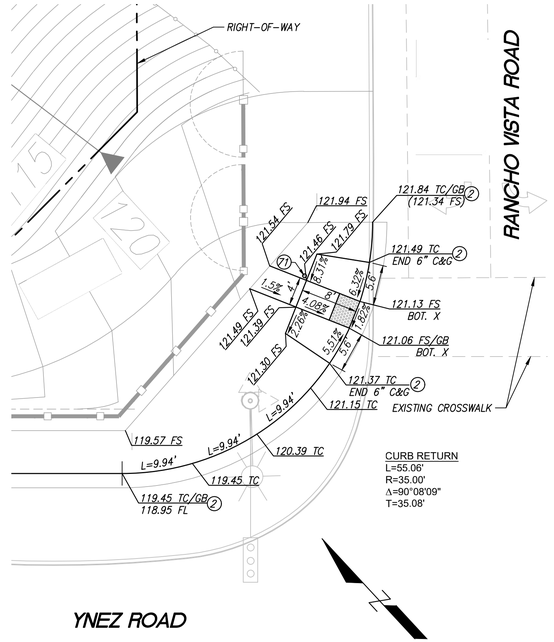
APPROVED BY: PATRICK THOMAS, DIRECTOR OF PUBLIC WORKS/CITY ENGINEER R.C.E. NO. 44223 — DATE: MARCH 30, 2020

CITY OF TEMECULA
DEPARTMENT OF PUBLIC WORKS

CURB TRANSITION

STANDARD NO. 213

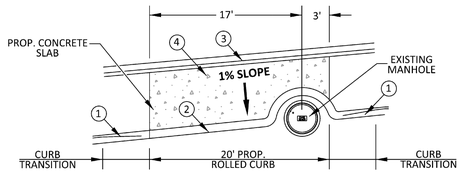
REVISIONS	REV.	BY:	APPR'D	DATE	REV.	BY:	APPR'D	DATE
10/98, 12/06, 03/20	1	D.B.	P.T.	03/20	4			
	2				5			
	3				6			



28 RAMP DETAIL

CONSTRUCTION NOTES

(2) CONSTRUCT TYPE A-6 CURB AND GUTTER PER CITY OF TEMECULA STD. 200
(71) INSTALL NEW PEDESTRIAN PUSH BUTTON PEDESTAL PER CITY OF TEMECULA TRAFFIC SIGNAL STANDARDS



CASE III
NOT TO SCALE

GENERAL NOTES:

1. CONSTRUCT TRANSVERSE AND LONGITUDINAL WEAKED - PLANE JOINTS IN CONCRETE PAD AT APPROXIMITELY 10' INTERVALS.
2. FOR CASE III, MANHOLE IN CURB LINE, THE CONTRACTOR SHALL CONSTRUCT CURB AROUND MANHOLE RIM WITH A 2" OFFSET.
3. FOR CASE I, II, & IV MANHOLE WITHIN MEDIAN, THE CONTRACTOR SHALL RAISE MANHOLE RIM TO PROPOSED GRADE OF MEDIAN HARDSCAPE.

CONSTRUCTION NOTES:

(1) CURB TRANSITION PER CITY OF TEMECULA STANDARD DRAWING NO 213
(2) TYPE "C" ROLLED CURB PER CITY OF TEMECULA STANDARD DRAWING NO 202
(3) TYPE "D" CURB PER CITY OF TEMECULA STANDARD DRAWING NO 202
(4) CONCRETE PAD/LANDING SHALL BE: 8"THICK PORTLAND CEMENT CONCRETE CLASS 560-C-3250; "B"AGGREGATE GRADATION; MAXIMUM SLUMP (4") PER GREENBOOK (STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION).

63 MODIFIED EMWD SB-183 DETAIL

Underground Service Alert
CALL TOLL FREE 1-800-422-4133
TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor_____					
Inspector_____					
Date Completed_____					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84" ELEVATION: 1006.84'

SCALE
HORIZONTAL: AS SHOWN
VERTICAL: AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER GEORGE ALAN LENFESTEY No. 45920 CIVIL STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
_____ Date: 11/26/25
R.C.E. No. 45920 Expires 12/31/26

RECOMMENDED BY:_____ DATE:_____
NINO ABAD, PRINCIPAL CIVIL ENGINEER

ACCEPTED BY:_____ DATE:_____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER

R.C.E. No. 69156

CITY OF TEMECULA DEPARTMENT OF PUBLIC WORKS

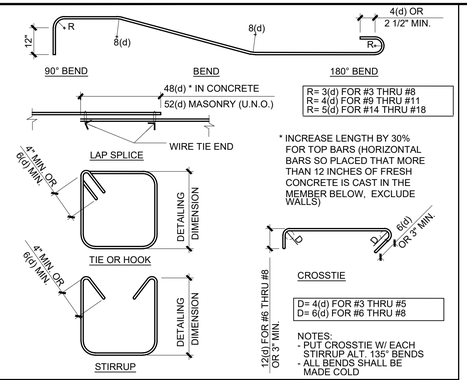
YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02

SEWER AND CURB RAMP DETAILS

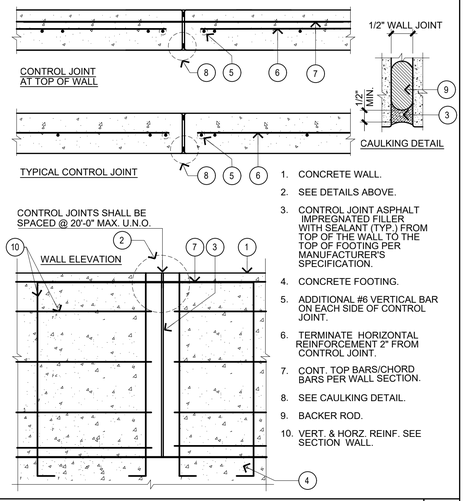
Drawing No. C-11

SHEET 12 OF 14

Plotted: Nov 26, 2025 - 8:45pm By: GilbertA
DWG: N:\01.204.000 Ynez Road Expansion\Drawings\Street Improvements\ST12-Details Sheet.dwg



® TYP. REINFORCING DETAILS D5124-180117 — 1



1. CONCRETE WALL.
2. SEE DETAILS ABOVE.
3. CONTROL JOINT ASPHALT IMPREGNATED FILLER WITH SEALANT (TYP.) FROM TOP OF THE WALL TO THE TOP OF FOOTING PER MANUFACTURER'S SPECIFICATION.
4. CONCRETE FOOTING.
5. ADDITIONAL #6 VERTICAL BAR ON EACH SIDE OF CONTROL JOINT.
6. TERMINATE HORIZONTAL REINFORCEMENT 2" FROM CONTROL JOINT.
7. CONT. TOP BARS/CHORD BARS PER WALL SECTION.
8. SEE CAULKING DETAIL.
9. BACKER ROD.
10. VERT. & HORZ. REINF. SEE SECTION WALL.

TYP. CONCRETE WALL ® CONTROL JOINT DETAIL D5138-110208 — 2

3

Underground Service Alert

CALL TOLL FREE
1-800-422-4133

TWO WORKING DAYS BEFORE YOU DIG

BASIS OF BEARINGS

BEARINGS ARE BASED ON THE CALIFORNIA STATE PLANE COORDINATE SYSTEM (CCS83), ZONE 6 BASED LOCALLY ON N.G.S. CORS STATION "ROSA, PID-DX3769. DISTANCE SHOWN HEREON ARE GROUND DISTANCES. TO OBTAIN GRID LEVEL DISTANCES, MULTIPLY DISTANCES BY 1.00008466.

SPECIAL INSPECTION BY A SPECIAL INSPECTOR FOR THE CONSTRUCTION OF CMU STRUCTURES ARE REQUIRED AND SPECIFIED IN THE FOLLOWING TABLE:

SPECIAL INSPECTION TABLE FOR CMU STRUCTURES

INSPECTION TASK	FREQUENCY		REFERENCE FOR CRITERIA	
	Continuous	Periodically	TMS 402	TMS 602
1. As masonry construction begins, verify that the following are in Compliance:				
a. Proportions of site prepared mortar.		✓		Art. 2.1, 2.6 A, & 2.6 C
b. Grade and size of prestressing tendons and anchorages		✓		Art. 2.4 B & 2.4 H
c. Grade, type and size of reinforcement, connectors, anchor bolts, and prestressing tendons and anchorages		✓		Art. 3.4 & 3.6 A
d. Prestressing technique		✓		Art. 3.6 B
e. Properties of thin-bed mortar for AAC masonry	✓			Art. 2.1 C.1
f. Sample panel construction		✓		Art. 1.6 D
2. Prior to grouting, verify that the following are in compliance:				
a. Grout space.		✓		Art. 3.2 D & 3.2 F
b. Placement of prestressing tendons and anchorages.		✓	Sec. 10.8 & 10.9	Art. 2.4 & 3.6
c. Placement reinforcement, connectors, and anchor bolts.		✓	Sec. 6.1, 6.3.1 6.3.6, & 6.3.7	Art. 3.2 E & 3.4
d. Proportions of site-prepared grout and prestressing grout for bonded tendons.		✓		Art. 2.6 B & 2.4 G.1.b
3. Verify compliance of the following during construction:				
a. Materials and procedures with the approved submittals.		✓		Art. 1.5
b. Placement of masonry units and mortar joint construction.		✓		Art. 3.3 B
c. Size and location of structural members.		✓		Art. 3.3 F
d. Type, size and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.		✓	Sec. 1.2.1(e) 6.2.1 & 6.3.1	
e. Welding of reinforcement.	✓		Sec. 6.1.6.1.2	
f. Preparation, construction, and protection of masonry during cold weather (temp. below 40°F(4.4°C)) or hot weather (temp. above 90°(32.2°C)).				Art. 1.8 C & 1.8 D
g. Application and measurement of presstressing force	✓			Art. 3.6 B
h. Placement of grout and prestressing grout for bonded tendons is in compliance.	✓			Art. 3.5 & 3.5 C
i. Placement of AAC masonry units and construction of thin-bed mortar joints.	✓			Art. 3.3 B.9 & 3.3 F.1.b
4. Observe preparation of grout specimens, mortar specimens, and/or prisms.		✓		Art. 1.4 B.2.a.3 1.4 B.2.b.3 1.4 B.2.c.3 1.4 B.3, & 1.4 B.4
5. Prior to construction, verification of compliance submittals.		✓		Art. 1.5
6. Prior to construction, verification of f'm and f'aac, except where specifically exempted by the code.		✓		Art. 1.4 B
7. During construction, verification of Slump flow and Visual Stability Index(VSI) when self-consolidating grout is delivered tothe project site.		✓		Art. 1.5 & 1.6.3

For SI: °C = (°F-32) /1.8

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	Reference Standard	IBC Reference
1. Inspect reinforcement, including prestressing tendons, and verify placement	—	✓	ACI 318 Ch. 20,25.2,25.3, 26.6.1-26.6.3	1908.4
2. Reinforcing bar welding:	—			
a. Verify weldability of reinforcing bars other than ASTM A 706;		✓	AWS D1.4 ACI 318: 26.6.4	—
b. Inspect single-pass fillet welds, maximum 5/16"; and		✓		
c. Inspect all other welds.	✓			
3. Inspect anchors post-installed in concrete.	—	✓	ACI 318: 17.8.2	—
4. Inspect anchors post-installed in hardened concrete members.			ACI 318: 17.8.2.4	—
a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads.	✓			
b. Mechanical anchors and adhesive anchors not defined in 4.a .		✓	ACI 318: 17.8.2	
5. Verify use of required design mix.	—	✓	ACI 318: Ch 19, 26.4.3, 26.4.4	1904.1,1904.2, 1908.2, 1908.3
6. Prior to concrete placement, fabricate specimens for strength tests, and determine the temperature of the concrete.	✓	—	ASTM C 172 ASTM C 31 ACI 318: 26.5, 26.12	1908.10
7. Inspect concrete and shotcrete placement for proper application techniques.	✓	—	ACI 318: 26.5	1908.6, 1908.7, 1908.8
8. Verify maintenance of specified curing temperature and techniques.	—	✓	ACI 318: 26.5.3-26.5.5	1908.9
9. Inspect prestressed concrete for:				
a. Application of prestressing forces; and	✓	—	ACI 318: 26.10	—
b. Grouting of bonded prestressing tendons.	✓	—		
10. Inspect erection of precast concrete members.	—	✓	ACI 318: 26.9	—
11. Verify in-situ concrete strength, prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	—	✓	ACI 318: 26.11.2	—
12. Inspect formwork for shape, location and dimensions of the concrete member being formed.	—	✓	ACI 318: 26.11.1.2(b)	—

SPECIAL INSPECTION BY A SPECIAL INSPECTOR FOR EXISTING SITE SOIL CONDITIONS. FILL PLACEMENT & LOAD BEARING REQUIREMENTS SHALL BE PERFORMED PER THE FOLLOWING TABLE:

SPECIAL INSPECTION TABLE FOR EXISTING SITE SOIL CONDITIONS

TYPE	Continuous Special Inspection	Periodic Special Inspection
1. Verify materials below footings are adequate to achieve the design bearing capacity per soils report.	—	✓
2. Verify excavations are extended to proper depth & have reached proper material per soils report.	—	✓
3. Perform classification & testing of compacted fill materials per soils report.	—	✓
4. Verify use of proper materials, densities & lift thicknesses during placement & compaction of compacted fill per soils report. Exception: Special inspection is not required during placement of controlled fill having a total depth of 12 inches or less.	✓	—
5. Prior to placement of compacted fill, inspect subgrade & verify that site has been prepared properly per soils report.	—	✓

FOUNDATION

Soils Foundation engineering has been predicated on data and recommendations contained in soils report by LGC Valley, Inc.
SOILS REPORT NO. 174002-02, DATE: 5/11/2018 and 12/02/2019. This report is considered part of calculations and construction documents and is to be adhered to in all of its recommendations and requirements. Verify minimum foundation depth, width, reinforcing steel and additional expansive soil requirements with valid soils report and if they are any more restrictive, then they shall supersede the Gouvis Engineering minimums. Soil engineer should review and approve all retaining walls prior to construction.

DESIGN CRITERIA:
ACTIVE EFP (LEVEL) = 35 PCF — SOILS DENSITY = 120 PCF
ACTIVE EFP (2:1) = 50 PCF — BEARING CAPACITY= 1500PSF
PASSIVE EFP = xxx PCF — ↖= 0.35
f'c = 5400 PSI (see note #4 under reinforced concrete)

1. U.N.O. all cells containing reinforcing steel shall be grouted solid.
2. All portion of wall retaining shall be grouted solid.
3. All footing shall be poured on undisturbed ground or undisturbed engineered compacted fill. A field soil memo is required from a representative of the geotechnical consultant for soil inspection of the footing excavation to confirm that the footing is excavated into suitable bearing material.
4. Wall shall be laid true and plumb.
5. Provisions shall be made for adjoining construction.
6. All laps and splices shall be 48 bar diameter min.
7. All construction shall be done in accordance with applicable sections of the 2022 CALIFORNIA BUILDING CODE and ACI standard 318-19.
8. All bars shall be bent cold.
9. Contractor shall verify compatibility of design with existing conditions prior to placement of footing steel.
10. Backfill shall be per soils engineer's recommendations.
11. Subdrain shall be 4" perforated PVC schedule 40 pipe with 1 CF/LF of 3/4" crushed rock or equivalent wrapped in filter fabric. The filter must overlap 12" at ends of the filter. Outlet to riprap at end of wall.
12. Waterproof back of all the retaining walls w/2 coats of asphaltic emulsion per manufacturer's specifications.
13. Slab control joints shall be placed at all angle points and a maximum 12'-0" o.c.
14. Backfilling shall not be permitted until at least 7 days after the walls are built and f'c has reached min. 2500 psi and grout has obtained min. 2000 psi compression strength.
15. Retaining walls are not designed for surcharge of paving equipment. Equipment must be kept back from top of the wall minimum distance equal to wall height.
16. For curved portion of the walls, footing reinforcing shall be placed radially, and spacing measured along the centerline of the masonry wall.
17. Outlet of any surface drainage pipe into the subdrain system is absolutely prohibited.
18. Concrete cylinder tests from project pour, in accordance with the CBC shall be submitted for review and approval by the project soils engineer and the local jurisdictional authorities, prior to any backfilling.
19. Step footing shall be in even block increments.
20. Footings shall be poured continuously.

SPECIAL INSPECTION:

1. In addition to the regular inspection, the following items will also require special inspection in accordance with Sec. 1704 of the Building Code.
2. Soils compliance prior to the foundation inspection, pre-stress foundation, high strength steel and concrete.
3. All inspection and tests shall be performed by a qualified testing agency retained by the owner.
4. The special inspector shall be qualified and approved by the building department and acceptable to the architect.
5. The special inspector shall observe work assigned for conformance to the approved design drawings and specification.
6. The special inspector shall furnish inspection report to building department, engineer and architect of record. Copies of the report shall be available at the job site at all time.
7. Final reports for all inspections and testing must be provided by the special inspector. Final reports shall document completion of all inspection and correction of all noted discrepancies.
8. The duties of special inspector shall be in conformance with the requirements of section 1704 of the California Building Code.
9. Contractor shall be responsible for all expenses due to any premature notification of inspection which results in additional site visits.
10. Failure of notification by the contractor for inspection on a timely basis may result in complete removal and replacement of all work performed at contractors expenses.

Site visits by the structural engineer do not constitute an inspection.

Special inspection required for the following items:

SPECIAL INSPECTIONS AND VERIFICATIONS BY A SPECIAL INSPECTOR ARE REQUIRED FOR CONCRETE CONSTRUCTION AND SPECIFIED IN THE FOLLOWING TABLE

(ONLY APPLICABLE IF THE STRUCTURAL DESIGN OF FOOTING IS BASED ON f'c > 2500psi) SEE NOTE #4 UNDER REINFORCED CONCRETE.

GENERAL REQUIREMENTS

All material and workmanship shall comply with the following:

1. These General Requirements unless otherwise noted on plans or specifications.
2. California Building Code, 2022.
3. All applicable Local, State and Federal Codes, Ordinances, Laws, Regulations and Protective Covenants governing the site of work.
4. Standard Specifications of ASTM as noted herein are required by the Building Code or CBC 2022.
5. In case of conflict, the more stringent requirement shall govern.
6. On site Verification of all dimensions and conditions shall be the responsibility of the contractor and sub-contractors. Noted dimensions take precedent over scale of drawings.
7. Engineer or architect of record is to be notified immediately by the contractor should any question arise pertaining the working drawings and/or specifications.
8. No deviations from these requirements and structural details shall be made without the written approval of Gouvis Engineering Consulting Group. Approval by the inspector does not constitute authority to deviate from plans or specifications.
9. The design, adequacy, and safety of erection bracing, shoring, temporary supports, etc., is the sole responsibility of the contractor, and has not been considered by the architect or Engineer.
The contractor shall provide the necessary bracing to provide stability prior to the application of the aforementioned materials. Observation visits to the site by the architect or structural engineer shall not imply the assumption of any responsibility in this regard. The builder has requested, contracted with and is compensating Gouvis Engineering Consulting Group for the limited services of providing the minimum structural engineering drawings required, when combined with the other builders consultants drawings, to obtain a building permit for this project. These drawings are not intended to, nor do they, detail all conditions, identify all materials, or define or limit the scope of work required to complete the project. The builder has requested, accepts, and represents that he will select all materials and manufactures, qualify and select all subcontractors and installers, direct all ways and means of construction, and provide all additional information, above and beyond these drawings, required to complete the project in conformance with all governing agencies and the work will meet or exceed accepted industry standards.
10. Gouvis Engineering shall have no liability for waterproofing or moisture transmission issues, whether related to concrete slabs, footings, foundations, or otherwise. Owner, Soils Engineer and Contractor shall be entirely responsible for such issues, and will defend and indemnify Gouvis Engineering against all such claims.

REINFORCED CONCRETE

GENERAL

1. All reinforced concrete materials and construction shall conform to chapter 19, CBC.

MATERIALS

2. Cement shall conform to CBC 1903 of CBC and shall correspond to that on which the selection of concrete proportions were based.
3. Concrete aggregates shall conform to CBC 1903.
4. Use type V cement for concrete in contact with soil containing sulfate. (min. f'c =4500 psi, 28 days). Refer to section 1904 of Building Code for special exposure conditions as required by Soils Engineer & see Corrosion Engineer's recommendations for concrete exposed to corrosion.
5. Reinforcing steel shall conform to ASTM A615. Grade 40 for sizes #3 and Grade 60 for sizes #4 and larger.
6. Dowels shall be equal in size and spacing.

STRENGTH

7. Concrete shall be proportioned to provide a minimum compressive strength, f'c, equal to 4500 psi (28 days), unless noted otherwise.
8. All reinforcing, dowels, holdowns, and other inserts shall be secured in position and approved by the local building official prior to the pouring of any concrete.
Min. concrete cover for reinforcing:
a. Concrete, placed against earth not formed - 3"
b. Concrete formed or troweled - 2"
c. Walls and curbs - 1 1/2"
d. Slab on grade - at center

CONCRETE MASONRY

GENERAL

1. All concrete masonry materials and construction shall be in accordance with Building Code, Chapter 21.

MATERIALS

2. All materials making up finished concrete masonry construction shall conform to standards required by Building Code Sec. 2103.
3. Mortar shall be type M or S as applicable and conforming with ASTM C270 and shall be proportioned per Article 2.1 & 2.6A of Specification for Masonry Structures (TMS 602-16).
4. Grout shall comply with Article 2.2 of TMS 602-16 and shall attain a minimum compression strength at 28 days of 2000 psi or the required compression, f'm, whichever is greater. The compressive strength of grout shall be determined in accordance with ASTM C-1019.
5. Concrete masonry units shall conform to ASTM C90 for load bearing concrete masonry units. Concrete brick shall conform to ASTM C55, Specifications for Concrete Building Brick.
6. Grade N concrete bricks are for use as architectural veneer and facing, limited to in exterior walls.
7. Grade S concrete bricks are for general use where moderate strength and resistance to frost action and moisture penetration is required.

STRENGTH

8. The specified compressive strength of masonry, f'm, shall be 2000 psi, unless noted otherwise. If higher f'm is noted, it shall be verified by prism tests as required in Article 1.4 Specification of Masonry Structures (TMS 602-16).
9. Reinforcing steel shall conform to ASTM A615. Grade 40 for sizes #3 and grade 60 for sizes #4 and larger.

SPECIAL INSPECTION

10. Special inspection for concrete masonry construction shall be carried out in accordance with Building Code Section 1704 and requirements in Special Inspection tables on sheet SN-1. Masonry compressive strength, f'm shall be verified by Unit strength method or Prism test method prior to and during construction as described in Article 1.4 Specification for Masonry Structures (TMS 602-16).

PROACTIVE ENGINEERING CONSULTANTS WEST, INC.
27494 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

DWG: By: Plotted:

CONSTRUCTION RECORD	DATE	BY	REVISIONS	DATE	APP'D
Contractor_____					
Inspector_____					
Date Completed_____					

BENCHMARK
RIVERSIDE COUNTY BENCH MARK T-32-81. LOCATED IN THE NORTHERLY SIDEWALK OF RANCHO CALIFORNIA ROAD 6" WEST OF THE CURB RETURN, WEST OF JEFFERSON AVENUE, 20' ± EAST OF THE BRIDGE OVER THE MURRIETA CREEK. FOUND 2 1/2" BRASS DISK STAMPED "T-32-81 R-6-30-05 EL= 1006-84" ELEVATION: 1006.84'

SCALE
HORIZONTAL
AS SHOWN
VERTICAL
AS SHOWN

SEAL: REGISTERED PROFESSIONAL ENGINEER — JUAN NGUYEN — No. C 64238 — Exp. 9/30/27 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	PEC WEST	PEC WEST

Plans Prepared Under The Supervision Of
_____ Date: ☒
R.C.E. No._____ Expires 12/31/26

RECOMMENDED BY:_____ DATE:_____
AVLIN ODVIAR, PRINCIPAL CIVIL ENGINEER

ACCEPTED BY:_____ DATE:_____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

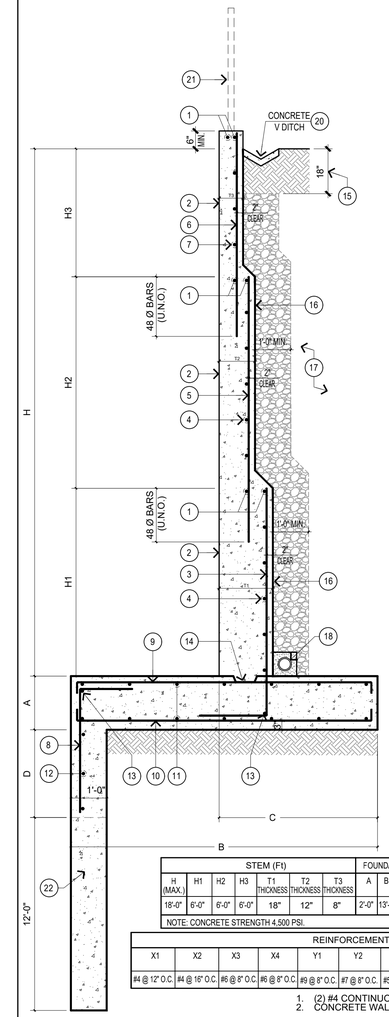
CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02

RETAINING WALL PLAN

Drawing No.

SHEET 13 OF 14



STEM (Ft)							FOUNDATION (Ft)			
H (MAX.)	H1	H2	H3	T1 THICKNESS	T2 THICKNESS	T3 THICKNESS	A	B	C	D
18'-0"	6'-0"	6'-0"	6'-0"	18"	12"	8"	2'-0"	13'-0"	8'-0"	4'-3"

NOTE: CONCRETE STRENGTH 4,500 PSI.

REINFORCEMENT							
X1	X2	X3	X4	Y1	Y2	Y3	Y4
#4 @ 12" O.C.	#4 @ 16" O.C.	#6 @ 8" O.C.	#6 @ 8" O.C.	#9 @ 8" O.C.	#7 @ 8" O.C.	#5 @ 8" O.C.	#6 @ 7" O.C.

1. (2) #4 CONTINUOUS.
2. CONCRETE WALL , SEE TABLE BELOW FOR THICKNESS.
3. Y1 - VERT. BARS PER SCHEDULE DOWEL INTO FOOTING W/STD HOOK AS SHOWN.
4. X1 HORIZ. BARS PER SCHEDULE.
5. Y2 - VERT. BARS PER SCHEDULE.
6. Y3 - VERT. BARS PER SCHEDULE.
7. X2 HORIZ. BARS PER SCHEDULE.
8. Y4 - BARS PER SCHEDULE.
9. X3 - BARS PER SCHEDULE.
10. X4 - BARS PER SCHEDULE.
11. #4 @ 12" O.C. T & B.
12. #4 @ 12" O.C.
13. ADD #6.
14. 2X10 CONT. SHEAR KEY.
15. 18" COMPACTED NATIVE BACK-FILL.
16. CARLISLE OR MIRADRAIN OR TREMCO WATERPROOFING.
17. COMPACTED BACKFILL APPROVED BY SOILS ENGINEER.
18. SUBDRAIN SHALL BE 4" PERFORATED PVC SCHEDULE 40 PIPE WITH 1 CF/LF OF 3/4" CRUSHED ROCK OR EQUIVALENT WRAPPED IN FILTER FABRIC. THE FILTER MUST OVERLAP 12" AT ENDS OF THE FILTER. OUTLET TO RIPRAP AT END OF WALL.
19. NOT USE.
20. CONCRETE V DITCH PER DETAIL 65 ON SHEET 4 (C-3)
21. FENCE AND CONNECTION TO WALLS THAT ARE NEEDED FOR THE CONTRACTOR TO CONSTRUCT.
22. 12'-0" DEEP CUT-OFF WALL.

NOTES:
- WATERPROOFING, EXTENT OF BACKFILL, BACKFILL MATERIAL & DRAINAGE SYSTEM TO BE APPROVED BY GEOTECHNICAL ENGINEERING.
- EDGE DISTANCE TO REBAR INDICATED IS CLEAR DIMENSION.
- CONCRETE STRENGTH 4,500 PSI.

RETAINING WALL 1

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27404 VIA INDUSTRIA
TEMECULA, CA 92590
951-200-6840

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TWO WORKING DAYS BEFORE YOU DIG

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Inspector					
Date Completed					

BENCHMARK
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SEAL:
REGISTERED PROFESSIONAL ENGINEER — JUAN NGUYEN — No. C 64238 — Exp. 6/30/27 — CIVIL — STATE OF CALIFORNIA

DESIGNED BY	DRAWN BY	CHECKED BY
PEC WEST	*PEC WEST*	*PEC WEST*

Plans Prepared Under The Supervision Of
_____ Date: ☒
R.C.E. No._____ Expires *12/31/26*

RECOMMENDED BY:_____ DATE:_____
AVLIN ODVIAR, PRINCIPAL CIVIL ENGINEER
ACCEPTED BY:_____ DATE:_____
RON MORENO
DIRECTOR OF PUBLIC WORKS / CITY ENGINEER
R.C.E. No. 69156

CITY OF TEMECULA — DEPARTMENT OF PUBLIC WORKS

YNEZ ROAD IMPROVEMENTS-PHASE I PROJECT, PW23-02
RETAINING WALL PLAN

Drawing No.
SHEET 14 OF 14

DWG: By: Plotted:

Appendix I

Response to Comment

Appendix I Responses to Comments on Draft Initial Study / Mitigated Negative Declaration

The City of Temecula (City), as CEQA Lead Agency, distributed the Draft Initial Study/Mitigated Negative Declaration (Initial Study/MND) for the "Ynez Road Improvements Phase 1 Project (Between Rancho Vista Road and Tierra Vista Road)" for public review on December 10, 2025, initiating a 30-day public review period ending on January 9, 2026. The document was made available online, and at the City's office. A total of one letter was received before the close of the public comment period. Pursuant to California Environmental Quality Act (CEQA) Guidelines §15088(a), "the lead agency shall evaluate comments on environmental issues received from persons who reviewed the Draft EIR and shall prepare a written response." All comment letters received on the Draft MND, including any letters received after the close of the public comment period, were evaluated for environmental issues, and written responses to comments on environmental issues were prepared. A list of the comment letters received, including details on the agency, organization, or individual that submitted the letter and the date of the letter is provide in **Table I-1 - *Comment Letters on the Draft Initial Study/MND for the Ynez Road Improvements Phase 1 Project (Between Rancho Vista Road and Tierra Vista Road)***. This appendix presents written responses to comments on environmental issues raised in these letters. The written responses describe the disposition of significant environmental issues raised, as required by CEQA Guidelines §15088(c).

Table J-1 - Comment Letters on the Draft Initial Study/MND for the Ynez Road Improvements Phase 1 Project (Between Rancho Vista Road and Tierra Vista Road)

Letter Number	Public Agency, Organization or Individual	Date of Letter/Email
A	California Department of Transportation	January 7, 2026

Where comments necessitated revisions to the Draft Initial Study/MND, as well as minor administrative technical edits to correct typographical errors, the added text is reflected in shaded underlined text (added text) and deletions are reflected in shaded strikeout text (~~deleted text~~). Pursuant to CEQA Guidelines Section15088.5, none of the comments received during the comment period involve any new significant impacts or "significant new information" that would require recirculation of the Initial Study/MND.

Comment Letter A – California Dept of Transportation

California Department of Transportation

DISTRICT 8
464 WEST 4TH STREET
SAN BERNARDINO CA, 92401
(909) 925-7520
www.dot.ca.gov

January 7, 2026

Route & Postmile #: I-15 / PM 4.678
Cross Street: Ynez Rd & Rancho Vista Rd
GTS ID: 38808
SCH #: 2025120517

City of Temecula
Planning Division
Attn: Emalee Manning
41000 Main St,
Temecula, CA 92590

Subject: Caltrans LDR Branch Review of the Ynez Road Improvements Phase 1 Project (PW23-02)

The California Department of Transportation (Caltrans) Local Development Review (LDR) Branch has completed its review of the Ynez Road Improvements Phase 1 Project Mitigated Negative Declaration (MND). The project site is located in the City of Temecula on Ynez Road between Tierra Vista Road and Rancho Vista Road.

The City of Temecula proposes to widen about 1,763 feet of the east side of Ynez Road between Tierra Vista Road and Rancho Vista Road to match the existing four-lane roadway. The project includes new sidewalks, curb and gutter, streetlights, Class II bike lanes, raised medians with turn pockets, utility relocations, and grading to construct and maintain a retaining wall on adjacent private property. It will require permanent easements on portions of APNs 944-290-17 and 944-290-16 and will include mitigation for impacts to a nearby drainage feature.

Based on the information available, we are submitting the following comments and recommendations for your consideration:

Active Transportation & Complete Streets
Per IS/ MND document, please see the following comments:

- Page 3 (PDF page 10), section 1.3
  - Should incorporate and cite the City of Temecula Multi-Use Trails and Bikeways Master Plan Update, given that it is a public document.

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Given existing bike lane gaps and efforts to create continuity between existing bicycle facilities on Ynez Road, it would be helpful to the bicyclist and motorized scooter users (to be compliant with CVC 21235) to have bicycle lane gaps filled as much as possible, since bicycle lanes exist on both sides of Ynez Rd. south of Preece Ln. and north of Dlr Dr., but there are gaps between

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Response to Comment Letter A

Response A-1: Comment noted. Page 3, Section 1.3 has been revised to cite the City of Temecula's Multi-use Trails and Bikeways Master Plan Update.

Response A-2: The project incorporates Class II bike lanes within the project area and therefore fills the bike lane gaps within the project limits. The draft IS/MND was edited to cite the City of Temecula Multi-Use Trails and Bikeways Master Plan Update on page 3 (PDF page 10), section 1.3

Comment Letter A – California Dept of Transportation

those cross streets north of the project location.

Equitable Access
If any Caltrans facilities are impacted by the project, they must comply with American Disabilities Act (ADA) Standards upon project completion. Additionally, the project must ensure the maintenance of bicycle and pedestrian access throughout the construction phase. These access considerations align with Caltrans' equity mission to provide a safe, sustainable, and equitable transportation network for all users.

Caltrans Encroachment Permit
Be advised that any permanent work or temporary traffic control that encroaches onto Caltrans' right-of-way requires a Caltrans-issued encroachment permit.

For information regarding the Encroachment Permit application and submittal requirements, contact:

Caltrans Office of Encroachment Permits
464 West 4th Street, Basement, MS 619
San Bernardino, CA 92401-1400
(909) 383-4526
D8.E-permits@dot.ca.gov
https://dot.ca.gov/programs/traffic-operations/ep
Important Note: All new permit applications must now be submitted through our new CEPS Online Portal at: https://ceps.dot.ca.gov/

Please be advised that LDR's point of contact role will conclude upon the completion of the development entitlement process. Once project is entitled, the Encroachment Permit Office will serve as the primary point of contact moving forward.

Thank you again for including Caltrans in the review process. Should you have any questions regarding this letter, or for future notifications and requests for review of new projects, please email LDR-D8@dot.ca.gov or call 909-925-7520.

Sincerely,

Janki Patel

Janki Patel
Branch Chief - Local Development Review
Division of Transportation Planning
Caltrans District 8

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Response to Comment Letter A

Response to Comment A-3: Comment noted. There are no Caltrans facilities impacted by the Project.

Regarding an encroachment permit, there are no Caltrans facilities that would be impacted by the Project, and no encroachment permit is required.